

2007

2007-2008 Southern Illinois University Bulletin Carbondale Campus (Undergraduate Catalog)

Southern Illinois University Carbondale

Follow this and additional works at: http://opensiuc.lib.siu.edu/ua_bcc

Recommended Citation

, . "2007-2008 Southern Illinois University Bulletin Carbondale Campus (Undergraduate Catalog)." (Jan 2007).

This Article is brought to you for free and open access by the University Archives at OpenSIUC. It has been accepted for inclusion in SIU Bulletins and Course Catalogs by an authorized administrator of OpenSIUC. For more information, please contact opensiuc@lib.siu.edu.

Southern Illinois University
Carbondale



Southern
Illinois University
Carbondale

Undergraduate Catalog 2007 - 2008

Southern Illinois University Carbondale

2007–2008 Undergraduate Catalog

Visit our catalog website at <http://www.registrar.siu.edu>

Southern Illinois University Carbondale (USPS 506-080)

Volume 48, Number 2, September, 2007

Periodicals postage paid at Carbondale, Illinois 62901. Published by Southern Illinois University Carbondale, Carbondale, Illinois 62901, four times per year, in August, September, October and November. Subscription price: \$4 per issue.

POSTMASTER: Send address changes to Records and Registration, Southern Illinois University Carbondale, Carbondale, IL 62901-4701.

This Catalog

This publication provides information about the University. Primary attention is given to its academic programs, rules, regulations, and procedures. Students starting their collegiate training (first graded course from an accredited institution) during the period of time covered by this catalog (summer 2007 through spring 2008) are subject to the curricular requirements as specified herein. The requirements herein will extend for a seven calendar year period from the date of entry for baccalaureate programs and three years for associate programs. If the students have not met their undergraduate educational objectives by that time, they will then become subject to current curricular requirements. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them. Where programs include requirements established by agencies external to the University, every effort will be made to follow this same principle so far as possible. Should subsequent curricular requirement changes work to the students' advantage, they may elect to meet the new requirements rather than those contained herein. Should the University find it necessary to discontinue an academic program, the effective date, unless otherwise dictated, will be such that the last regularly admitted class would be able to complete the program in regular time sequence. This means four years for baccalaureate and two years for associate programs. A student who has withdrawn from the University may not be readmitted to a discontinued program.

The University reserves the right to change information contained herein on matters other than curricular requirements without notice when circumstances warrant such action.

The Undergraduate Catalog covers in detail questions concerning the undergraduate program of Southern Illinois University Carbondale for the period from summer 2007 through spring 2008. It supersedes Volume 48, Number 2.

Affirmative Action Policy

It is the policy of Southern Illinois University Carbondale to provide equal employment and educational opportunities for all qualified persons without regard to race, color, religion, sex, national origin, age, disability, status as a disabled veteran or a veteran of the Vietnam era, sexual orientation, or marital status. The University is committed to the principles of equal employment opportunity and affirmative action and will continue to conduct all personnel actions in accordance with the letter and spirit of applicable state and federal statutes and regulations, including Executive Order 11246 as amended. Personnel actions include, but are not limited to, recruitment, hiring, position assignments, compensation, training, promotion, tenure consideration and award, retention, lay-off, termination, and benefits.

The University recognizes that the barriers of race, color, religion, sex, national origin, age, disability, status as a disabled veteran or a veteran of the Vietnam era, sexual orientation, or marital status of some individuals have resulted in their denial of full participation in all societal functions and is, therefore, committed to taking affirmative steps aimed at overcoming such historical patterns of discrimination in our society. The University's affirmative action program identifies special actions intended to bring such groups into full participation in all aspects of University life. Through its affirmative action program, Southern Illinois University Carbondale is committed to: (1) increased numbers of minorities and females in all aspects of SIUC employment practices with special procedures applicable to those positions determined to be underutilized for minorities and females; (2) cultural and educational diversity in the curricula and environment of the University; (3) removal of barriers to the disabled; and (4) encouraged support of the principles of equal opportunity and affirmative action in an effort to redress the consequences of past societal discrimination and to maintain a positive non-discriminatory educational environment.

The responsibility for coordinating and monitoring compliance with the University's Equal Employment Opportunity/Affirmative Action policies is assigned to the Associate Chancellor (Diversity). Implementing and assuring compliance with this policy is the responsibility of all academic and administrative units. *The University's ADA, §504, Title IX and Sexual Harassment coordinator is Dr. Seymour Bryson, Associate Chancellor (Diversity), 110 Anthony Hall, Mail Code 4341, Southern Illinois University Carbondale, 1265 Lincoln Drive, Carbondale, IL 62901. Phone: (618) 453-1186.*

Approved 2007 - 2008 University Calendar

Summer Session - 2007

Eight-Week Session Begins
Independence Day - Holiday
Final Examinations

Commencement

Monday, June 11, 7:30 A.M.
Wednesday, July 4
Thursday, August 2 and
Friday, August 3
Saturday, August 4

Fall Semester - 2007

Semester Classes Begin
Labor Day - Holiday
Thanksgiving Vacation

Final Examinations

Commencement

Monday, August 20
Monday, September 3
Saturday, November 17,
12 Noon Sunday, November 25
Monday, December 10 - Friday,
December 14
Saturday, December 15

Spring Semester - 2008

Semester Classes Begin
Martin Luther King, Jr. - Holiday
Spring Vacation

Honors Day
Final Examinations
Commencement

Monday, January 14
Monday, January 21
Saturday, March 8, 12 Noon - Sunday,
March 16
Sunday, April 13
Monday, May 5 - Friday, May 9
Friday, May 9 and Saturday, May 10

All breaks begin officially at 10:00 p.m. the night before and end at 7:30 a.m. the morning after the respective beginning and ending dates listed, unless otherwise noted.

Accommodating Religious Observances of Students

Southern Illinois University Carbondale will make reasonable accommodation for individual student religious observances. The *Policy Accommodating Religious Observances of Students* appears in its entirety in Chapter 7.

Table of Contents

Catalog and Catalog Yearii
Affirmative Action Policy.....iii
University Calendar 2007-2008 iv
Board of Trustees and Officers of Administration..... vi
Chapter Reference Guide..... vii

1 / General Information.....1

The University2
Campus Living 11
Parking on Campus 13
Financial Aid..... 14

2 / Admission, Tuition and Academic Information.....17

Admission Policies 18
Advisement, Registration27
Tuition and Fees32
Grading and Scholastic Regulations 38
Program Flexibility 42
Degrees Offered.....47
Degree Requirements48
Recognition of High Scholastic Achievement.....50
Graduation Procedures51
Issuance of Transcripts52

3 / University Core Curriculum.....53

University Core Goals54
University Core Curriculum Requirements.....54
University Core Courses58
Multicultural Applied Option67

Capstone Option.....68
University Core Transfer Students...70
Illinois Articulation Initiative.....72

4 / College and Academic Programs .77

Agricultural Sciences78
Applied Sciences and Arts79
Business and Administration.....81
Education and Human Services84
Engineering89
Liberal Arts.....92
Mass Communication and Media Arts95
Science.....95
Graduate School97
Library Affairs98
School of Law99
School of Medicine100
Academic Programs101

5 / Undergraduate Curricula and Faculty.....106

6 / Student Services535

Enrollment Management..... 536
Student Affairs537
Campus Services.....547

7 / University Policies.....553

Residency Status554
Release of Student Information557
Religious Observances563

8 / Index567

Board of Trustees and Officers of Administration

Board of Trustees of Southern Illinois University	Term Expires
Roger Tedrick, <i>Chair</i> , Mt Vernon	2009
Ed Hightower, <i>Vice Chair</i> , Edwardsville	2007
John Simmons, <i>Secretary</i> , East Alton	2007
Keith R. Sanders, Spring Grove	2007
Samuel Goldman, Carbondale	2011
Stephen Wigginton, Belleville	2011
Marquita Wiley, Belleville	2009
Christine Guerra (Student Trustee), Carbondale	2007
Jesse Phelps (Student Trustee), Edwardsville	2007
Misty Whittington, <i>Executive Secretary of the Board of Trustees</i>	
Jerry Blakemore, <i>General Counsel</i>	
Duane Stucky, <i>Board Treasurer</i>	

Officers of Administration, Southern Illinois University

Glenn W. Poshard, *President*
 John S. Haller, Jr., *Vice President for Academic Affairs*
 Duane Stucky, *Vice President for Financial and Administrative Affairs*
 David Gross, *Executive Assistant for Government Relations*

Officers of Administration, Southern Illinois University Carbondale

Walter V. Wendler, *Chancellor*
 John M. Dunn, *Provost and Vice-Chancellor*
 Larry Dietz, *Vice-Chancellor for Student Affairs*
 Ricky McCurry, *Vice-Chancellor for Institutional Advancement*

Chapter Reference Guide

Chapter 1

General
Information

Chapter 2

Admission, Tuition and
Academic Information

Chapter 3

University Core
Curriculum

Chapter 4

Colleges and Academic
Programs

Chapter 5

Undergraduate Curricula
and Faculty

Chapter 6

Student Services

Chapter 7

University Policies

The black tabs on the right of this page correspond to black tabs on Chapters 1 through 7 in this catalog.

For information or concerns pertaining to this catalog, contact Tina L. Collins, editor, at the Office of Records and Registration, Southern Illinois University Carbondale, Carbondale, IL 62901. For access to the Undergraduate Catalog on the World Wide Web, visit: <http://www.registrar.siu.edu>. Published by Records and Registration, Southern Illinois University Carbondale. Photography: University Photo Communications



1 / General Information



The University

Southern Illinois University

Southern Illinois University is a multi-campus university comprising two institutions, Southern Illinois University Carbondale (SIUC) with a School of Medicine at Springfield, and Southern Illinois University Edwardsville (SIUE) with a School of Dental Medicine at Alton and a center in East St. Louis. Southern Illinois University, with an annual operating budget of more than \$560 million, enrolls more than 33,000 students in programs from two-year technical curricula to Ph.D. programs in 27 fields along with law and medicine. SIU was chartered in 1869 as Southern Illinois Normal University, a teachers' college. In 1947, the name was changed to Southern Illinois University, reflecting the institution's academic expansion. Southern Illinois University also expanded geographically. As early as 1949, SIU began offering off-campus academic courses in the metropolitan East St. Louis area, which led to the eventual development of a separate institution in Edwardsville.

A modern and comprehensive post-secondary educational institution, Southern Illinois University offers a broad range of academic programs that lead to associate, baccalaureate, masters, specialists, doctoral, and professional degrees.

The instructional, research, and service missions of the two institutions reflect the needs of the geographic areas in which they are located. Southern Illinois University also is committed to serving statewide, national, and international needs. This commitment is reflected in the educational activities located off the main campuses in communities throughout the state and in the 48 programs offered on 34 military bases in 19 states. It is also realized through research and training exchanges, worldwide student exchange programs, and degree programs in Jamaica, Singapore, and Hong Kong.

A nine-member Board of Trustees governs Southern Illinois University and sets policy that enables it to carry out its established missions and goals. The president of Southern Illinois University is its chief executive officer and reports to the Board of Trustees. The chancellors report directly to the president and are responsible for the internal operations of SIUE and SIUC.

Southern Illinois University Carbondale

Southern Illinois University Carbondale has taken pride in the quality of its services since its doors were first opened in 1869. Outstanding departments, distinguished faculty, thorough and inspired teaching, and a thoughtful approach to the blending of old wisdom with new knowledge, as well as student services from admission to placement, combine with the University's enviable location to provide a rewarding educational experience.

Every member of the University faculty is a student as well as a teacher bringing the products of research and scholarship into the classroom. The University has many distinguished scholars on its faculty honored by their peers for important contributions to the fields they study. Contact with these hard-working educators offers students the best possible entry into the world of today where ideas and technology mesh. As students progress in their studies they will work along with faculty members and may eventually be able to participate in ongoing research projects or set up projects of their own. Other courses may lead to internships or practicum work on campus or in the area around the University.

Morris Library, a major resource for students and faculty, contains over 2,000,000 volumes, over 3,000,000 units of microform, and about 13,000 periodical subscriptions. These materials are in open stacks, available to every student. There are also important collections of original research materials, as well as support services such as a map library, records and tapes, and a self-instruction center. Many disciplines require laboratories; some are the traditional variety

and some are in orchards, barns, hangars, machine shops, sound chambers, computer labs, archaeological digs, sewing rooms, kindergartens, and clinics.

The University offers a great variety of services to students. The Office of Records and Registration audits students' progress and maintains records from entrance to graduation. Financial experts, wise in the field of money for education, work tirelessly to find the right combination of loans, grants, and on- and off-campus employment to keep each student in school. Residence halls are available on campus as are furnished and unfurnished apartments for families. The counseling services are ready to help students deal with scholastic, family, emotional, medical, legal, or financial problems.

The University provides an aggressive placement program on a number of levels. University Career Services presents career fairs and regular visits by recruiters from large employers. Career counselors are ready to work with students from the time of their enrollment. Seminars and workshops are conducted regularly and a career library is maintained. Some schools and departments have highly successful recruitment programs of their own. Placement services do not stop at graduation — the University keeps a current placement file for every interested graduate, and Alumni Services offers referral assistance.

Carbondale, an economic center of southern Illinois, has been cited in a recent study as one of the fifty most desirable places to live in the United States. Only a few hours from Chicago, St. Louis, and Memphis, the University sits amid rolling hills, farmlands, and orchards just 60 miles above the confluence of the Mississippi and Ohio rivers. Glaciations deposits of rock have left the area from Carbondale south ruggedly scenic and suitable for a wide range of outdoor activities. Four large recreational lakes are within minutes of the campus; the two great rivers, the spectacular 240,000-acre Shawnee National Forest, and a large number of smaller lakes, state parks, and recreational areas are within easy driving distance. The Mid-South climate is ideal for year-around outdoor activities — even a little cross-country skiing. The campus itself is a marvel of landscaping, planted with native trees, shrubs and blooming flora.

Activities on campus are equally inviting. There are more than 300 student organizations—special interest, political, Greek, religious, service—intramurals from baseball to ultimate frisbee, a recreational lake on campus, nine intercollegiate sports programs for women and nine for men, and great varieties of diverting entertainment. A large indoor recreational center contains an Olympic-sized pool, weight rooms, game courts of all kinds, diet and exercise programs, instruction, and equipment that can be checked out for outdoor recreation.

At this modern university in a rural setting one can benefit from the best of both worlds — the scenic wonders, the small-town friendliness, the easy access to all the area has to offer, and the resources of a sophisticated faculty and staff with the latest in technological marvels at its command.

Mission Statement

Southern Illinois University Carbondale, now in its second century, is a major public higher education institution dedicated to quality academic endeavors in teaching and research, to supportive programming for student needs and development, to effective social and economic initiatives in community, regional, and statewide contexts, and to affirmative action and equal opportunity.

Enrolling students throughout Illinois and the United States and from a large number of foreign countries, SIUC actively promotes the intellectual and social benefits of cultural pluralism, encourages the participation of non-traditional groups, and intentionally provides a cosmopolitan and general education context which expands students' horizons and leads to superior undergraduate education.

Seeking to meet educational, vocational, social and personal needs of its diverse population of students and helping them fully realize their potential is a central purpose of the University. Emphasis on accessibility and regional service which

creates distinctive instructional, research and public service programs also gives SIUC its special character among the nation's research universities, and underlies other academic developments, such as its extensive doctoral program and the schools of medicine and law.

Committed to the concept that research and creative activity are inherently valuable, the University supports intellectual exploration at advanced levels in traditional disciplines and in numerous specialized research undertakings, some of which are related directly to the southern Illinois region. Research directions are evolved from staff and faculty strengths in keeping with long-term preparation and planning.

Even as the University constantly strives to perpetuate high quality in both instruction and research, it continues a long tradition of service to its community and region. Its unusual strengths in the creative and performing arts provide wide-ranging educational, entertainment and cultural opportunities for its students, faculty, staff, and the public at large. Its programs of public service and its involvement in the civic and social development of the region are manifestations of a general commitment to enhance the quality of life through the exercise of academic skills and application of problem-solving techniques. The University seeks to help solve social, economic, educational, scientific, and technological problems, and thereby to improve the well being of those whose lives come into contact with it.

Focus Statement

Southern Illinois University Carbondale offers a full range of baccalaureate programs, is committed to graduate education through the doctoral degree, and gives high priority to research. It receives substantial federal support for research and development and annually awards a significant number of doctoral degrees balanced among selected liberal arts and sciences disciplines and professional programs. In addition to pursuing statewide goals and priorities, Southern Illinois University Carbondale:

- strives to develop the professional, social, and leadership skills expected of college students and to improve student retention and achievement;
- supports the economic, social, and cultural development of southern Illinois through appropriate undergraduate, graduate, and professional education and research;
- develops partnerships with communities, businesses, and other colleges and universities, and develops utilization of telecommunications technologies;
- cultivates and sustains a commitment in research and instruction to problems and policy issues related to the region and the state's natural resources and environment;
- strives to meet the health care needs of central and southern Illinois through appropriate health-related programs, services, and public health policy; and
- cultivates and sustains diversity through a commitment to multiculturalism, including international programming.

Accreditations

AACSB International - The Association
for the Advancement of Collegiate Schools
of Business
777 S Harbour Island Blvd, Suite 750
Tampa, FL 33602-5730
Telephone: (813) 769-6526
url: <http://www.aacsb.edu>

Accreditation Association for
Ambulatory Health Care, Inc.
3201 Old Glenview Road, Suite 300
Wilmette, IL 60091
Telephone: (847) 853-6060
url: <http://www.aaahc.org>

Accreditation Board for Engineering and Technology (TAC/ABET) and (EAC/ABET)

111 Market Place, Suite 1050
Baltimore, MD 21202-4012
Telephone: (410) 347-7713
url: <http://www.abet.org>

ACPHA-Accreditation Commission for Programs in Hospitality Administration

203 S. Morris Street
PO Box 400
Oxford, MD 21654
Telephone: (410) 226-5527
url: <http://www.acpha-cahm.org>

Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)

12000 Findley Rd., Suite 240
Duluth, GA 30097
Telephone: (770) 476-1224
url: <http://www.arc-pa.org>

Accrediting Council on Education in Journalism and Mass Communications

School of Journalism
1435 Jayhawk Blvd.
University of Kansas
Lawrence, KS 66045
Telephone: (785) 864-3973
url: <http://www.ukans.edu/~acejmc>

American Association of Museums

1575 Eye Street, Suite 400
Washington, DC 20005
Telephone: (202) 289-9116
url: <http://www.aam-us.org>

American Bar Association Standing Committee on Paralegals

321 N. Clark Street
Chicago, IL 60610
Telephone: (312) 988-5618
url: <http://www.abaparalegals.org>

American Board of Funeral Service Education

38 Florida Ave
Portland, ME 04103
Telephone: (207) 878-6530
url: <http://www.abfse.org>

American Camp Association Illinois Section

67 E. Madison, Suite 1406
Chicago, IL 60603
Telephone: (312) 332-0833
url: <http://www.acail.org>

American Chemical Society

1155 16th St., N.W.
Washington, DC 20036
Telephone: (202) 872-4589
url: <http://www.chemistry.org>

American Psychological Association, Committee on Accreditation

750 First St., N.E.
Office of Program Consultation and Accreditation
Washington, DC 20002-4242
Telephone: (202) 336-5979
url: <http://www.apa.org/ed/accreditation>

Association for Assessment and Accreditation

of Laboratory Animal Care International
11300 Rockville Pike, Suite 1211
Rockville, MD 20852-3035
Telephone: (301) 231-5353
url: <http://www.aaalac.org>

Association for Behavior Analysis (ABA)

1219 South Park Street
Kalamazoo, MI 49001
Telephone: (269) 492-9310
url: <http://www.abainternational.org>

CLIA-Clinical Lab Improvement Amendment Regional Office, U.S. Department of Health and Human Services

233 N. Michigan Ave.
Suite 600
Chicago, IL 60601-5519
Telephone: (312) 886-4392
url: <http://www.cms.hhs.gov/clia>

Commission on Accreditation for Dietetics Education of The American Dietetic Association

120 South Riverside Plaza
Suite 2000
Chicago, IL 60606-6995
Telephone: (312) 899-0040 ext. 5400
url: <http://www.eatright.org/cade>

Commission on Accreditation in Physical Therapy Education (CAPTE)

1111 N. Fairfax Street
Alexandria, VA 22314-1488
Telephone: (703) 706-3245
url: <http://www.apta.org>

Commission on Accreditation of Allied Health Education Programs (CAAHEP)

35 East Wacker Drive, Suite 1970
Chicago, IL 60601-2208
Telephone: (312) 553-9355
url: <http://www.caahep.org>

Commission on Accreditation of Rehabilitation Facilities (CARF)

4891 E. Grant Road
Tucson, AZ 85712
Telephone: (520) 325-1044 or (888) 281-6531
url: <http://www.carf.org>

Commission on Dental Accreditation of the American Dental Association

211 E. Chicago Ave.
Chicago, IL 60611-2678
Telephone: (312) 440-4653
url: <http://www.ada.org>

COLA

Reference ID #5438 #0455
9881 Broken Land Parkway, Suite 200
Columbia, MD 21046
Telephone: (800) 981-9883
url: <http://www.colag.org>

Committee on Accreditation for Respiratory Care (COARC)

1248 Harwood Road
Bedford, TX 76021-4244
Telephone: (817) 283-2835
url: <http://www.coarc.com>

Council on Academic Accreditation in
Audiology and Speech-Language
Pathology

10801 Rockville Pike
Rockville, MD 20852
Telephone: (301) 897-5700 or (800) 498-2071
url: <http://www.asha.org>

Council for Accreditation of Counseling and
Related Educational Programs (CACREP)

5999 Stevenson Ave.
Alexandria, VA 22304
Telephone: (703) 823-9800 ext. 301
url: <http://www.cacrep.org>

Council on Rehabilitation Education (CORE)

1835 Rohlwing Rd., Suite E
Rolling Meadows, IL 60008
Telephone: (847) 394-1785
url: <http://www.core-rehab.org>

Council on Social Work Education

1725 Duke St., Suite 500
Alexandria, VA 22314-3457
Telephone: (703) 683-8080
url: <http://www.cswe.org>

Educational Leadership Constituent Council

1801 N. Moore St
Arlington, VA 22209-1813
Telephone: (703) 860-7207
url: <http://www.npbea.org>

Federal Aviation Administration
Flight Standards District Office

1250 North Airport Drive, Suite 1
Springfield, IL, 62707-8417
Telephone: (217) 744-1910
url: <http://www.faa.gov/fsdo/spi>

Foundation for Interior Design
Education Research (FIDER)

146 Monroe Center, NW #1318
Grand Rapids, MI 49503-2822
Telephone: (616) 458-0400
url: <http://www.fider.org>

Illinois Alcohol and Other Drug Abuse
Professional Certification Assoc. Inc.

1305 Wabash, Suite L
Springfield, IL 62704
Telephone: (217) 698-8110
url: <http://www.IAODAPCA.org>

International Association of Counseling
Services

101 S. Whiting Street, Suite 211
Alexandria, VA 22304
Telephone: (703) 823-9840
url: <http://www.iacsinc.org>

Joint Review Committee on Education
in Radiologic Technology (JRCERT)

20 N. Wacker Dr., Suite 2850
Chicago, IL 60606-3182
Telephone: (312) 704-5300
url: <http://www.jrcert.org>

Liaison Committee on Medical Education
(LCME) American Medical Association
(AMA) LCME Secretariat

515 North State Street
Chicago, IL 60610
Telephone: (312) 464-4933
url: <http://www.lcme.org>

National Association for the Education
of Young Children (NAEYC)

1509 16th Street NW
Washington, DC 20036-1426
Telephone: (800) 424-2460 X 11318
url: <http://www.naeyc.org>

National Association of Industrial
Technology (NAIT)

3300 Washtenaw Ave., Suite 220
Ann Arbor, MI 48104-4200
Telephone: (734) 677-0720
url: <http://www.nait.org>

National Association of Schools of Art
and Design

11250 Roger Bacon Dr., Suite 21
Reston, VA 20190
Telephone: (703) 437-0700 ext. 10
url: <http://www.arts-accredit.org>

National Association of Schools of Music

11250 Roger Bacon Dr., Suite 21
Reston, VA 20190
Telephone: (703) 437-0700 ext. 10
url: <http://www.arts-accredit.org>

National Association of Schools of
Public Affairs and Administration

1120 G Street, N.W., Suite 730
Washington, DC 20005
Telephone: (202) 628-8965 ext. 105
url: <http://www.naspa.org>

National Association of Schools of
Theatre (NAST)

11250 Roger Bacon Dr., Suite 21
Reston, VA 20190
Telephone: (703) 437-0700 ext. 10
url: <http://www.arts-accredit.org>

National Automotive Technicians
Education Foundation

101 Blue Seal Drive, SE Suite 101
Leesburg, VA 20175
Telephone: (703) 669-6650
url: <http://www.natef.org>

National Council for Accreditation of
Teacher Education (NCATE)

2010 Massachusetts Ave., N.W., Suite 500
Washington, DC 20036-1023
Telephone: (202) 466-7496
url: <http://www.ncate.org>

National Court Reporters Association

8224 Old Courthouse Road
Vienna, VA 22182-3808
Telephone: (703) 556-6272
url: <http://www.ncraonline.org>

National Recreation and Park Association,
NRPA/AALR Council on Accreditation
22377 Belmont Ridge Road
Ashburn, VA 20148
Telephone: (703) 858-2150
url: <http://www.nrpa.org>

Section of Legal Education and Admissions to
the Bar, Office of the Consultant on Legal
Education to the American Bar Association
321 N. Clark, 21st Floor
Chicago, IL 60611
Telephone: (312) 988-6738
url: <http://www.abanet.org/legaled>

Society of American Foresters (SAF)
5400 Grosvenor Lane
Bethesda, MD 20814-2198
Telephone: (301) 897-8720 X 123
url: <http://www.safnet.org>

The Higher Learning Commission of the North
Central Association of Colleges and Schools
30 N. LaSalle St. Suite 2400
Chicago, IL 60602-2504
Telephone: (312) 263-0456 (800) 621-7440
<http://www.ncahigherlearningcommission.org>

Faculty

The University faculty is dedicated to excellence in teaching and to the advancement of knowledge in a wide variety of disciplines and professions. Many faculty members are well known both nationally and internationally for their many varied research contributions. The Undergraduate Catalog lists the numerous programs offered by the faculty and, in addition, in Chapter 5 of this catalog the faculty departments in which they are appointed list members.

Undergraduate Curricula

The undergraduate majors and minors offered by Southern Illinois University Carbondale are listed below in alphabetical order. Also indicated is whether a major, a minor, or both are offered. The academic unit, which offers the major, is listed, as is the degree the student would expect to receive upon graduation. If a major may be completed in more than one academic unit, the other units are listed on additional lines. For example, the biological sciences major are offered through the College of Science. Students planning to teach biological sciences may also complete the major in the College of Education and Human Services. The requirements for each of the programs listed below are explained in Chapter 4 of this bulletin. The degree abbreviations used are: A.A.S., Associate in Applied Science; B.A., Bachelor of Arts; B.F.A., Bachelor of Fine Arts; B.Mus., Bachelor of Music; B.S., Bachelor of Science.

In addition to the majors and minors listed, preprofessional programs may be completed in dentistry, law, medicine, nursing, optometry, pharmacy, physical therapy, physician assistant, podiatry, public health, and veterinary science.

SUBJECT	MAJORMINOR		COLLEGE	DEGREE
Accounting	X	X	College of Business and Administration	B.S.
Administration of Justice	X	X	College of Liberal Arts	B.A.
Aerospace Studies		X		
African Studies		X	College of Liberal Arts	
Agribusiness Economics ⁶	X	X	College of Agricultural Sciences	B.S.
Agriculture, General ⁶	X	X	College of Agricultural Sciences	B.S.
Airport Management and Planning		X	College of Applied Sciences and Arts	
Aircraft Product Support		X	College of Applied Sciences and Arts	
Animal Science ⁶	X	X	College of Agricultural Sciences	B.S.
Anthropology	X	X	College of Liberal Arts	B.A.
Aquatics ²		X	College of Education and Human Services	

Architectural Studies ⁶	X		College of Applied Sciences and Arts	B.S.
Army Military Science Art	X	X	College of Liberal Arts	B.A., B.F.A.
	X		College of Education and Human Services	B.S.
Asian Studies		X	College of Liberal Arts	
Athletic Training ²		X	College of Education and Human Services	
Automotive Technology ⁶	X		College of Applied Sciences and Arts	B.S.
Aviation Flight	X		College of Applied Sciences and Arts	A.A.S.
Aviation Management ⁶	X		College of Applied Sciences and Arts	B.S.
Aviation Technologies ⁶	X		College of Applied Sciences and Arts	B.S.
Biological Sciences	X	X	College of Science	B.S.
	X		College of Education and Human Services	B.S.
Black American Studies		X	College of Liberal Arts	
Business and Administration	X	X	College of Business and Administration	B.S.
Business Economics	X		College of Business and Administration	B.S.
Chemistry	X	X	College of Science	B.A., B.S.
Child and Family Services ³		X	College of Education and Human Services	
Chinese ¹		X	College of Liberal Arts	
Cinema and Photography	X		College of Mass Comm. and Media Arts	B.A.
Civil Engineering	X		College of Engineering	B.S.
Classical Civilization ¹		X	College of Liberal Arts	
Classics ¹	X		College of Liberal Arts	B.A.
Coaching ²		X	College of Education and Human Services	
Communication Disorders and Sciences	X		College of Education and Human Services	B.S.
Computer Engineering	X		College of Engineering	B.S.
Computer Science	X	X	College of Science	B.S., B.A.
Dental Hygiene ⁶	X		College of Applied Sciences and Arts	B.S.
Dental Technology	X		College of Applied Sciences and Arts	A.A.S.
Design	X		College of Liberal Arts	B.A.
Early Childhood ³	X		College of Education and Human Services	B.S.
East Asian Civilization ¹		X	College of Liberal Arts	
Economics	X	X	College of Liberal Arts	B.A.
Electrical Engineering	X		College of Engineering	B.S.
Electronic Systems Technologies ⁶	X		College of Applied Sciences and Arts	B.S.
Elementary Education ³	X		College of Education and Human Services	B.S.
Engineering Technology	X		College of Engineering	B.S.
English	X	X	College of Liberal Arts	B.A.

			College of Education and Human Services	B.S.
Environmental Studies	X		Graduate School	
Equine Studies ⁵	X		College of Agricultural Sciences	
Fashion Design and Merchandising ^{4,6}	X	X	College of Applied Sciences and Arts	B.S.
Finance	X	X	College of Business and Administration	B.S.
Fire Service Management ⁶	X		College of Applied Sciences and Arts	B.S.
Food and Nutrition	X		College of Agricultural Sciences	B.S.
Foreign Language and International Trade	X		College of Liberal Arts	B.A.
Forestry	X		College of Agricultural Sciences	B.S.
French ¹	X	X	College of Liberal Arts	B.A.
	X		College of Education and Human Services	B.S.
Geography and Environmental Resources	X	X	College of Liberal Arts	B.S.
Geology	X	X	College of Science	B.A., B.S.
German Studies ¹	X	X	College of Liberal Arts	B.A.
	X		College of Education and Human Services	B.S.
Greek ¹		X	College of Liberal Arts	
Health Care Management ⁶	X		College of Applied Sciences and Arts	B.S.
Health Education	X		College of Education and Human Services	B.S.
History	X	X	College of Liberal Arts	B.A.
	X		College of Education and Human Services	B.S.
Industrial Technology ⁶	X		College of Engineering	B.S.
Information Systems Technologies ⁶	X		College of Applied Sciences and Arts	B.S.
Information Technology		X	University Wide	
Interior Design	X		College of Applied Sciences and Arts	B.S.
Japanese ¹		X	College of Liberal Arts	
Journalism	X	X	College of Mass Comm. and Media Arts	B.S.
Kinesiology	X	X	College of Education and Human Services	B.S.
Latin ¹		X	College of Liberal Arts	
Linguistics	X	X	College of Liberal Arts	B.A.
Management	X	X	College of Business and Administration	B.S.
Marketing	X	X	College of Business and Administration	B.S.
Mathematics	X	X	College of Science	B.S.
	X		College of Liberal Arts	B.A.
Mathematics	X		College of Education and Human Services	B.S.
Mechanical Engineering	X		College of Engineering	B.S.

Microbiology	X	X	College of Science	B.S.
Mining Engineering	X		College of Engineering	B.S.
Mortuary Science and Funeral Service ⁶	X		College of Applied Sciences and Arts	B.S.
Museum Studies		X	College of Liberal Arts	
Music	X	X	College of Liberal Arts	B.Mus., B.A.
Paralegal Studies for Legal Assistants ⁶	X	X	College of Liberal Arts	B.S.
Philosophy	X	X	College of Liberal Arts	B.A.
Physical Therapist Assistant	X		College of Applied Sciences and Arts	A.A.S.
Physician Assistant	X		College of Applied Sciences and Arts	B.S.
Physics	X	X	College of Science	B.S.
Physiology	X	X	College of Science	B.S.
Plant and Soil Science	X	X	College of Agricultural Sciences	B.S.
Plant Biology	X	X	College of Science	B.A.
Political Science	X	X	College of Liberal Arts	B.A.
Psychology	X	X	College of Liberal Arts	B.A.
Radio-Television	X		College of Mass Comm. and Media Arts	B.A.
Radiologic Sciences ⁶	X		College of Applied Sciences and Arts	B.S.
Recreation	X		College of Education and Human Services	B.S.
Rehabilitation Services	X		College of Education and Human Services	B.S.
Respiratory Therapy Technology	X		College of Applied Sciences and Arts	A.A.S.
Social Studies	X		College of Education and Human Services	B.S.
Social Work	X		College of Education and Human Services	B.S.
Sociology	X	X	College of Liberal Arts	B.A.
Spanish ¹	X	X	College of Liberal Arts	B.A.
	X		College of Education and Human Services	B.S.
Special Education	X		College of Education and Human Services	B.S.
Speech Communication	X	X	College of Liberal Arts	B.S.
Technical Resource Management ⁶	X		College of Applied Sciences and Arts	B.S.
Theater	X	X	College of Liberal Arts	B.A.
University Studies	X		College of Liberal Arts	B.A., B.S.
Women's Studies		X		
Workforce Education and Development ⁶	X	X	College of Education and Human Services	B.S.
Zoology	X	X	College of Science	B.A., B.S.

¹Described under Foreign Languages and Literatures²Described under Kinesiology³Described under Curriculum and Instruction⁴Described under Workforce Education and Development⁵Described under Animal Science⁶Qualified A.A.S. graduates may be eligible to earn a B.S. degree through the Capstone Option. (See Chapter 3)

Campus Visitors

We welcome prospective students, their families, friends, and interested groups to learn about Southern Illinois University Carbondale through various on-campus and off-campus events. Activities on campus include campus visits, group visit days, on-campus previews, and open houses. SIUC off-campus preview programs are held in several locations around Illinois and Missouri each spring.

Campus Visits. Campus visits are available by appointment Monday through Friday 8:00 a.m. to 4:30 p.m. and some Saturdays. To make best use of the visit, plan to arrive early. Please make your reservations at least one week in advance. Your scheduled visit can include meeting with one of SIUC's admission counselors who will advise you about academic programs, student services, admission policies and procedures, housing options, financial aid and general information about the University and community. Guided tours of the campus and housing are available. Appointments with representatives of academic programs can be arranged with advance notice. Campus visitors without advance notice will be accommodated to the best of our abilities. See contact information below.

Group Visits. Arrangements are available for schools, churches or organizations that wish to bring a group of students to campus. Advance reservations are necessary.

Open Houses. Open house programs are held on campus four or five times each year. Activities include admission counseling; academic program exhibits; displays by student organizations; presentations on financial aid, housing, and other student services; tours of residence halls; campus and academic department tours; and opportunities to enjoy other events or activities.

SIUC Previews. SIUC preview programs are events held on-campus and at off-campus locations to bring SIUC within easy traveling distance of many Illinois communities. Activities include admission counseling, small group and individual sessions on financial aid, consultation about University housing, and information displays.

To schedule a campus or group visit to campus, or for information about scheduled on-campus open house and preview programs, write Undergraduate Admissions, Mailcode 4710, Southern Illinois University Carbondale, Carbondale, Illinois 62901 or call (618) 453-7141 or email to <visitsiu@siu.edu>. In addition, visit our home page at <<http://www.admissions.siu.edu>> and view the section for prospective students and special events.

Applying for Admission

Request the Undergraduate Admission Application from Undergraduate Admissions, Mailcode 4710, Southern Illinois University Carbondale, Carbondale, Illinois 62901, call (618) 536-4405 (direct), e-mail to <joinsiu@siu.edu> or view our home page at <<http://www.admissions.siu.edu>>. You can submit the Undergraduate Admission Application electronically. For admission requirements see Chapter 2.

Campus Living

SIUC Housing Policy

All single freshmen under the age of 21, not living with a parent or a legal guardian, are required to live in University Housing.

There are no restrictions for sophomores (26 hours), juniors (56 hours), seniors, students over the age of 21, veterans, or married students. This policy is enforced fall, spring, and summer. Students in violation of this policy will have a hold placed on their future registration and will be required to move into University Housing.

Exceptions may be made for residing with a brother, sister or grandparent. Any students who feel they qualify for an exception should contact the Supervisor of the Housing Policy by telephone at (618) 453-2301 or by email at: <<http://www.housing@siu.edu>>.

Residence Halls

University Housing offers four on-campus residential areas. Included with your contract are features including air-conditioning, local telephone service, cable television and computer labs. Ethernet service is available in all rooms for an additional charge. All residence halls are smoke free. Updated rates are available online at <<http://www.housing@siu.edu>>.

Brush Towers consists of two 17-story residence halls and a commons building. Included in the commons building are dining services, postal services, Grinnelli's Restaurant, an area office and a student lounge containing dart boards, a dance studio, pool tables and more. Brush Towers is conveniently located near the Student Recreation Center and downtown Carbondale.

University Park consists of three 4-story residence halls, one 17-story residence hall and a commons building. Included in the commons building are dining and postal services, an area office, a writing center, a computer lab, a laundry room and a study lounge. This area is open during University breaks. University Park is located within walking distance of the Student Recreation Center and downtown Carbondale.

University Hall consists of one 4-story residence hall. Dining and postal services, an area office and a lounge are located within the building. An inground pool is located in the courtyard. This area is open during University breaks. University Hall is located near the Student Recreation Center and downtown Carbondale.

Thompson Point consists of eleven 3-story residence halls and a commons building. The commons building offers dining and postal services, Lakeside Latte, a weight room, a laundry room, a computer lab, an area office and The Last Resort student lounge. Thompson Point is located on the west side of campus, near Campus Lake. Accessible rooms are available.

Residence Hall Dining

University Housing offers traditional all-you-care-to-eat meals, late-night fast food service, and express areas for students on the go and several specialty shops. Dining services include nutritional counseling by a registered dietitian, continuous serve meals, display cooking and chefs on staff. Dietary questions can be addressed to our dietitian online at <<http://www.housing@siu.edu>>. Meal plans are included in the residence hall room and board contract.

University Housing Apartments

Students may use their financial aid award towards the cost of University Housing Apartments. All apartments are air-conditioned and laundry facilities are located in each area. Each area has live-in staff to assist residents. Programs and activities for adults and children are available in Evergreen Terrace and Southern Hills. Visit the University Housing website at:

<<http://www.housing@siu.edu>> or contact the Contracts Office at (618) 453-2301 for complete eligibility requirements and contract information.

Apartments at Wall & Grand consist of 100 two- and four-bedroom furnished apartments in three four-story buildings. The new apartments will be open to single students with sophomore status and above. Utilities, local telephone service and cable TV are included. Washers and dryers are provided in each apartment. Ethernet services are available for an additional charge.

Elizabeth Apartments is a two-story brick complex with 16 furnished efficiency apartments. Utilities are included in the monthly rate. Elizabeth Apartments are open to single graduate students only.

Evergreen Terrace has 304 unfurnished apartments in 38 two-story buildings. Two- and three-bedroom apartments are available as well as apartments modified to accommodate residents with mobility impairments. Water and trash are included. A computer lab is located at Evergreen Terrace. Evergreen Terrace is open to married couples and couples and single parents with up to four children.

Southern Hills has 272 furnished apartments in 17 two-story buildings. Efficiency, one- and two- bedroom apartments are available as well as apartments modified to accommodate residents with mobility impairments. Utilities are included in the monthly rent. Southern Hills is open to married couples, couples and single parents with up to two children and single graduate students.

Off-Campus Housing

All off-campus housing is privately owned. Off-campus housing information is available in online classifieds at <<http://www.dailyegyptian.com>> and at <<http://www.southernillinoisan.com>>

Parking on Campus

Students wishing to operate, park or possess a motor vehicle on campus must apply for a parking decal at the Parking Division located at 701 S. Washington Street, Building B.

Graduate students and the following categories of undergraduate student may apply for permission to use, operate, park or possess a motor vehicle on campus: (1) Juniors and seniors (with proof of 56 credit hours or more completed); (2) Students 21 years of age; (3) Veterans with two or more years of active duty military service; (4) Married students; (5) Students residing in the home of a parent or guardian; (6) Students requiring a motor vehicle for reasons of health or physical condition as certified in writing by Student Health Services; and (7) On campus freshman and sophomore students must contact the Parking Division to apply for a limited number of decals that are sold via a wait list.

To purchase a decal at the Parking Division, an eligible student must present a student identification card, a valid operator's license and unexpired vehicle registration card. Students residing on campus must also present a housing contract or a meal ticket. If a parking decal is purchased, a fee is charged. The type of decal an applicant is eligible for and receives and the date of purchase determines this fee.

To accommodate unregistered vehicles, twenty-four hour parking is available for the first five days of any term and during final exam week of any term ONLY in lots 56, 59 and 100.

Vehicles without the appropriate parking permit, owned or operated by students in any location on campus, will be issued parking citations.

Exceptions to Motor Vehicle Regulations

Regulations concerning the use of motor vehicles require that a student has achieved junior status, be 21 years of age, married, a veteran with two or more years of active duty service, or hold graduate status. Exceptions are made only on a limited basis. Freshman and sophomore students should contact the Parking Division for details regarding applying for parking privileges via the wait list. See Parking Division's website at <<http://www.dps.siu.edu/parking>> for the latest applicable parking information and policies.

Financial Aid

The Financial Aid Office assists students in obtaining monetary assistance to finance their postsecondary education at Southern Illinois University Carbondale (SIUC). Last year SIUC distributed over \$189 million in financial aid to 19,990 students.

Offers of financial aid are extended beginning in March 2007 for the upcoming fall and spring semesters. These offers are based on the student filing the Free Application for Federal Student Aid (FAFSA), and may include a combination of grants, scholarships, loans and employment. **The priority deadline for filing the FAFSA is April 1, 2007.**

Financial Aid Programs

The University participates in federal, state, and institutionally funded financial aid programs. The Financial Aid Office website at <www.siu.edu/~fao> summarizes the types of financial aid available, application procedures, eligibility requirements, and deadlines.

Grants. The following grant programs are need based and awarded based on the results of the FAFSA:

- Federal Pell Grant

- Federal Supplemental Educational Opportunity Grant

- Illinois Monetary Grant Program (MAP)

- Illinois Incentive for Access Grant Program (IIA)

- SIUC Student-To-Student Grant

- SIUC Need Based Grant

Scholarships. Southern Illinois University Carbondale offers scholarships based on academic achievement, special talent, athletic ability or other considerations. Our scholarship program provides entering freshman and transfer awards to students who have achieved high academic standards, including scholarships for valedictorians, salutatorians, and National Merit finalists. Awards to continuing students who have excelled are also available. Scholarships vary in eligibility requirements and dollar values. A comprehensive list of scholarships is available at <www.siu.edu/~fao>.

Loans. Students attending SIUC can borrow funds from the Federal Direct Stafford/Ford loan programs. Students completing a FAFSA will automatically be considered for federal loans. The Federal Direct Subsidized Stafford/Ford Loan and the Federal Perkins Loan are based on financial need. The Federal Direct Unsubsidized Stafford/Ford Loan is awarded to students who do not demonstrate financial need. The Federal Direct Parent Loan for Undergraduate Students (PLUS) is not based on financial need and allows parents to borrow for their dependent student's cost of attendance. Alternative loans through private lenders are also available.

Employment. The University employed over 6,000 students last year. Most student employees work at the SIUC minimum wage for 15 to 20 hours per week. Job listings can be found at <www.siu.edu/~fao/jobs>. The Undergraduate Assistantship program allows students to gain work experience in the major field of study.

Application for Financial Aid for the 2007-08 Academic Year

To apply for financial aid, students and their parents (if applicable) should complete a 2007-08 Free Application for Federal Student Aid (FAFSA). Students are encouraged to apply online at <www.fafsa.ed.gov>, but paper applications may be obtained from high school guidance counselors or the Financial Aid Office. When

completing the FAFSA, entering our school code of 001758 will allow us to receive application information electronically from the U. S. Department of Education.

Students should complete their FAFSA as early as possible after January 1, 2007, since funding is limited and distributed to eligible students on a first come, first served basis. Priority consideration will be given to students who complete and file the FAFSA by April 1, 2007.

Senior Citizens Courses Act

Senior citizen as defined under the Act means a person 65 years of age or older whose annual income is less than \$21,218 for a household containing one person and other requirements contained in the Senior Citizens Assistance Act (320 ILCS 25). The statute requires the University to waive the tuition for such citizens unless classroom space is not available or if tuition paying students enrolled do not constitute the minimum number required for the course. Even though tuition is waived, the student must pay other fees.

Satisfactory Academic Progress Requirements

Students receiving most forms of financial aid are required to make academic progress toward their degree to remain eligible for assistance. At the end of each spring semester, academic records are evaluated to determine if the student meets the credit hour completion requirement, as well as the 2.00 minimum grade point average. Students must also complete their degree within a maximum number of semesters and are limited in the maximum number of credit hours earned. Students failing to meet the satisfactory progress standard will be placed on probation until the next review. Probationary students not meeting standards at that time will be denied any future financial aid. Policy details may be found at <www.siu.edu/~fao/info/satprog.htm>.

Students who reduce attempted hours or receive WF or WU grades that reduce enrollment to less than half time, or who withdraw from SIUC are subject to repayment of financial aid based on the last date of attendance.

Additional Financial Aid Information

Students desiring information should contact the Financial Aid Office, Mailcode 4702, Woody Hall, B Wing, Third Floor, 900 South Normal Avenue, Carbondale, Illinois 62901, telephone (618) 453-4334. Students may FAX financial aid documents to (618) 453-7305.

Students can contact the Financial Aid Office electronically at e-mail address: <fao@siu.edu>. Students can also access information at: <<http://www.siu.edu/~fao>> or obtain their financial aid information from SalukiNet at: <<http://salukinet.siu.edu>>.

Note: At the time of printing this publication, final rules and regulations for the 2007-2008 academic school year were pending. Students should contact the Financial Aid Office for the most recent information.



2 / Admission, Tuition and Academic Information



Admission Policies, Requirements, Procedures

Policies and procedures for admission are presented in the admissions section of this chapter. Definitions of each category of admissions are included along with procedures needed to follow to complete your undergraduate admission application.

APPLYING FOR ADMISSION

Request an Undergraduate Admission application from Undergraduate Admissions, Mailcode 4710, Southern Illinois University Carbondale, Carbondale, Illinois, 62901 or phone (618) 536-4405 or email <joinsiuc@siu.edu> or download a printable application at: <<http://admissions.siu.edu>>. The application requires a \$30 non-refundable fee, payable by check, money order or credit card. The admission application cannot be processed until the application fee is received. The Undergraduate Admission Application may also be submitted electronically <<http://admissions.siu.edu>> and the fee charged to a credit card.

Applications for admission to the University are accepted anytime during the calendar year but should be submitted at least thirty days prior to the beginning of classes in order to permit the processing and notification through the mail.

The University closes admission to some programs whenever the availability of faculty or facilities necessitates such closures. The University also stops accepting admission applications from freshman whenever the availability of the University resources dictates this action.

If you are a transfer student you can be considered for any future term. Transfer students who intend to transfer to Southern Illinois University Carbondale before completing one year of study may be admitted prior to completing their transfer work if they qualified for admission as beginning freshmen.

DOCUMENTS REQUIRED TO PROCESS AN APPLICATION FOR ADMISSION

All students need a completed Undergraduate Admission Application accompanied by the \$30 application fee.

NEW FIRST TIME FRESHMAN AND TRANSFERS WITH LESS THAN 26 SEMESTER HOURS

1. High School Transcripts or GED Test Scores.
2. ACT or SAT scores¹.

TRANSFER STUDENTS (INCLUDING THOSE WITH LESS THAN 26 SEMESTER HOURS)

1. Transcripts from each institution of post-secondary education attended, even if no credit was earned. Transcripts must not be issued for more than 30 days.

¹ Must have their official ACT scores sent to the University from ACT, Inc., Box 451, Iowa City, Iowa 52240, <www.act.org> or their official SAT scores sent to the university from the College Board SAT Program, PO Box 6200, Princeton, New Jersey 08541, <www.collegeboard.com>.

Programs Requiring Additional Materials or Screening

In addition to the undergraduate admission application and the required educational records, some programs require applicants to submit other materials. These programs are: architectural studies, aviation flight, aviation management, dental hygiene, fashion design and merchandising, health care management, interior design, mortuary science and funeral service, physical therapist assistant, physician assistant and radiologic sciences. After applicants to these programs have been admitted to the University, they will receive information and instructions from their intended major.

The following majors require that students be screened beyond the regular SIUC admission requirements before entering directly into the programs: archi-

tectural studies, automotive technology, aviation flight, aviation management, dental hygiene, fashion design and merchandising, fire service management, foreign language and international trade, information systems technologies, interior design, health care management, mortuary science and funeral service, music, paralegal studies, physical therapist assistant, physician assistant, radio-television, radiologic sciences and all teacher education programs.

In most cases, students may apply for any major in any term. However, a few majors at SIUC permit new students to enter in the fall semester only. They are: architectural studies, dental hygiene, fashion design and merchandising, interior design, physical therapist assistant and radiological sciences. For transfer students, admission to architectural studies and interior design in spring or summer will be considered individually. The physician assistant program permits new students to enter summer only.

Some programs offer major courses beginning in the fall only, but will permit students to begin in the spring and summer terms to take non-major courses. These programs include mortuary science and funeral service.

ADMISSION OF FRESHMEN

To be eligible for admission, you must be a graduate of a recognized high school. Graduates of non-recognized high schools may be admitted to the University by submitting an acceptable entrance examination score. If you have not completed high school, you may be considered for admission by passing the GED test.

Students entering the University as freshmen are admitted to the academic unit within the University that offers the academic program they indicate they plan to pursue if the student qualifies for admission into that program. Students who are in the process of deciding on the course of study they want to follow are admitted as a Pre-Major student or to selected other academic units with an undecided major.

Students admitted as beginning freshmen, but who enroll at another college or university prior to their enrollment at Southern Illinois University Carbondale may face a change in their admission status. It will be necessary for students to report work in progress and forward the official transcripts after completion of the coursework.

Beginning freshmen are considered for admission on the basis of a combination of class rank and test scores (ACT or SAT). In addition, students entering the University are required to have completed selected high school courses to qualify for unconditional admission. All students granted admission while in high school are required to graduate from high school. See High School Course Pattern Requirements below.

High School Course Pattern Requirements. This policy applies to beginning freshman and transfer students who have completed fewer than twenty-six semester hours of transferable credit.

HIGH SCHOOL COURSE REQUIREMENTS FOR ADMISSION

Course	Required Units	High School Courses That Complete the Area
English	4	Emphasizing written and oral communication and literature
Social Studies	3	Emphasizing history, government, sociology, psychology, geography, etc.
Mathematics	3	Algebra I and II, and a proof-based geometry course. A fourth unit is highly recommended: trigonometry and pre-calculus, or statistics, depending on the student's area of interest.
Science	3	Laboratory sciences.

Electives..... 2 Foreign language, art, music, or vocational education. If a foreign language is taken, it must include two semesters of the same language.

Total 15 – 15.5

High school units in excess of the required number of units in social studies or science may be redistributed among the other categories by applying no more than one unit to any of the following categories: social studies, science, or elective. Elective subjects cannot be substituted for required courses in English, mathematics, science or social sciences. A prospective student with two or more deficiencies in English or mathematics may be subject to denial.

Beginning freshmen may satisfy a course pattern deficiency by achieving a sub score on the ACT, which is equivalent to the sixtieth percentile on the College Bound Norms. CLEP scores or AP scores that qualify the student for credit may also fulfill deficiencies. The tests must be in the area that is deficient.

Students, who have course pattern deficiencies but qualify for admission based on class rank, test scores and transfer grade point average, will be admitted to the University on the condition that deficiencies will be satisfied through the academic advisement process.

Selected applicants are exempt from the high school subject requirements. These include students whose class rank and ACT test scores are at the seventy-fifth percentile, participants in the high school/concurrent enrollment program until the time of their high school graduation, and transfer students who have earned twenty-six semester hours of transferable credit.

Requirements for Admission of Freshman

High school graduates, who have fulfilled mandated course subject pattern requirements, can be granted admission in one of the following ways:

1. ACT composite score (or equivalent SAT score) at the 66th percentile, or above, and class rank in the top three quarters, or
2. ACT composite score (or equivalent SAT score) at the 50th percentile, or above, and class rank in the top half, or
3. ACT composite score (or equivalent SAT score) at the 33rd percentile, or above, and class rank in the top quarter.

All other applicants who meet the course pattern requirements will be reviewed to determine potential admissibility. Admission of students who do not meet the above requirements may be subject to conditions.

ADMISSION OF TRANSFER STUDENTS

If you have attended another college, university, or postsecondary institution you are required to submit an official transcript from each institution attended. All transcripts become the official property of Southern Illinois University Carbondale and will not be returned nor issued to another institution. Transcripts must be issued by the previously attended institution within the last thirty days. Transcripts are required from the following institutions:

1. An institution which is accredited or in candidacy status by one of the regional accrediting associations; or,
2. An institution which is not accredited by or in candidacy status with one of the regional accrediting associations but the credit from the institution is accepted by the reporting institution in that state; or,
3. An institution which is not accredited by or in candidacy status with one of the regional accrediting associations but is one recognized by ACCSCT, ACICS, N.A.I.T., AMA, ABET, or similar accrediting bodies recognized by the National Commission on Accrediting or the United States Office of Education. The student must have completed a two-year non-baccalaureate degree or equivalent terminal program with a *C* average before admission to SIUC will be granted. Students ad-

mitted from such institutions should not expect to receive credit at Southern Illinois University Carbondale except in programs, which accept occupational credit.

Requirements for Admission of Transfer Students

1. Graduation from a recognized high school or satisfactory completion of the General Educational Development Test; and,

2. An overall *C* average (2.0 on a 4.0 scale) from all post-secondary institutions. All grades earned in transferable courses and in courses with a quality point value are used to calculate the grade point average used for admission purposes. Beginning Summer 2003, the repeat policy requires that all earned grades carrying quality point values are to be considered when computing students' grade point averages, including each earned grade in all courses. Effective Summer 1996 through Spring 2003, only the last grade of the subsequently repeated course will count in the grade point average even if the last grade is an *F*. The course must be from the same institution. Prior to Summer 1996, all earned grades carrying quality point values are considered when computing student' grade point averages, including each earned grade in a repeated course. All courses must be from the same institution. All transfer work is calculated according to Southern Illinois University Carbondale regulations rather than those of institutions students have previously attended; or,

3. Completion of an associate degree in a baccalaureate-oriented program (A.A. or A.S.) from an accredited Illinois public two-year institution. The student will: (a) be admitted with junior standing and, (b) be considered to have completed the University Core Curriculum requirements required for general graduation purposes; and,

4. Eligible to continue your enrollment at the last post-secondary institution attended. Students who have been placed on scholastic probation or academic suspension from another college or university will be considered for admission by Undergraduate Admissions only if there is tangible evidence that additional education can be completed successfully. Tangible evidence might include: (1) an interruption of schooling for one or more years, (2) military experience, (3) work experience, and (4) previous academic performance.

The Office of Judicial Affairs must clear students suspended for any reason other than academic failure, before the Director of Admission will grant admission. If you are seeking admission with fewer than twenty-six semester hours, you will be required to meet the admission requirements of a beginning freshman as well as a transfer student.

Transfer students who have completed a minimum of one year of work can be considered for admission in advance of their matriculation. If you are enrolled in a collegiate program for the first time and wish to transfer upon completion of your first term or first year, you may do so if you meet the University's admission requirements for beginning freshmen. Admission granted to a student on partial or incomplete records is granted with the condition that the student will have an overall *C* average and be eligible to continue at the last school attended at the time of matriculation. Students whose final transcripts indicate a grade point average or scholastic standing less than that required for unconditional admission may have their admission and registration withdrawn or their scholastic standing changed.

Transfer students will be admitted directly to the academic unit in which their major field of study is offered if they qualify for that program. Students who are undecided about their major field of study will be admitted to Pre-Major Advisement or to selected other units with an undecided major. Information on articulation of individual colleges/universities is available on the World Wide Web site:

<<http://www.siu.edu/departments/oar/transfers.htm>>.

Transfer Credit

Transfer credit for students admitted to the University is evaluated for acceptance toward University and University Core Curriculum requirements by Academic Support Programs (a division of the Office of Records and Registration) after the admission decision has been made. Credit from a regionally accredited institution, and those in candidacy status, or from an institution that has its credit accepted by the reporting institution in the state is evaluated at the time of admission. Courses, which are remedial, developmental or pre-college, will not be accepted for transfer. Academic Support Programs will determine the acceptance of credit and its applicability toward University Core Curriculum requirements. All credit accepted for transfer, which is not applied to University Core Curriculum requirements or to a specific degree program, will be considered general transfer credit (elective credit). Transfer courses to be considered toward specific program requirements will be articulated by the department directing the program. Information on articulation of individual schools is available on the World Wide Web site: <<http://www.registrar.siu.edu/eval/transfers.htm>>.

All grades earned in transferable courses and in courses with a quality point value are used to calculate the grade point average used for admission purposes. Beginning Summer 2003, the repeat policy requires that all earned grades carrying quality point values are to be considered when computing students' grade point averages, including each earned grade in all repeated courses. Effective Summer 1996 through Spring 2003, only the last grade of the subsequently repeated course will count in the grade point average even if the last grade is an *F*. The course must be from the same institution.

Prior to Summer 1996, all earned grades carrying quality point values are considered when computing students' grade point averages, including each earned grade in a repeated course. All courses must be from the same institution. Transfer work is calculated according to Southern Illinois University Carbondale regulations.

All credit that is accepted for transfer and not applied to University Core Curriculum requirements or to a specific degree program will be considered general transfer credit (elective credit). A student should only expect to receive credit if the transfer work was taken at a regionally accredited institution or one whose credit is accepted by the reporting institution in the state.

The University accepts credit earned through extension, off-campus, or correspondence programs toward the bachelor's degree. Not more than 30 semester hours may be taken in correspondence work. Correspondence work taken from regionally accredited institutions is accepted if the grade is a *C* or better. SIUC operates an Individualized Learning Program, similar to correspondence programs, in which students may earn academic credit.

Credit for Military Experience. Students who have served one or more years of active duty and received an honorable discharge may receive two hours of military studies credit, two hours of physical education credit, and two hours of health education credit. Service of only six months to one year may result in two hours of freshman aerospace studies or army military science credit. Completion of basic training will result in an award of two hours of physical education credit. To receive credit, students must submit a copy of the DD 214 (copy 4) document.

Credit will be accepted for DANTES subject standardized courses within the limits enforced for proficiency credit. No credit is allowed for college-level GED tests. In evaluating credit possibilities based on formal service-school training programs, the recommendations of the American Council on Education, as set forth in the US Government bulletin *Guide to the Evaluation of Educational Experiences in the Armed Forces* are followed. To receive credit for military service, veterans must present a copy of discharge separation papers, an AARTS transcript, a SMART transcript or transcript from the Community College of the Air

Force to Academic Support Programs, Records and Registration, Mailcode 4701, SIUC, Carbondale IL 62901. For information contact the World Wide Web site: <<http://www.registrar.siu.edu/eval/articpg.htm>>.

Submission of Transcripts. Transfer students who have taken college-level work at other institutions must have an official transcript of all work, from each college or university attended, forwarded to the Office of Records and Registration. All transcripts must be issued by the sending institution within the last thirty days. Failure to comply with this ruling, failure to indicate all institutions attended on the undergraduate admission application, or incorrect information regarding the status at other institutions can result in withdrawal of admission, dismissal, or denial of credit.

Completion of an associate degree in a baccalaureate-oriented program (A.A. or A.S.) in an accredited Illinois two-year public institution provides that the student will: (a) be accepted with junior standing and (b) be considered to have completed the University Core Curriculum requirements required for general graduation purposes. These benefits do not automatically apply to other associate degrees (e.g., A.A.S., A.E.S., A.G.S., A.F.A.). Associate degrees earned at other than Illinois two-year institutions will be reviewed by the Office of Records and Registration. If the degree is determined to be baccalaureate-oriented and to have comparable content and credit hour criteria, the same benefits will be extended to those graduates. Transfer students may also satisfy the requirements of the University Core Curriculum by successful completion of the Illinois Transferable General Education Curriculum. Credit from an accredited two-year institution is limited only by the provision that students must earn at least 60 semester hours of work at Southern Illinois University Carbondale or at any other approved four-year institution and must complete the residence requirements for a degree from the University.

Further information on the application of transfer work toward satisfying University Core Curriculum requirements may be found in Chapter 3.

ADMISSION OF SPECIAL CATEGORIES OF STUDENTS

Several types of students are given special consideration when seeking admission to the University.

Admission of International Students

In general, international students must meet the same academic standards for admission as those required of domestic students. As there is considerable variation between educational systems throughout the world, precise comparative standards are not always available. Therefore, international students are considered for admission on the basis of their former academic work, English proficiency, and evidence of adequate financial resources.

In addition to submitting copies of secondary school records and, when applicable, college transcripts, international students must also submit scores from the TOEFL examination (Test of English as a Foreign Language). TOEFL scores are required of all international students who (1) have completed their secondary education in a country where English is not the native language, (2) have completed fewer than two years of study in a United States high school, (3) have completed fewer than two years (56 semester hours) of collegiate training in an accredited United States college or university. Students who have completed their secondary education in a country where English is the native language are required to submit scores from either the American College Test (ACT) or the Scholastic Aptitude Test (SAT).

Students who have acquired immigrant status are also required to demonstrate English proficiency. English proficiency can be demonstrated by successful completion of the TOEFL examination. Immigrants who have completed at least two years of study in a United States high school, have earned 56 semester hours in a

United States college or university, or have completed their secondary education in a country in which English is the native language are not required to submit TOEFL scores or write a special English examination. They may, however, be required to submit university entrance examination scores (ACT or SAT) if they are seeking admission as a beginning freshman or as a transfer student with fewer than twenty-six semester hours.

International students whose secondary school and college records are acceptable for admission purposes must achieve acceptable TOEFL scores for unconditional admission. Students with a TOEFL score of 520 (paper exam) or higher or 190 or higher (computer exam) will be granted unconditional admission. Applicants whose TOEFL score is less than 520 (paper) or 190 (computer) will be admitted contingent upon completion of an English test administered by the Center for English as a Second Language. Students who fail to submit TOEFL scores, or who do not submit acceptable TOEFL scores, will be required to attend courses at the Center for English as a Second Language (CESL). A \$30 nonrefundable fee must accompany the application.

An administrative service fee of \$100 per student per semester, including summer session, will be charged to sponsoring agencies which enroll international students.

International students interested in making application to Southern Illinois University Carbondale should address their inquiries to International Programs and Services, Mailcode 4333. Southern Illinois University Carbondale, Carbondale, Illinois 62901. The undergraduate international admission application can be submitted electronically by linking to <<http://www.siu.edu/intl>>.

Southern Illinois University Carbondale is authorized under Federal law to enroll non-immigrant alien students.

Admission of Former Students

If you have attended other institutions since your previous enrollment at Southern Illinois University Carbondale you must submit an official transcript from each institution before you can be considered for readmission. An overall C average (2.0 on 4.0 scale) as calculated according to SIUC grading policies and procedures and based on all post-secondary institutions attended since previous SIUC enrollment is required for readmission consideration. In addition, a student who has a financial obligation to the University or an immunization hold must clear these holds before being considered for readmission. Students who were suspended for scholastic or disciplinary reasons during their previous enrollment at the University must be approved for readmission by the appropriate academic dean or the Office of Judicial Affairs before they can be readmitted to the University. Students with less than a C average must be approved for readmission by an academic dean if they are entering an academic unit other than the one in which they were previously enrolled.

It is advisable for former students to initiate the readmission process with the Office of Undergraduate Admissions early. This permits students to complete any special requirements that may be imposed upon them. (See Scholastic Probation, Second Chance and Scholastic Suspension elsewhere in this catalog for further information.)

SECOND CHANCE PROGRAM — A SPECIAL ADMISSION PROGRAM FOR FORMER STUDENTS

The Second Chance Program is designed to allow some former Southern Illinois University Carbondale students who had a poor scholastic performance in their initial enrollment a second opportunity to demonstrate their academic capabilities. The program permits students in selected majors to establish a new grade point average calculated from their first semester of readmission. Not all University departments are participating in the Second Chance Program. Second Chance students will lose their Second Chance standing if they transfer to a program that does not offer Second Chance.

Program Eligibility Requirements. Former Southern Illinois University Carbondale students who meet one of the following qualifications may apply for entrance to the Second Chance Program.

1. Adult reentering students who are at least twenty-four years of age and who previously earned fewer than 60 semester hours at Southern Illinois University Carbondale with less than a 2.0 grade point average. Applicants who have attended any post-secondary institution, college, or university including Southern Illinois University Carbondale within the immediate three years prior to reentering Southern Illinois University Carbondale in the Second Chance Program, must have earned a 2.0 cumulative gpa for collegiate work taken during that period.
2. Veterans who have completed at least one year of active military service after having previously earned fewer than 60 semester hours at Southern Illinois University Carbondale with less than a 2.0 gpa. Southern Illinois University Carbondale must be the first institution attended since discharge or separation.
3. Community college associate degree graduates who have previously earned less than 60 semester hours from SIUC with a grade point average below 2.0 prior to completing an associate degree from a regionally accredited institution. SIUC must be the first institution attended since earning the associate degree.

Application/Admission Guidelines and Academic Regulations.

1. A former Southern Illinois University Carbondale student must meet the University readmission requirements at the time of readmission before applying for the Second Chance Program.
2. The Second Chance Program application must be submitted before completing the first semester of attendance after being readmitted to the University. The application should be submitted soon after the readmission decision is granted.
3. A student can be admitted to Second Chance only once. Students who are suspended for scholastic reasons while enrolled in Second Chance cannot be readmitted to this program.
4. Students readmitted to Southern Illinois University Carbondale through the Second Chance Program may enter only selected majors. The following programs do **not** participate in the Second Chance Program and transferring to these programs will result in the loss of your Second Chance status.

Accounting	Kinesiology (athletic training and
Aviation Flight	teacher education specializations)
Business and Administration	Management
Business Economics	Marketing
Business–Undecided	Mechanical Engineering
Cinema and Photography	Mining Engineering
Civil Engineering	Physical Therapist Assistant
Communication Disorders and Sciences	Physician Assistant
Electrical and Computer Engineering	Radio-Television
Finance	Radiologic Sciences
	Social Work

In addition to the above programs, Teacher Education Programs in the College of Education and Human Services as well as those majors in other colleges in which a student intends to pursue a Teacher Education Program are not available to students in the Second Chance Program.

5. Students readmitted through the Second Chance Program will have Second Chance indicated on their transcripts with an appropriate explanation of the program included in the transcript explanation sheet, which is attached to all transcripts.
6. Students who are readmitted through the Second Chance Program must meet the curricular requirements stated in the undergraduate catalog in effect for either the term of their reentry or for subsequent terms after their reentry to Southern Illinois University Carbondale under the Second Chance Program.

7. A new Southern Illinois University Carbondale grade point average will be calculated from the first term of readmission through the Second Chance Program.

8. The new Southern Illinois University Carbondale grade point average will apply only to scholastic retention, and the grade point average required for graduation from the University. All grades earned at Southern Illinois University Carbondale, including all work taken prior to admittance to the Second Chance Program, will be used in the calculation of student classification, major program grade point average, collegiate unit requirements, graduation honors, and total semester hours completed.

9. Previously earned work at Southern Illinois University Carbondale will remain on the student's official record and passing work may be used to satisfy degree requirements.

10. Students readmitted through the Second Chance Program may not use the University's forgiveness policy to calculate another GPA for graduation purposes.

11. To be eligible for graduation, a student readmitted through the Second Chance Program must earn at least 30 additional semester hours at Southern Illinois University Carbondale.

12. A Second Chance student who changes majors to a program, which does not participate in Second Chance, will have their previous SIUC grade point average calculated in all future grade point averages.

Admission of Veterans

Veterans seeking admission to the University are admitted in good standing regardless of their previous academic record provided that any additional post-secondary education attempted after active duty has been completed with a grade average of C (2.0 equals C) quality or better.

Veterans are required to submit all required admission credentials before their applications can be processed. This includes high school transcripts or GED scores, ACT or SAT results if under the age of 21, and official transcripts from each college or university previously attended. Official transcripts from the previously attended institutions must not be more than thirty days old. In order to be admitted under the veteran's policy, one must have served on active duty and present a copy of discharge or separation papers (DD 214-copy 4) to the Office of Records and Registration. There is a \$30 nonrefundable fee, which must accompany the application.

Military personnel on active duty in any branch of the United States military are expected to meet the same admission requirements as a veteran. Students in military programs are admitted directly into the degree program in which they are enrolling.

Admission of Students as Unclassified

Individuals who wish to take classes at SIUC but who do not intend to earn a degree at this time can be considered for admission as an unclassified student. To be eligible, the student must have graduated from an accredited high school or have passed a high school equivalency test (GED). Students in this category are non-degree-seeking and are not required to submit records normally required for admission to a degree program. Students in this category may take up to a total of twenty-six semester hours before they are required to provide all of their academic records. Students in this category are not ordinarily eligible for any financial aid program. There is a \$30 nonrefundable fee that must accompany the application. This fee is not required of students enrolling solely in courses specifically designated as Distance Education.

SENIOR CITIZEN COURSES ACT

Students admitted under the Senior Citizen Courses Act may be considered for admission as unclassified non-degree students without submitting records required for admission to a degree program. Those seeking admission to a degree program must meet all University admission policies. For further information refer to Financial Aid.

Admission of High School Students for Concurrent Enrollment

Exceptionally capable high school students that have completed their freshman year in high school and are recommended in writing by their high school principal may be approved for admission by the director of Undergraduate Admissions. Enrollment in some University courses may be subject to departmental approval. Students approved for admission to this program will be permitted to enroll in University courses during the summer and concurrently with their high school work during the regular school year. Sophomores and juniors may register for one course and seniors may enroll for one and possibly two courses depending on their high school schedules. There is a \$30 nonrefundable fee, which must accompany the application. The concurrent enrollment program is an acceleration and enrichment experience for academically capable students. To participate in the program, students must have achieved an overall *B* average (3.0 on a 4.0 scale) in high school.

The University courses to be taken in this program should be in subject areas in which a high school does not offer courses or in subject areas in which the student has completed all of the courses the high school can offer. When a high school principal recommends a specific course or courses to be taken, an academic advisor will assist the student in arranging such a schedule.

It is assumed that high school principals who recommend students for this program will consider a student's aptitude for completing college work and a student's ability to adjust socially to the campus community.

Admission of Transient Students

Students who are attending another collegiate institution and want to enroll for one semester must submit an undergraduate admission application. They must also submit documentation indicating they have an overall *C* average and are eligible to continue their enrollment at the last institution attended. This can be a student's most recent transcript or grade report. Transient students who request to continue their enrollment for subsequent semesters must submit all documents required for admission and meet the University's current admission policies. There is a \$30 nonrefundable fee, which must accompany the application.

Advisement, Registration, Withdrawal

Through a carefully designed system of orientation, academic advisement and registration, the University attempts to assure students an efficient and effective introduction to the University prior to the time they start class attendance. A more extensive program is provided for those students entering during the fall semester while abbreviated activities are in operation for the other semesters.

The University conducts an advance registration system. All continuing and new students have the opportunity and are expected to complete advisement and registration for the semester before its actual start. Advisement and registration for new freshmen are included with the orientation activities. These activities are offered prior to the start of school.

Similar procedures are followed at the start of the other semesters. Admitted students are kept informed of orientation, advisement, registration procedures, and the times when they occur by the Office of Records and Registration in cooperation with New Student Programs and other units in Student Affairs.

Academic Advisement

Academic advisement is administered by the academic units. Each unit employs a select group of trained advisors. They operate under the supervision of a chief advisor who is responsible to the dean of the academic unit. Students who have not yet declared a major are advised in the Pre-Major Advisement Center.

The University accepts the importance of the academic advisement function. Insistence on receipt of transcripts and ACT or SAT scores prior to admission serves not only to determine admission, but later provides suitable educational information to advisors upon which decisions can be made relative to the proper courses to advise the student to take. On the basis of this information, an advisor can make intelligent decisions relative to students who should receive advanced standing in courses or who should be urged to take proficiency examinations in courses about which they appear to be already well informed.

The advising of individual students as to their progress is a service provided to them. It does not relieve the students of the responsibility to assure that they are meeting the requirements they need for graduation. The students should check with their advisor whenever there is a question as to how they are proceeding.

Changing Majors

A student wishing to change their major must receive approval from the new department and college. A minimum of a *C* average is required to process a change in major; some academic units and departments require a higher grade point average. To ascertain the grade point average required for a department, check Chapter 5. Students with less than a *C* (2.0) grade point average who desire to change from one department to another will be admitted to the new academic unit only if approved by the dean of that unit. A change is initiated by going to the academic unit where admission is being sought.

Registration for Courses

Registration for any session of the University is contingent upon being eligible for registration. Thus advance registration, including the payment of tuition and fees, is considered to be invalid if the student is later declared to be ineligible to register due to scholastic reasons. One may also be considered ineligible to register because of financial or disciplinary reasons.

Detailed information about the dates and procedures for advisement and registration may be found at: <<http://registrar.siu.edu/records/schedclass.htm>>.

Familiarization with the following general points about registration is important.

1. Registration for a semester is conducted under a registration calendar consisting of three distinct periods. Advance registration occurs during the last eight weeks of the preceding term, final registration immediately preceding the start of classes and late registration during the first week of classes.

2. Currently enrolled students are expected to register during the advance registration period. New freshmen, transfer, and re-entry students are provided an opportunity to advance register on specific new student registration days during the advance registration periods.

3. Students who are unable to advance register may register prior to the beginning of classes during the final registration period.

4. Students register at the advisement center of their colleges, schools or departments.

5. A student may not attend a class for which he/she is not officially registered. Mere attendance does not constitute registration in a class, nor will attendance in a class for which a student is not registered be a basis for asking that a program change be approved permitting registration in that class. Students should complete the registration process before classes begin.

6. Enrollment changes to classes can only be made through the processing of an official registration form. After the second week of the semester, the Office of Records and Registration must process this form.

7. Tuition and fees are payable in advance or by installments and no student shall be enrolled in any educational unit until at least the first installment of tuition and fees has been paid or officially deferred.

8. Students may not drop a course merely by stopping attendance.

Attendance

The faculty of Southern Illinois University Carbondale affirms the importance of prompt and regular attendance on the part of all undergraduate students. Quality instruction clearly depends upon active student participation in the classroom or its equivalent learning environment. In the transition from high school to the university and from the university to the workplace, personal success is directly related to good attendance.

As a caring public institution, SIUC has the obligation to encourage its primary constituents, the students, to meet their responsibilities first of all to themselves, but also to their families, their classmates, their instructors and the taxpayers and donors who underwrite higher education in the state of Illinois.

For these reasons the SIUC faculty remind undergraduates and their instructor that the first day of class is just as valuable as the last day of class; that work and other extracurricular commitments do not necessarily justify an absence; that holidays begin and end precisely as stated in the University calendar; that instructors should be notified three days prior to religious observances; that major examinations, term papers, and/or assigned projects for one class do not exempt students from their need to attend another; and finally, that some financial assistance at the university is actually contingent upon attendance.

Students who stop attending a class without officially dropping will be subject to being awarded a *WF* grade for the class. The *WF* grade is assigned by the instructor along with an indication of the recorded last date of attendance. The *WF* grade counts as an *F* in the undergraduate gpa calculation. The last date of attendance associated with the *WF* may affect the student's enrollment status, and thus their eligibility for financial aid.

These guidelines express the faculty's collective concern for undergraduates and for one important feature of their education here at SIUC.

Student Identification Numbers

The university student identification number may be the student's Social Security number. Students who do not have a Social Security number will be issued a system-generated number. Students not wanting their Social Security number used as their university identification number may request a system generated number by contacting the Office of Records and Registration.

Withdrawal

Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. Outlined below are the procedures to be followed when dropping courses and when dropping from the University (which would be withdrawal from all courses for which registered).

DEADLINE DATES

If Classes Meet for	Deadline for Withdrawal to Receive Full Refund	Deadline to Withdraw
13-16 weeks	2nd week	8th week plus 1 day
9-12 weeks	2nd week	6th week
8 weeks	2nd week	4th week
7 weeks	1st week	4th week
4-6 weeks	1st week	3rd week
2-3 weeks	1st day	1st week
Less than 2 weeks	1st day	2nd day
Off-Campus and Individualized Learning Courses ¹	2nd week	8th week

¹Off campus sections (not to include Military Programs) have the same relative deadline dates as On-campus sections, based on the scheduled meeting dates of the section. Individualized learning deadlines are calculated beginning with the date the student registers for the class.

Course Drops. Students officially drop courses through the program change process. This process is done with the academic advisor. Unless a student has processed an authorized drop from a course by the deadline in the schedule above, the student will not be allowed to drop the course. It is the student's responsibility to ensure that the drop process is officially completed. It is probable that a student, who does not drop by the deadlines, but stops attending during the second half of the semester, will receive a grade of *WF*. Note: ceasing to attend a course may affect a student's financial aid eligibility and the *WF* counts as an *F* in the calculation of the gpa. Students who drop courses after the full refund deadline, but remain enrolled in the University, will not receive any refund.

Withdrawal From the University. Students registered for academic work must obtain a withdrawal if they contemplate leaving the University. If a housing contract has been purchased, the student must contact University Housing to cancel the contract.

Withdrawal from the University is a serious decision, which, in many cases, affects financial assistance status, housing contracts, and academic records. A student may, with authorization from the Office of Records and Registration and the academic dean, obtain a withdrawal. There are, however, restrictions on a withdrawal. A withdrawal will not be issued beyond the eighth week of the semester unless the reasons for the withdrawal are beyond the student's control and verified in writing. Warning: if a student obtains a withdrawal after the 100% refund period and is receiving financial assistance, the student may be in violation of the Satisfactory Progress for Financial Assistance policy since no academic credit will be earned for the semester. The table above provides the deadline dates for withdrawal.

Students receiving a withdrawal from a full semester length course within the first two weeks will, under normal circumstances, receive a refund of all tuition and fees paid by the student or family. All financial assistance funds will be returned to their original sources if the student withdraws during the 100% period.

Students who withdraw after the full refund deadline will receive an account credit equal to a pro-rata refund of tuition and fees through sixty percent of the duration of the enrollment period. An administrative fee will be assessed to all students who withdraw from the University and receive a pro-rata refund. The amount of the fee will be lesser of five percent of all assessed charges, or \$100. See the following:

PRO-RATA REFUND SCHEDULE FOR WITHDRAWALS FROM THE UNIVERSITY (Subject to change)

Enrollment		Length of Courses in Weeks											
Period		16	15	14	13	12	11	10	9	8	7	6	5
Week 1		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Week 2		100%	100%	100%	100%	100%	100%	100%	100%	100%	70%	70%	60%
Week 3		80%	80%	80%	80%	70%	70%	70%	70%	60%	60%	50%	40%
Week 4		70%	70%	70%	70%	70%	60%	60%	60%	50%	40%	40%	0%
Week 5		60%	60%	60%	60%	60%	50%	50%	40%	40%	0%	0%	0%
Week 6		60%	60%	50%	50%	50%	40%	40%	0%	0%	0%	0%	
Week 7		50%	50%	50%	40%	40%	40%	0%	0%	0%			
Week 8		50%	40%	40%	40%	0%	0%	0%					
Week 9		40%	40%	0%	0%	0%	0%						
Week 10		40%	0%	0%	0%								
Week 11		0%	0%	0%									

Enrollment		Length of Courses in Weeks			
Period		4	3	2	1
Day 1	Week 1	100%	100%	100%	100%
Day 2		100%	90%	80%	60%
Day 3		100%	80%	70%	40%
Day 4		100%	70%	60%	0%
Day 5		100%	60%	50%	0%
Day 6	Week 2	70%	60%	40%	
Day 7		60%	50%	0%	
Day 8		60%	40%	0%	
Day 9		50%	40%	0%	
Day 10		50%	0%		
Day 11	Week 3	40%	0%		
Day 12		40%	0%		
Day 13		0%			
Day 14		0%			
Day 15		0%			
After Day 15			0%		

Students who officially withdraw from school by the specific withdrawal deadline will receive a credit to their University account. Immediate cash refunds are not given for withdrawal from the University, reduction in credit-hour loads, or over-payment of account. The Bursar processes refunds at least once a week (twice a week during the week before the start of a semester and the first week of a semester) from an automated listing reflecting those accounts with a credit balance. No refunding of tuition and fees is made for a withdrawal occurring after the deadlines, except as described in the section titled Tuition and Fee Refund Policy and Procedures below.

Special consideration is extended to individuals who leave school for extended military service (6 months or longer). These students may choose to withdraw completely and have the withdrawal backdated to show no enrollment. If withdrawing during the third through tenth weeks of school, these students may receive WMS grades in all classes, with a prorata refund. When the withdrawal occurs after the tenth week, students will receive both grades and credit hours for the courses in which they are passing. In all instances, a copy of the military orders or a letter from the commanding officer is required for verification of impending military service. To be eligible for these benefits students must remain in school to within ten days of their military reporting date.

Students in military service with the State of Illinois pursuant to the orders of the Governor have the right to receive a full monetary credit or refund for funds paid to any Illinois public university, college or community college if the person is placed into a period of military service with the State of Illinois in the event of state emergencies pursuant to the orders of the Governor and is unable to attend the university or college for a period of seven or more days. Students may elect to receive course credit for all of their courses rather than a refund.

Withdrawal from the University does not relieve the student from housing contract obligations. Each student who has a contract with the University must contact University Housing and resolve the contract issue with that office.

All students seeking a withdrawal must contact the Office of Records and Regis-

tration in person or by mail. The effective date of the withdrawal, if granted, will be the student's last date of class attendance, provided the student completes the requirements for the withdrawal. Incomplete applications for withdrawal will be denied. Any student who fails to comply with the withdrawal procedures will receive grades for the semester and must satisfy the financial obligations for the semester.

Tuition and Fees and Other Financial Information

Tuition and Fees

Tuition and fees charged students are established by the Board of Trustees and are subject to change whenever conditions necessitate. All tuition assessments are on a per-hour basis, as are most fee assessments. The tuition and fee amounts to be assessed students for Fall 2007 and Spring 2008 were not approved in time for inclusion in this Catalog. The tuition and fee schedules shown below are the fees currently in place for Fall 2006 and Spring 2007. More up-to-date information on tuition and fees may be found at:

<<http://www.registrar.siu.edu/tuition/>>.

FALL 2007 AND SPRING 2008 ON-CAMPUS UNDERGRADUATE TUITION CHARGES (PER SEMESTER HOUR ENROLLED)

Term of Entry at SIUC	Illinois Resident ¹	Non-IL Resident ¹	Note
Summer 2004 or prior	\$195.00 per hour	\$390.00 per hour	Subject to change
Fall 2004 through Summer 2005	\$164.00 per hour	\$410.00 per hour	Guaranteed rate
Fall 2005 through Summer 2006	\$177.00 per hour	\$442.50 per hour	Guaranteed rate
Fall 2006 through Summer 2007	\$193.60 per hour	\$484.00 per hour	Guaranteed rate
Fall 2007 through Summer 2008	\$212.00 per hour	\$530.00 per hour	Subject to change

¹Tuition is capped at 15 times the above rates for students enrolled in 15 or more semester hours

FALL 2006 AND SPRING 2007 ON-CAMPUS UNDERGRADUATE FEE CHARGES (FLAT AND PER SEMESTER HOUR ENROLLED)

Fee	Fee Type	Charge (all fees are subject to change) ³
STS Grant (1)	Flat ¹	\$3.00 per semester
Student Attorney (2)	Flat	\$5.00 per semester
Student Center (3)	Per Hour ²	\$8.17 per hour up to a maximum of \$98.00 for 12 or more hours
Student Activity (4)	Per Hour	\$3.00 per hour up to a maximum of \$36.05 for 12 or more hours
Student Rec (5)	Per Hour	\$8.33 per hour up to a maximum of \$100.00 for 12 or more hours
Athletic Fund (6)	Per Hour	\$13.92 per hour up to a maximum of \$167.00 for 12 or more hours
Campus Rec (7)	Per Hour	\$0.42 per hour up to a maximum of \$5.00 for 12 or more hours
Student Medical (8)	Flat	\$387.00 per semester
Revenue Bond (9)	Per Hour	\$4.95 per hour up to a maximum of \$59.40 for 12 or more hours
Mass Transit (10)	Per Hour	\$3.42 per hour up to a maximum of \$41.00 for 12 or more hours
Info. Technology (11)	Per Hour	\$6.00 per hour up to a maximum of \$72.00 for 12 or more hours
Student Svcs. Bldg. (12)	Per Hour	\$1.67 per hour up to a maximum of \$20.00 for 12 or more hours

¹Total flat fees: \$395.00

²Total per hour fees: \$49.88 (to a maximum of \$598.45 for 12 or more hours).

³Maximum fees assessed for 12 or more semester hours: \$993.45.

The fees which have been established by the Board of Trustees are payable by all students unless they are specifically exempted by the Board of Trustees. All fees are considered to be institutional in nature and require payment regardless of whether or not the student receives direct benefits or is in a location which permits access to such benefits.

STUDENT FEES INCLUDE

1. The Student-to-Student (STS) Grant Program Fee funds a student grant program. The fee is payable by undergraduate students only; those who do not wish to participate in the program may seek a refund of the fee by submitting a request, in writing, to the Office of Records and Registration within ten days of the date of payment of fees.

2. Student's Attorney Fee supports the budget of the Students' Attorney Program.

3. Student Center Fee provides funding for operation of the Student Center.

4. Student Activity Fee funds student organizations and activities on campus; it includes \$1.30 in funding for Campus Safety, \$7.50 in support of Rainbow's End and \$5.50 for support of enhanced fine art activities.

5. Student Recreation Fee (REC) provides funds for operation of the Student Recreation Center and associated programs.

6. Athletic Fund Fee partially funds the University's intercollegiate programs.

7. Campus Recreation Fee funds recreational facilities and programs external to the Student Recreation Center.

8. Student Medical Benefit Fee is comprised of the SMB: Primary Care Fee of \$162.00 and the SMB: Extended Care Fee of \$225.20. It funds the comprehensive Student Health Program that includes emergency service and hospitalization; specialty, primary and emergency dental care; and prevention programs. Students who pay these fees are entitled to full medical benefits at the Student Health Programs Clinic. If the student feels they have comparable coverage, they may seek a refund of the SMB: Extended Care Fee within the first two weeks of a fall or spring semester or the first week of a summer session by contacting the Student Health Programs Insurance Department.

9. The Revenue Bond Fee (RBF) replaces funds which were previously obtained from tuition payments and used to underwrite the funded debt operations of the Student Center and University Housing.

10. The Mass Transit Fee provides funding for bus transportation to on-campus and certain Carbondale locations.

11. The Information Technology Fee provides funding for maintenance and improvements to the Information Technology network as well as funding for a new student information system.

12. The Student Services Building Fee provides funding for the planned new Student Services Building.

ADDITIONAL FEE INFORMATION

1. Students who register for regular term-length classes after classes begin and students who register for shorter-than-term-length classes, including inter-session classes after the first listed meeting day of the class, will be assessed a Late Registration Fee of \$15. The fee is non-refundable/non-waiverable unless it is clearly shown that faculty or administrative action caused the late registration. Off-campus classes and registration in courses 599, 600, 601 and 699 are exempt from this fee.

2. Graduate, medical, and law students are not charged the student-to-student grant program fee.

3. Permanent full-time or permanent part-time employees may be eligible for tuition and fee credit. Employees must have approval from their department head and the director of Human Resources before enrolling for courses.

4. Students taking off-campus courses (Section number range 800-899) are required to pay tuition, but do not pay student fees for those classes.

5. Students may also incur charges for departmental field trips, library fines and excess breakage. Students taking a course involving use of materials, as distinct from equipment, will ordinarily pay for such materials.

6. Students enrolling in Public Service Courses pay tuition and \$3 per hour divided equally between Student Center and Medical fees. Students enrolling in a combination of public service courses and other courses pay tuition and fees based on the on-campus tuition and fee schedule for the combined total of hours enrolled.

7. Medical students at Springfield do not pay the Student Center Fee, Student Recreation Fee, Revenue Bond Fee, Students' Attorney Fee, or Athletic Fund Fee.

8. Students enrolling in off-campus courses pay tuition only. Students who combine enrollment in on- and off-campus courses pay tuition only for hours off-campus and tuition and fees for hours enrolled on campus.

9. Tuition and program delivery charges for students enrolled in off-campus programs for the military are established in accordance with the Board of Trustees' policies relating to such charges for Southern Illinois University Carbondale cost recovery programs and are not affected by the residency status of the student.

10. For the purpose of tuition assessment, all faculty and staff (including Civil Service employees), as well as their spouses and dependent children, shall be considered as resident students.

11. An identification card fee of \$10 will be charged to all first-time SIUC students who register for on-campus credit. This is a one-time charge. For additional information contact the Student Center ID Card office.

12. Senior Citizen Courses Act. Senior citizen as defined under the Act means a person 65 years of age or older whose annual household income is less than \$14,000. The statute requires the University to waive the tuition for such citizens unless classroom space is not available or if tuition paying students enrolled do not constitute the minimum number required for the course. Even where tuition must be waived, other fees may be charged.

13. A \$30 nonrefundable fee, which must accompany the admission application.

14. The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

15. The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.

16. The School of Art and Design assesses Art and Design majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.

17. In addition to the above fees, there is a graduation application fee and a transcript fee. For further information contact the Office of Records and Registration.

PAYMENT OF TUITION AND FEES

Tuition and fees are payable each semester during the academic year. Students will be mailed monthly statements of account through the University billing/receivable system. The statement lists all tuition and fees assessed, charges for University housing, charges for various other services, credits applied to the student's account from financial aid sources and cash payments. It shows the balance of these charges and credits as an amount owed by the student or an amount owed to the student. Payments may be made online by visiting <<http://salukinet.siu.edu>>, by phone (618) 453-2221, by mail, or in person at the Bursar Office by the deadline date in accordance with instructions printed on the statement of account. The Bursar's office accepts cash, checks, money orders, and credit cards (Visa, Master Card, American Express, and Discover). The remittance copy of the statement should accompany the payment.

The statements will be mailed to the student's billing address, or if not one, the local address around the fifteenth of each month. December statements of account are mailed to the student's billing address, or if not one, the student's permanent address.

It is the student's responsibility to maintain an accurate billing address to which a statement of account can be mailed. Failure to receive a bill does not relieve students of the responsibility for prompt payment of amounts due. See additional information under the heading Local, Permanent, and Billing Addresses below.

All student fees and other financial obligations to the university are payable as billed either by school terms or installments, and no student shall be enrolled in classes in any educational unit until the minimum required amount has been paid.

A service charge of one and one-half percent per month (18% APR) will be assessed on all delinquent accounts. To avoid the service charge, students must pay the minimum amount due printed on the statement prior to the next billing date. Detailed information is in the *Schedule of Classes* published each semester on the Records and Registration website,
<<http://www.registrar.siu.edu/records/schedclass.htm>>.

Following the end of each semester, students not registered for the next semester that have delinquent account balances will be mailed a series of letters requesting payment. If payments, or arrangements, are not made on a timely basis, the account may be placed with a collection agency with a collection fee added to the account. Should it be necessary for an outside agency to effect collection, reasonable collection costs shall be added and shall be paid by the debtor. If the University obtains judgment from a court of competent jurisdiction, the debtor shall be liable for the collection agency fee as well as reasonable court costs and attorney's fees. A claim on delinquent accounts may be submitted to the State of Illinois Comptroller's Office in accordance with the Illinois Collection Act which authorizes the deduction of the amount you owe to SIUC from an amount normally due you (i.e., payroll deduction, tax refund, etc.) and your account may be referred to a credit bureau. As SIUC is a non-profit institution of higher learning, student receivable accounts are considered to be educational loans offered for the sole purpose of financing an education and may not be dischargeable in bankruptcy proceedings.

Students who process a program change which places them in a different tuition and fee category than the one for which they originally registered will be billed additional tuition and fees when appropriate. If the change places them in a smaller tuition and fee category and if they processed the program change within the necessary time frame, they will receive a refund provided their account carries no other charges.

Installment Payment Plans. There are several installment payment plans. Eligibility will depend on where students attend class and when they register. The University reserves the right to alter the payment plans offered and in some plans to require prepayment of part or of all a student's charges prior to registration. The basic criterion for eligibility for installment payments is that the student must be attending classes on the Carbondale campus or School of Medicine classes in Springfield. Payment plans for students attending classes on the Carbondale campus or School of Medicine classes allow tuition and fees to be paid in up to four installments for fall or spring semesters and up to two installments for summer term, depending on when students process their registrations. Students who opt for the installment payment need only to pay the minimum amount due indicated on the May, July, or December statement of account by the stated deadline. There is no installment payment plan for students who only attend classes' off-campus. A one and one-half percent service charge (18% APR) will be assessed on all minimum amounts not paid prior to the next billing. Students in military

contractual programs are not subject to a service charge, but accounts that are delinquent may be assessed a \$25.00 collection charge.

TUITION AND FEE REFUND POLICY AND PROCEDURES

Tuition and all general student fees shall be refunded to students who officially withdraw from the University by the withdrawal deadlines (see Deadline Dates above). Action on any request for refund of tuition and fees shall be in compliance with Board of Trustees policy and these procedures. For refund of tuition and fees prior to the withdrawal deadlines, the following will apply.

Request for a withdrawal from the University is initiated in the Office of Records and Registration and approved by the student's academic dean as part of the normal withdrawal procedures.

Refund of tuition and fees based on withdrawal from the University on or prior to the withdrawal deadlines is made without consideration of the student's reason for withdrawing. There is a no refund of the application fee.

No tuition or general student fees shall be refunded in cases where withdrawal occurs after the deadlines stated in Board of Trustees policy, except for students in grave circumstances who demonstrate that, for reasons beyond their control, they are utterly unable to continue their educational programs. Refunds of tuition and general student fees approved in such cases are made at the University's discretion upon a determination by the chancellor or his designee of the existence of one of the following conditions.

Accident or illness occurring prior to the withdrawal deadline, which incapacitated the student and made it impossible for them to withdraw prior to the deadline.

Accident or illness in the student's immediate family, which occurs prior to the withdrawal deadline and is of such nature as to prevent the student from continuing their education.

Emotional or psychological trauma resulting from an incident which occurred prior to the deadline and for which the student is undergoing counseling or therapy.

A disciplinary, academic, or financial aid termination appeal, which is not accepted if the appeal was initiated prior to the withdrawal deadline.

Induction into military service for a period not less than six months.

Students in military service with the State of Illinois pursuant to the orders of the Governor have the right to receive a full monetary credit or refund for funds paid to any Illinois public university, college or community college if the person is placed into a period of military service with the State of Illinois in the event of state emergencies pursuant to the orders of the Governor and is unable to attend the university or college for a period of seven or more days. Students may elect to receive course credit for all of their courses rather than a refund.

The refund of tuition and fees in cases where withdrawal from the University occurs after the deadlines specified in the Board of Trustees refund policy is governed by the following procedures.

The Provost and Vice Chancellor or his designee will serve as the chancellor's representative for considering requests for refund of tuition and fees after the time period specified in the refund policy.

Request for such refunds are initiated in the Office of Transitional Programs, which will furnish the student with the necessary information and appropriate form.

A student requesting a refund after the specified periods must withdraw from the University before the request for refund will be acted upon.

Tuition and fees will not be refunded for courses which have already been completed earlier in the semester, and for which a final grade has been earned.

The student must submit written verification of the reasons supporting the request, i.e., (a) written verification from a physician as to the accident or illness

to the student or in the student's immediate family and the student's inability to withdraw prior to the deadline; or (b) written verification from a physician or counselor which supports their statement concerning emotional or psychological trauma and which substantiates that the trauma resulted from an incident which occurred prior to the deadline; or (c) a copy of the letter denying a disciplinary, academic or financial aid termination appeal and verification that the appeal was filed prior to the withdrawal deadline; or (d) written correspondence from the military which verifies when the student is to report for military service and the length of time the student is expected to serve.

The student requesting the refund shall be required to substantiate to the satisfaction of the Office of Records and Registration (Transitional Programs) the nature, extent, and seriousness of conditions or circumstances which are the basis for the refund request.

The Office of Records and Registration will make a decision on the request and inform the student as soon as practical.

Tuition Waivers for Faculty and Staff

Employees, who are seeking a waiver of tuition, must apply for the waiver each term by completing an Application for Tuition/Waiver. Waiver application forms may be obtained from Human Resources, 806 S. Elizabeth St. or from the Graduate Registration Office, Woody Hall, B104. The form should be filled out each term and must be returned to Human Resources. The waiver benefit does not limit the number of credit hours that may be taken. The amount of the waiver will be credited to the applicant's account after employment status has been verified and the application form has been processed. Employees shall be eligible for a tuition waiver when they are employed at any time during a semester for which they registered. Questions concerning the process may be directed to Human Resources (618) 453-6698.

GRADUATE SCHOOL WAIVERS

All full-time University employees who wish to use the employee tuition waiver (faculty and staff) who are classified as graduate students must seek approval of the Graduate School to enroll in more than six semester hours of courses.

TUITION WAIVERS FOR DEPENDENTS OF DECEASED EMPLOYEES

Surviving spouses and dependent children of a deceased SIUC employee may be eligible for a tuition waiver if the service time of the deceased employee was at least five years in a full-time capacity and if the employee was in active, retired or disability status at the time of death. In the case of a dependent child of a deceased employee, the applicant must have been less than 22 years of age at the date of death of the employee, or enrolled in the University at that time. Applicants who are themselves employed by SIUC in a status other than student work are not eligible for this waiver. Human Resources administer applications for the waiver. Questions concerning the process should be directed to Employee Records (618) 453-6698.

INTER-INSTITUTIONAL UNDERGRADUATE TUITION WAIVER

Children of employees who have been employed by any Illinois senior public university for at least seven years shall receive a 50% tuition waiver for undergraduate tuition. The student must qualify for formal admission to the university and must be under the age of 25 at the beginning of the academic year during which the waiver is to be effective. Eligible applicants who have maintained satisfactory progress toward graduation may have the partial tuition waiver renewed each semester until they have reached 130 semester hours of undergraduate partial tuition waiver benefits. Human Resources administer applications for the waiver. Questions concerning process should be directed to Employee Records (618) 453-6698.

Local, Permanent and Billing Addresses

The University maintains both a local and a permanent address for students and a billing address for students who request a specific address for their statements. Accurate addresses are very important for students to ensure receipt of timely mail from the University.

The *billing address* is used only by the Bursar to mail the statement of account. If no billing address exists, the local address is used as the address for the Statement of Account in the months of January through November. In the absence of a billing address, the Statement of Account is mailed to your permanent address in the month of December only.

The *permanent address* maintained by the University is your permanent home address or the address at which you will promptly receive mail when you are absent from Carbondale.

The *local address* is your primary residence while classes are in session. It is used by the University to direct correspondence during the semester. In the months of January through November this address is used to mail your Statement of Account if no billing address exists.

Grading and Scholastic Regulations

Grading System Explanation

The grades of *A*, *B*, *C*, *D*, *F* and *WF*, are included in determining student grade point averages.

An *INC* is assigned when, for reasons beyond their control, students *engaged in passing work* are unable to complete all class assignments. An *INC* must be changed to a completed grade within a time period designated by the instructor but not to exceed one year from the close of the term in which the course was taken, *or graduation*, whichever occurs first. Should the student fail to complete the course within the time period designated, not to exceed one year, or graduate, whichever occurs first, the incomplete will be converted to a grade of *F* and the grade will be computed in the student's grade point average. Students should not reregister for courses in which an *INC* has been assigned with the intent of changing the *INC* grade. Re-registration will not prevent the *INC* from being changed to an *F*.

GRADE SYMBOL	DEFINITION	GRADE POINTS PER HOUR
<i>A</i>	Excellent	4
<i>B</i>	Good	3
<i>C</i>	Satisfactory	2
<i>D</i>	Poor	1
<i>F</i>	Failure	0
<i>WF</i>	Failure. For student who did not officially withdraw from class, ceased attending and failed to complete requirements for the course.	0
<i>P</i>	Pass. Used only in Pass/Fail system. See Grading System Explanation below.	
<i>PR</i>	Work in Progress. See Grading System Explanation below.	
<i>W</i>	Authorized withdrawal.	
<i>INC</i>	Incomplete. See Grading System Explanation above.	
<i>AU</i>	Audit. No grade or credit earned. See Grading System Explanation below.	

Students enrolling for an *Audit* must designate their intent to enroll on an *Audit* basis at the time of registration, or prior to the end of the second week of a sixteen-week semester and prior to the end of the second week of an eight-week summer session. An equivalent prorated amount of time would be allowed for courses of shorter duration. Students registering for short courses must register for *Audit* prior to the beginning of those classes. Students registering for a course on an *Audit* basis receive no credit. Auditors' Course Request Forms must be

marked accordingly, and they pay the same fees as though they were registering for credit. They are expected to attend regularly and to determine from the instructor the amount of work expected of them. If auditing students do not attend regularly, the instructor may determine that the student should not have a satisfactory (*AU*) audit grade. If the audited class is unsatisfactory, a grade of *UAU* will appear on the student's transcript.

PR is an authorized grade for specifically approved undergraduate courses. For example, it is used for the required University Core Curriculum English 101, which is a course that has been designated as one in which students must receive a grade of *C* or better. The grade is given only to students who regularly attend class and attempt to complete the required work. The grade is to be used only once per student for any given course. The course provides additional instruction for those students not making adequate progress. Students who receive a *PR* grade must reregister for the course within a time period not to exceed a year from the end of the semester in which the course is taken. The grade earned in the course for which the student reregisters will be included in the grade point average. Failure to complete the course within the year will result in the *PR* automatically becoming an *F*. The *F* will be included in grade point computation.

PASS/FAIL-GRADING SYSTEM

Certain courses, which, in the judgment of the department or program, have been determined to be inappropriate for the traditional grading system are designated as Mandatory Pass/Fail. Courses, which carry this designation, include the words Mandatory Pass/Fail at the end of the course descriptions in Chapter 6. For courses taken on a Mandatory Pass/Fail basis, completed grades will be either a grade of *P* when the student's work is satisfactory or the grade of *F* when the student's work is unsatisfactory. The grade of *P* is not included in the grade point average but the hours earned apply toward graduation. The grade of *F* is computed in the grade point average as a failure but no hours of credit are earned. If a student receives an *INC* in a Mandatory Pass/Fail course, the same regulations apply for completion of the work as apply for all other grades of *INC*, as explained in the Grading System Explanation above.

In addition to the Mandatory Pass/Fail courses, an Elective Pass/Fail grading policy was in effect through the end of Spring Semester, 1987. The regulations concerning the discontinued policy appear in the 1986-1987 Undergraduate Bulletin.

CHANGING OF GRADES

Grades given at the end of a course are final and may not be changed by additional work or submitting additional materials. When work is completed for a course in which an *INC* grade has been given, instructors notify the Office of Records and Registration of that fact, along with the final grade to be given, by processing a Grade Change Card through the academic dean's office.

Occasionally, students may wish to question grades given, either for accuracy or for removal of grades in situations when they were unable to perform some required step for reasons beyond their control. Only the assigned instructor for a course has the authority to change a grade except in the instance when the University no longer employs the instructor. Extenuating circumstances, which transcend faculty judgment of the instructor, may be appealed through procedures established by the instructor's school or college. Matters related to faculty judgment in grading may not be appealed. Any change of grade must be approved and signed not only by the instructor but also by the departmental chair and the dean of the academic unit. In the case of an *INC* being changed to a final grade, only the instructor's signature is required.

Repeat Policy

Beginning Summer 2003, the repeat policy requires that all earned grades carrying quality point values are to be considered when computing students' grade point averages, including each earned grade in all repeated courses. Individual units and departments may establish a limit to the number of times a course can be repeated. The student needs to check with the parent department of the course before registering for a repeat course. All grades earned for the initial and all subsequent attempts will be clearly identified and noted on the student transcript. Only those courses taken at the same institution are considered repeats under this policy.

Effective Summer 1996 through Spring 2003, only the last grade of the subsequently repeated course will count in the grade point average even if the last grade is an *F*. The courses must be from the same institution.

Prior to Summer 1996, all earned grades carrying quality point values are considered when computing students' grade point averages, including each earned grade in a repeated course. Only those courses taken at the same institution are considered repeats under this policy.

Scholastic Standing

The matter of scholastic standing is quite often of importance to students both while in school and later when they present a transcript of their educational record in support of their application for employment or additional schooling.

At the end of each semester or session of attendance, SalukiNet is updated for each student showing, in addition to the grades earned that semester or session, the scholastic standing and the grade point average for that semester or session and for the overall record at Southern Illinois University Carbondale. It is important that you understand the University's system for computing grade point averages and the various grade point average requirements.

Transferred grades are not to be used in determining students' calculated SIUC grade point averages, except that transfer students who are admitted on probationary status will be required to earn a 2.0 average semester by semester until a total of 12 semester hours has been earned before they can be removed from probation.

The significance of the above should be clearly understood by transfer students when studying the general baccalaureate degree requirements. A 2.0 (*C*) average is required for the work taken at this University.

In computing students' grade point averages, all grades of *A*, *B*, *C*, *D*, *F* and *WF* are included in determining the number of *quality* hours. Each hour of these grades (1 hour of *A* is worth 4 quality points) is given its numerical quality points, which are then divided by the total number of quality hours to determine the student's grade point average.

Scholastic Probation and Suspension System

Students are expected to make satisfactory progress toward a degree, certificate or other approved objective. To ensure that students are making progress, their records are checked against the regulations below.

SCHOLASTIC PROBATION

When a student's cumulative University average falls below a *C* average (2.0), the student will be placed on scholastic probation. A student on scholastic probation may continue enrollment at the University provided the student is not placed on scholastic suspension, which will occur if the student's subsequent term average is below 2.0 and the student has accumulated more than 6 negative points. A student will be re-instated to good standing when the cumulative University average reaches 2.0 or above.

While on scholastic probation students may not enroll for more than 14 hours per semester unless approved to do so by the dean of their academic unit. Students employed full time may not register for more than eight hours without approval of the head of their academic unit. The academic unit within which the students are enrolled may establish other limitations. Students enrolled in programs for the military or students enrolled in programs with a weekend or evening format are not restricted to the eight-hour limit while on probation.

TRANSFER STUDENTS ADMITTED ON PROBATION

Transfer students admitted on scholastic probation will remain in that status until they have earned at least a *C* average at Southern Illinois University Carbondale. If they earn below a *C* average for any session while on scholastic probation, they will be placed on scholastic suspension.

SCHOLASTIC SUSPENSION

Students will be scholastically suspended from the University if they fail to meet the requirements of their conditional or probational status. Students placed on Scholastic Suspension may seek reinstatement after a minimum of two semesters' interruption but must furnish tangible evidence that additional education can be successfully undertaken. Some academic units have scholastic requirements in addition to the overall University requirements listed here. Students must learn and comply with the University requirements as well as those requirements applying to individual schools and colleges.

POSITIVE AND NEGATIVE QUALITY POINTS

Positive and negative quality points are assigned to grades above or below a *C*. There are two methods to figure points depending upon the information, which is available.

Grades. The SalukiNet grade report, which is updated at the end of each semester, lists the hours used in calculating the average and the quality points earned. Since *C* has a value of two quality points on a 4 point scale, quality points equaling a *C* average are exactly twice the number of quality hours. All quality points over that amount are positive quality points. All quality points under the amount are negative quality points.

For example:

Quality Hours		Quality Points		Grade Point Average
60	=	120	=	(C) 2.0

Twice the quality hours equals 120 quality points. This is a *C* (2.0) average. A student with 60 quality hours and only 115 quality points would have five negative points (1.92 average). A student with 30 quality hours and 55 quality points would have five negative points (1.83) average.

Grades and Hours of Credit Available. Whenever all grades and hours of credit are known and quality points have not been assigned as on SalukiNet, a simple method is to assign positive and negative points as follows:

- A = 2 positive points per hour
- B = 1 positive point per hour
- C = 0
- D = 1 negative point per hour
- F = 2 negative points per hour
- WF = 2 negative points per hour

For example:

3 hours of A	x	2 positive points	=	6 positive points
3 hours of B	x	1 positive point	=	3 positive points
3 hours of C	x	0 points	=	0.
2 hours of D	x	1 negative point	=	2 negative points
4 hours of F	x	2 negative points	=	8 negative points

4 hours of WF x 2 negative points = 8 negative points

The eighteen negative points are balanced by only nine positive points so the sample has nine negative points.

Negative points are also used to easily determine exactly what grades must be earned to raise the average to C. For example, a student with eight negative points could raise the average to C by earning four hours of A grade or eight hours of B grade, assuming all other grades earned are at least C.

Class Standing

The University requires students to earn at least 120 semester hours of acceptable credit in order to receive a baccalaureate degree. For academic classification purposes a freshman is a student who has completed fewer than 26 hours; a sophomore, from 26 through 55; a junior, from 56 through 85; and a senior 86 or more.

Academic Load

The University considers 12 hours as the minimum number to constitute full-time attendance. This is the figure used for enrollment reporting purposes on the undergraduate level. Academic load guidelines are as follows:

LOAD	REGULAR SEMESTER	8-WEEK SUMMER SESSION
Minimum load for full time	12	6
Average load	15-16	7-8
Maximum load without dean's approval	18	9
Maximum load ¹	21	11

¹This maximum may be exceeded by very special action of the respective academic dean, and rarely more than once in the student's degree program.

Students on scholastic probation may not take more than 14 hours without approval of the dean of their academic unit. Students employed full-time at the University may not register for more than eight hours.

Credit

UNIT OF CREDIT

The University is on the early semester calendar. All references to hours of credit in this catalog are to semester hours unless otherwise specified. One semester hour of credit is equivalent to one and one-half quarter hours. One semester hour of credit represents the work done by a student in a lecture course attended fifty minutes per week for one semester and, in the case of laboratory and activity courses, the stated additional time.

Program Flexibility for the Student

The University offers you a wide variety of programs on all higher educational levels. Specialized programs are available on the associate and baccalaureate levels. In addition, the University gives attention to ways it might better serve present day educational needs. Described below are opportunities for you to earn credit through means other than the traditional classroom method. While greater flexibility is the goal, the University exercises appropriate supervision to ensure the flexibility is accompanied by educational soundness.

Credit by Means Other than Classroom Attendance

INTERNET, EXTENSION, OFF-CAMPUS AND CORRESPONDENCE CREDIT

The University accepts credit earned through extension, off-campus, Internet, individualized learning programs, and correspondence programs toward the Bachelor degree. The work is accepted when taken from institutions which are re-

gionally accredited. Southern Illinois University Carbondale operates an Individualized Learning Program similar to correspondence programs in which students may earn academic credit. More information about the Individualized Learning Program may be found in Chapter 4 under the Division of Continuing Education.

The University offers off-campus courses whenever (1) it is apparent there is a need and potential enrollment to justify scheduling, (2) it is possible to obtain a faculty member to instruct the class, and (3) adequate laboratory and library facilities are available.

Persons may enroll for off-campus work on an audit basis provided facilities are available. They must receive permission of the instructor to do so, and they must pay the same tuition as though they were registering for credit. Further information may be obtained from the Division of Continuing Education.

CREDIT FOR MILITARY EXPERIENCE

Students who have served one year or more of active duty and have received an honorable discharge may receive two hours of ROTC, two hours of physical education credit, and two hours of health education credit. Completion of basic training only will be awarded two hours of physical education credit. Service of six months to one year may result in two hours of freshman ROTC credit and two hours of physical education.

Credit will be accepted for DANTES subject standardized examinations within the limitations enforced for proficiency credit. No credit is allowed for college-level GED tests. In evaluating credit possibilities based upon formal service-school training programs, the recommendations of the American Council on Education as set forth in the U.S. Government bulletin, *Guide to the Evaluation of Educational Experiences in the Armed Forces*, are followed.

In order to receive credit for military service, veterans must present a copy of discharge separation papers or an AARTS, SMART or CCAF transcript to Academic Support Programs in the Office of Records and Registration.

HIGH SCHOOL ADVANCED PLACEMENT PROGRAM (AP)

Through the High School Advanced Placement Program, high school students who are qualified through registration in an advanced placement course in their high schools or through other special educational experiences may apply for advanced placement and college credit through the Advanced Placement Program of the College Board. To receive credit, students must earn at least a grade of 3 and in some cases a 4 or 5. Transcripts from the Advanced Placement Program must be sent to Records and Registration, Mailcode 4701, SIUC, Carbondale, IL 62901.

Transfer students who have AP credit transcribed as college courses from their previous institution will receive that course credit at SIUC as transfer credit.

The maximum credit granted through advanced placement examinations is thirty hours (fifteen for an associate degree). It is nonresident credit, does not carry a grade, and is not used in computing the students' grade point average. The thirty-hour limit also includes any CLEP credit or proficiency credit that has been earned.

Advanced classes, which qualify for this purpose, are offered in many high schools in specific subjects such as English composition, economics, foreign languages, history, biology, computer science, chemistry, government, mathematics, physics, and psychology. A national examination is given in each subject with the examinations administered through the Educational Testing Service. The examinations are prepared by a national committee of high school and college teachers and are intended to measure the achievement of the student and determine at what point the student should begin college work in the subject.

The credit to be granted at Southern Illinois University Carbondale is determined by the appropriate department. The credit will be validated after the student has earned 12 hours of credit with a minimum grade average of C grade or above in residence at SIUC. The following is a list of exams and the credit that can be received. A score of three is required unless otherwise noted.

1. Art History: Art and Design 207b (3 semester hours)
2. Biology: Plant Biology 115 (3 semester hours)
3. Chemistry: Chemistry 200 (3 semester hours) with a grade of 3, Chemistry 200 and 210 (6 semester hours) with a grade of 4 or 5.
4. Computer Science:
 - Computer Science A: Computer Science 202 (4 semester hours)
 - Computer Science AB: Computer Science 202 (4 semester hours) and 220 (3 semester hours)
5. Economics:
 - Microeconomics: Economics 240 (3 semester hours)
 - Macroeconomics: Economics 241 (3 semester hours)
6. English:
 - Language and Composition: English 101 (3 semester hours) with a score of 3 or 4; English 120 (3 semester hours) and English 102 (3 semester hours) with a score of 5. English 120 and English 102 will complete the Core Curriculum composition requirement.
 - Literature and Composition: English 121 (3 semester hours)
7. Environmental Science: Geography 100 (3 semester hours) with a grade of 4 or 5.
8. Foreign Languages:
 - Classical Greek Language: Classics 321a,b (2 semester hours) with a grade of 3; Classics 321a,b and 352 (5 semester hours) with a grade of 4 or 5.
 - Classical Latin Language: Classics 320 (3 semester hours) with a grade of 3; Classics 320 and 388 (6 semester hours) with a grade of 4 or 5.
 - French Language: French 321 (3 semester hours) with a grade of 3; French 321 and 390 (7 semester hours) with a grade of 4 or 5.
 - French Literature: French 311 (3 semester hours) with a grade of 3; French 311 and French 330 (6 semester hours) with a grade of 4 or 5.
 - German Language: German 320a (4 semester hours) with a grade of 3; German 320a and 390a (7 semester hours) with a grade of 4 or 5.
 - German Literature: German 330 (3 semester hours) with a grade of 3; German 330 and 380 (6 semester hours) with a grade of 4 or 5.
 - Russian Language: Russian 320 (3 semester hours) with a grade of 3; Russian 305 and 320 (7 semester hours) with a grade of 4 or 5.
 - Russian Literature: Russian 306 (3 semester hours) with a grade of 3; Russian 306 and 390 (7 semester hours) with a grade of 4 or 5.
 - Spanish Language: Spanish 390 (4 semester hours) with a grade of 3; Spanish 306 and 390 (7 semester hours) with a grade of 4 or 5.
 - Spanish Literature/Spanish Culture: Spanish 306 (3 semester hours) with a grade of 3; Spanish 306 and 370 (6 semester hours) with grade of 4 or 5.
 - Spanish Literature/Spanish-American Culture: Spanish 306 (3 semester hours) with a grade of 3; Spanish 306 and 371 (6 semester hours) with a grade of 4 or 5.
9. Geography:
 - Human Geography: Geography 300i (3 semester hours) with a grade of 4 or 5.
10. Government and Politics:
 - Comparative: Political Science 250 (3 semester hours)
 - U.S.: Political Science 114 (3 semester hours)
11. History:
 - European History: History 205a,b (6 semester hours)
 - U.S. History: History 300 and 301 (6 semester hours)
 - World History: History 207a, b (6 semester hours)

12. Mathematics:
Calculus AB: Mathematics 150 (4 semester hours)
Calculus BC: Mathematics 150 and 250 (8 semester hours)
Statistics: Mathematics 283 (3 semester hours) with a grade of 4 or 5.
13. Music: Music 104a (1 semester hour) and Music 105a (3 semester hours) with a score of 4 or better.
14. Physics:
Physics B: Physics 203a,b (6 semester hours) and Physics 253a,b (two semester hours) with a score of 4 or 5. A score of 3 in Physics B qualifies the student to take a proficiency exam in Physics 203 a and b.
Physics C, Part I: Physics 205a (3 semester hours) and Physics 255a (one semester hour) with a score of 4 or 5. A score of 3 in Physics C, part I qualifies the student to take a proficiency exam in Physics 205a.
Physics C, Part II: Physics 205b (3 semester hours) and Physics 255b (one semester hour) with a score of 4 or 5. A score of 3 in Physics C, part II qualifies the student to take a proficiency exam in Physics 205b.
15. Psychology: Psychology 102 (3 semester hours)
- Further information about the Advanced Placement Program may be obtained from the appropriate regional office of the College Board or by writing The CEEB, 45 Columbus Avenue, New York, New York 10023.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

Through the College Level Examination Program (CLEP) students may apply for credit, which will substitute for one or more University Core Curriculum courses.

Listed below are the minimum required scores and the credit awarded for each CLEP exam. The exams listed below are the only CLEP exams which will be awarded University Core Curriculum credit.

1. *Natural Sciences*. A score of 52 or above entitles the student to receive six semester hours of University Core Curriculum credit in Science.
2. *Social Sciences and History*. A score of 52 or above entitles the student to receive six semester hours of University Core Curriculum credit in Social Science.
3. *Humanities*. A score of 52 or above entitles the student to receive six semester hours of University Core Curriculum credit in Humanities or three semester hours of credit in Humanities and three semester hours of credit in Fine Arts.
4. *English Composition with Essay*. With a score of 61 or above on the CLEP English Composition with Essay examination, students will receive six semester hours of credit for University Core Curriculum English composition (English 120 and 102).

A score of 57 to 60 entitles the student to receive **(a)** advanced placement in English 120 and **(b)** six semester hours of credit for University Core Curriculum English composition (English 120 and 102) upon successful completion of English 120 with a grade of C or higher.

5. *College Mathematics*. A score of 58 or higher entitles the student to receive three semester hours of credit for Mathematics 113, which will fulfill the University Core Curriculum mathematics requirement.
6. *Foreign Languages*. The table below indicates the minimum required scores and the corresponding credit awarded for the French, German and Spanish paper-based and computer-based subject exams. A satisfactory score on one or more of the 'College Level 2' exams will satisfy one area of University Core Curriculum credit in Humanities.

Exam	Paper-Based Exam Score	Computer-Based Exam Score	Credit Awarded (semester hours)
French – College Level 1	42	50	FR 123a,b (8)
French – College Level 2	45	62	FR 123a,b, 201a,b (16)
German – College Level 1	36	50	GER 126a,b (8)
German – College Level 2	42	63	GER 126a,b, 201a,b (16)

Spanish – College Level 1	45	50	SPAN 140a,b (8)
Spanish – College Level 2	50	66	SPAN 140a,b, 201a,b (16)

If prior to taking a CLEP examination the student has received a grade (including a *W* or an audit) or has enrolled in college-level work in any discipline included in the CLEP exam (see below) they shall be ineligible for credit. (Military credit does not constitute prior coursework). One exception to this rule is made if the course the student took in a discipline from a CLEP exam was taken more than five years prior and no credit was awarded for the course.

The Natural Sciences examination includes the disciplines of plant biology, microbiology, physiology, zoology, chemistry, physics, geography and all SIUC University Core Curriculum science courses.

The Social Sciences and History examination includes the disciplines of western civilization, American history, Afro-Asian civilization, world history, political science, economics, anthropology, geography, sociology, social psychology, social studies, and all SIUC University Core Curriculum social science courses.

The Humanities examination includes the disciplines of literature, poetry, fiction, drama, non-fiction, creative writing, films, performing arts, art, art appreciation, art history, architecture (past and present), music: classical, modern and jazz, general humanities courses, philosophy: aesthetics, ethics, and general survey, and all SIUC University Core Curriculum humanities courses.

The English Composition with Essay examination disciplines includes rhetoric; composition, creative writing and all English prefix courses.

The College Mathematics disciplines include all college-level mathematics courses.

The Foreign Language disciplines include all college-level courses in the corresponding foreign language.

Students may be exempted from all University Core Curriculum requirements if they: **(a)** meet the minimum required scores for the five CLEP general examinations; Natural Sciences, Social Sciences and History, Humanities, English Composition with Essay and College Mathematics, prior to completion of 12 semester hours of college-level credit and **(b)** complete the graduation option of the University Honors Program. Further information is available from the director of the University Honors Program.

Transfer students who have CLEP credit transcribed as a college course from their previous institution, with the exception of English Composition, will receive that course credit at SIUC as transfer credit. Students who transfer with an AA or an AS degree from an Illinois Community College will receive credit for their English Composition CLEP if it is transcribed as a course from that institution.

CLEP credit will not be recorded on the student's SIUC transcript until the student has earned 12 hours of credit with a minimum grade average of *C* grade or above in residence at SIUC.

CLEP credit may not exceed thirty hours (fifteen hours toward an Associate degree). The thirty hours also includes Advanced Placement as well as departmental and Core Curriculum proficiency exams.

CLEP credit does not apply toward the residence requirement for graduation.

For further information, students should consult with their academic advisor.

PROFICIENCY EXAMINATIONS

Through its proficiency examination program, the University recognizes the importance of providing encouragement for academically talented students. Such students are permitted to make application to demonstrate the mastery of certain courses through proficiency examinations. Application forms are available at the departmental offices.

The following general rules govern the proficiency examinations for undergraduate credit:

1. Students who believe they are qualified to take a proficiency examination should check with the department offering the course to determine their eligibility to do so. Students scoring in the top ten percent of ACT are particularly encouraged to avail themselves of this opportunity.
2. Credit not to exceed thirty hours (fifteen hours toward an associate degree), including credit through the College Board Advanced Placement Program and the College Level Examination Program, may be earned through proficiency examinations. Credit will be considered nonresident. A combined total of 40 hours may be earned through proficiency examinations and credit for work experience.
3. All University Core Curriculum courses are available for proficiency credit, subject to specified restrictions.
4. Upon passing proficiency examinations, students are granted course credit and receive a *Pass* grade. Their records will show the name of the course, the hours of credit granted, and the notation “credit granted by proficiency examination.” Students who fail a proficiency examination receive a *Fail* grade. This results in no penalty to the students. They will not receive credit and there will be no official record regarding the proficiency examination. However, the proficiency examination grade report form will be in the student’s file for reference purposes.
5. Students may not take proficiency examinations for the same course more than one time. Neither may they take a proficiency examination in a course in which they have previously received a grade. Students who are registered for a course may not receive credit by proficiency examination for that course unless they withdraw from the course by the date during the semester, which would result in no course entry appearing on the transcript. This date is the end of the second week for a regular semester course, and a correspondingly shorter period for summer session or short courses. Individual departments may require the proficiency examination to be completed in advance of this date.
6. No credit granted by proficiency examinations will be recorded until the student has earned at least 12 hours of credit of *C* grade or above in residence at the University.

CREDIT FOR WORK EXPERIENCE

Southern Illinois University Carbondale recognizes that there might well be a number of undergraduate programs for which work experience has a meaningful relationship. It therefore permits those undergraduate programs to grant credit for work experience that relates to the students’ areas of specialization. The credit granted is to apply to the major program and is awarded only upon approval by the major departments. Credit earned by work experience is limited to 30 hours. Any combination of credit for proficiency examinations, AP, CLEP and work experience is limited to 40 hours. Credit granted for work experience is considered non-resident credit when granted for work that is not part of a regular instructional course. Students should consult with their major departments to see whether they approve credit for work experience.

Degrees Offered

Southern Illinois University Carbondale grants the following degrees:

Associate in Applied Science	Master of Business Administration
Bachelor of Arts	Master of Fine Arts
Bachelor of Fine Arts	Master of Music
Bachelor of Music	Master of Public Administration
Bachelor of Science	Master of Science
Master of Accountancy	Master of Science in Education
Master of Arts	Master of Social Work
Master of Arts in Teaching	Juris Doctor

Doctor of Medicine

Doctor of Philosophy

In addition to the above degrees, the University offers the undergraduate courses in preprofessional areas.

The School of Law and the School of Medicine offer professional degrees. Information about the School of Law may be obtained by writing the dean, School of Law, Southern Illinois University Carbondale, Carbondale, Illinois 62901. Information about the School of Medicine may be obtained by writing the dean, Southern Illinois University School of Medicine, P.O. Box 19230, Springfield, Illinois 62794.

For information concerning academic programs on the advanced degree level, refer to the Graduate Catalog or write the dean, Graduate School, Southern Illinois University Carbondale, Carbondale, Illinois 62901.

Degree Requirements

ASSOCIATE DEGREE

Each candidate for an associate degree must complete a minimum of 60 hours of credit in approved courses. Each student must complete the residency requirement by completing a minimum of 15 semester hours of technical courses within a major for the Associate in Applied Science degree at Southern Illinois University Carbondale. Each student must maintain a *C* average for all work taken at Southern Illinois University Carbondale. In addition to the technical courses, each program requires certain University Core Curriculum courses to be taken. The degree-granting unit for the associate degree is the College of Applied Sciences and Arts.

BACCALAUREATE DEGREE

Each candidate for a bachelor's degree must complete the requirements listed below.

Hour Requirements. Each student must have earned a minimum of 120 semester hours of credit, although some majors require more. Of the 120 hours, at least 60 must be earned at a senior-level institution. All credit granted may be applied toward the 60-hour requirement unless the credit has specifically been designated as being from a two-year college or credit has been awarded based on attendance at a two-year school. Credit for work experience, DANTES, CLEP, Advanced Placement, military credit, and proficiency examination credit awarded by an accredited senior-level institution are counted toward the 60-hour requirement. Mathematics 107 cannot be counted in the 120 hours required for graduation.

Residence Requirements. Each student must complete the residence requirement by taking the last year, which is defined as 30 semester hours, or by having three years of credit, which is defined as 90 semester hours at Southern Illinois University Carbondale. Only credit for those courses for which the student has *registered* and for which a *satisfactory grade has been recorded* at Southern Illinois University Carbondale may be applied toward the residence requirement hours. Students enrolled in an approved program delivered off-campus will have completed the residence requirement for the University upon completion of all courses required by the program. Credit for work experience, CLEP, Advanced Placement, military credit or proficiency credit is considered non-resident.

Average Requirements. Each student must have a *C* average for all work taken at Southern Illinois University Carbondale and a *C* average for all major work taken at the University.

Forgiveness Policy. The University has adopted a policy for students whose only graduation problem concerns the *C* average for all work taken at the University. Such students may ask that the average be computed by one of the following methods: (1) by excluding from calculation of the grade point average a maximum

of ten semester hours of *D* or *F* grade earned outside the major which was taken prior to the last 60 semester hours of completed work at the University or, (2) by earning a grade point average of 2.10 or higher for the last 60 semester hours of work completed at the University. The student will be graduated if the average meets either of the two alternatives. It should be noted that the two alternatives are offered as a means of computing the gpa for graduation only and may not be used for any other purpose. All grades, including those designated as repeats are included in forgiveness calculation.

Course Requirements. Each student must meet the University requirements and the requirements of the academic unit, the major, and the minor, if required. The University Core Curriculum Requirements, which are explained in Chapter 3, total 41 semester hours of credit although there are methods available to reduce the number for certain students. The requirements of each college and for the specific major and minor programs are explained in Chapter 5.

Second Bachelor's Degree

DUAL DEGREE

A student may earn two different degrees (e.g., B.A. and B.S.) at the same time by having completed the requirements for each degree and a total of at least 150 semester hours. The application for graduation must include both degrees. Students officially enrolled in a dual degree program who, for any reason, choose to graduate with a single bachelor's degree after having completed more than one-half of the requirements for the second degree will be granted seven years beyond the date of initial graduation for purposes of completing requirements for the second degree. It shall be the student's responsibility to monitor the passage of time and to complete degree requirements by the official deadline. The University assumes no responsibility for notifying students of pending deadlines after initial notifications are sent.

SECOND BACHELOR'S DEGREE

A student may earn a second bachelor's degree upon completion of a minimum of 30 hours, making a total of 150 hours minimum, provided the student fulfills the requirements of the department or school and college for the second bachelor's degree. Students pursuing a second baccalaureate degree must meet the University Core Requirements of 41 semester hours if the department or school or college so requires. Students may, however, complete a second bachelor's degree under the Capstone Option if the department offers this option for the first baccalaureate degree. If a student's first bachelor's degree is from another university, 30 hours in residence is required to fulfill the requirements for the second bachelor's degree. If the first bachelor's degree was earned at the University, a minimum of 10 semester hours of the 30 required must be taken in residence at the University.

Three-Year Baccalaureate Degree Program

It is possible to complete a baccalaureate degree program in three years by utilizing proficiency examinations. The equivalent of one year of credit (30 semester hours) may be earned by this method. If you desire to follow the three-year program you should make that fact known to your academic advisor at the earliest possible date so that your eligibility can be determined. A combination of programs may be employed to accumulate these 30 hours as described above in the section on Credit by Means Other than Classroom Attendance.

Preprofessional Programs

Preprofessional students may, subject to certain conditions, obtain a bachelor's degree after three years' work (90 semester hours) at Southern Illinois University Carbondale and one or more year's work in a professional school. During the three

years of residence at the University, they need to have completed all requirements other than elective hours for the bachelor's degree that they are seeking.

In some cases the completion of major requirements is possible by taking certain courses at the professional school, but this is permitted only upon the prior approval of the appropriate divisional head. Also, completion of at least one year of professional school with acceptable grades in an approved medical school, an approved dental school, an approved veterinary school, an approved law school, an accredited physical therapy school, a hospital plan approved by the University or an accredited school of osteopathy is required. In all cases, all University graduation requirements must be met. It is advisable for a student interested in this program to make the decision to seek a bachelor's degree before entering the professional school so that any questions may be clarified at an early date.

Recognition of High Scholastic Achievement

Dean's List. At the end of each semester, a dean's list is prepared. The criteria for inclusion on the dean's list are established by each of the academic units. To be recognized as being on the dean's list, you must have been in attendance full-time (12 semester hours or more) and must have earned the SIUC average for the semester, which has been specified by the academic unit. If at the end of the semester you have met the criteria established, a notation will appear on your grade slip and your academic record. The dean's list is recognition for a particular semester. It does not take into consideration your complete record.

University Honors Program. The University Honors program is explained in Chapter 4. Those who successfully complete the University Honors Program graduation option receive recognition on the academic record at the time the degree is recorded.

Departmental Honors. Departments in the College of Agricultural Sciences, the College of Liberal Arts, and the College of Science offer honors courses, individual honors work, and honors curricula, all designed to serve the student with high scholastic potential. A departmental or academic unit honors program consists of no fewer than six, nor more than fourteen semester hours in research or independent study which is counted toward the student's major. Some honors programs require a comprehensive examination at the end of the junior year and again at the end of the senior year. Grades may be deferred at the end of the first semester, but not from one school year to the next. Departmental honors will be noted on the academic record at the time degree is recorded.

Scholastic Honors Day. Each spring semester a Scholastic Honors Day convocation is held to recognize students exhibiting high scholastic achievement. Qualification for recognition is determined at the end of the third week of the spring semester. Recognition at that time will be accorded to a full- or part-time student who has (1) attained an undergraduate grade point average at SIUC of 3.50 or better and, if applicable, a 3.50 average or better in all undergraduate work (including transfer credit) recognized by SIUC; and (2) reached the benchmarks of 12, 45, 75, or 105 credit hours of coursework. Such a Scholastic Honors student will be invited by the University to the next regularly scheduled Honors Day ceremony of that student's respective college. Each academic unit schedules its own convocation, and each Scholastic Honors student is recognized individually on this day.

A variety of professional, departmental, and fraternal honorary organizations offer recognition and membership based upon scholastic achievement. Election or selection to most of these organizations is noted at the Scholastic Honors Day ceremonies. The following are examples of some of these organizations: *Alpha Epsilon Rho, Alpha Lambda Delta, Alpha Zeta, Beta Alpha Psi, Beta Beta Beta, Beta Gamma Sigma, Golden Key Honor Society, Eta Sigma Phi, Gamma Beta Phi,*

Kappa Delta Pi, Kappa Omicron Phi, Phi Alpha Theta, Pi Mu Epsilon, Pi Omega Pi, Sigma Tau Delta, Tau Beta Pi, and the Honor Society of Phi Kappa Phi. Selection to membership in these organizations is not reflected on the academic record or diploma.

Honors Recognition at the Time of Graduation The student's honors designation is determined by first measuring the SIUC gpa against the criteria, but cannot be higher than the designation determined by application of the criteria to the all-work gpa. Graduating students with scholastic averages for SIUC work of 3.900 or higher and who also have an all-work cumulative grade point average, which is also 3.900 or higher, receive *summa cum laude*. Students with 3.750 - 3.899 or higher SIUC scholastic averages and who also have an all-work cumulative grade point average of 3.750 or higher receive *magna cum laude*. Students with 3.500 - 3.749 or higher SIUC scholastic averages and who also have an all-work cumulative grade point average of 3.500 or higher receive *cum laude*. The all-work cumulative grade point average includes both SIUC work and graded transfer credit work accepted from other institutions, all of which are calculated according to SIUC policy. The honors that apply are recorded on the student's academic record at the time the degree is recorded.

Graduation Procedures

The academic requirements for the various baccalaureate degrees are listed in Chapter 5. Presented here are the procedures students expecting to graduate must follow. See the website: <<http://registrar.siu.edu/records/Graduation.htm>>.

Graduation ceremonies are held each year at the end of the fall and spring semesters and the summer session. Degree candidates must apply for graduation with the Office of Records and Registration (graduate students with the Graduate School) by no later than the end of the first week of the semester before the expected graduation date. Application forms are available in the Office of Records and Registration (Graduate School for graduate students), or may be obtained online:

<<http://registrar.siu.edu/records/pdfrec/GRADAPP.pdf>> or by writing that office.

A graduation application fee is established for all persons applying to receive degrees. The fee does not cover the rental fee for the cap and gown or the cost of the invitations. Both of these items are ordered through the University Book Store in the Student Center. Questions regarding the cap and gown and the invitations should be referred to the University Book Store. Typical deadlines to order for May, August or December graduations are April 1, July 1 and November 1 respectively.

In addition to completing the steps for application for graduation, students are responsible for determining that they are meeting all graduation requirements and have no outstanding financial obligation to the University. To assure that students are meeting the academic requirements, each academic unit provides a graduation check-up service through its academic advisement process by which satisfaction of academic requirements can be verified. Even though the University does provide an academic check on graduating students, this is done primarily to be sure that it is graduating students who have met the requirements. The advising of individual students as to their progress is a service provided them and does not relieve students of their responsibility to make certain they are meeting the requirements. Students should check with their academic advisors as to the procedures they should follow in this matter as they approach graduation. Undergraduate students who started at SIUC Fall 1990 or later, may view their Degree Progress Report via SalukiNet on the world wide web at:

<<http://salukinet.siu.edu/>>.

Applicants who do not complete their degree requirements for the commencement (graduation) date they first apply for will be once automatically moved to

the next commencement date. If the applicant then does not complete their degree requirements for that next graduation date, then the application will be voided, and the student will be required to submit a new application for a subsequent graduation date, and will be assessed another graduation application fee.

Graduating students who have outstanding financial obligations or delinquent accounts with the University will not receive either the diploma or transcripts until their accounts are paid.

Attendance at commencement is not compulsory. If you do not plan to attend, notification must be sent to the Office of Records and Registration (graduate students to the Graduate School). This information is needed for seating arrangements and for mailing purposes.

GRADUATION APPEAL

The University has a Graduation Appeals Committee whose function it is to hear student's petitions to be permitted to graduate even though they have not satisfied all University graduation requirements. The committee hears those cases involving University requirements for the associate or baccalaureate degree. Appeals relative to a major or academic unit requirement is through the appropriate administrative official. Ordinarily, the Graduation Appeals Committee will give consideration to an appeal if there is tangible evidence that the matter at issue is of an unusual nature and that it has resulted due to conditions beyond control of the student. Appeal is initiated through the Office of Records and Registration and the student's academic dean.

Issuance of Transcripts

The Office of Records and Registration will issue a transcript of the student's official educational record under the following conditions: A transcript is issued only upon a student's request or with the student's explicit permission, except that such permission is not required for an unofficial transcript when University faculty and administrative personnel request a transcript for official purpose. In addition, requests will be honored from a recognized research organization conducting educational research provided the confidential character of the transcript is protected. Transcripts issued directly to a student will have the statement, Issued to the Student, on its face. Transcripts will be sent to other recipients as requested in writing by the student. A \$5 transcript fee for mailed transcripts, or a \$10 fee for faxed transcripts, must be paid in advance for every transcript requested. A transcript will not be issued if a student has an outstanding debt to the University. Also, there may be certain instances when transcripts will be released without the student's written permission.

For further information see policy on release of student information and access to student records in Chapter 7. See the web site:

<<http://registrar.siu.edu/records/transcpt.htm>> to order your SIUC transcript online. Students who started at SIUC Fall 1990 or later, may view their unofficial transcript via SalukiNet on the world wide web:<<http://salukinet.siu.edu/>>.

3 / University Core Curriculum



University Core Curriculum

James Smith Allen, *Director*

The University Core Curriculum is a carefully structured and deliberately sequenced program of study required of all SIUC undergraduate students. The program's objectives are to develop students' abilities to communicate orally and in writing, to think mathematically, and to analyze and conceptualize effectively. The Core is grounded in the traditional arts and sciences, and fosters a life of inquiry, creativity, and civic participation. As a matter of principle, the program limits curricular choice in favor of greater conceptual coherence.

Within the first 56 credit hours, every undergraduate must take 12 credit hours of Foundation Skills in English Composition, Speech Communication, and Mathematics. To introduce students to the universe of human knowledge, which underlies all undergraduate majors, the Core requires 23 credit hours of Disciplinary Studies in Fine Arts, Human Health, Humanities, Science, and Social Science. Finally, to emphasize the interconnectedness of our lives, culturally and intellectually, students are required to take six credit hours of Integrative Studies in diversity and interdisciplinary issues.

The University Core Curriculum is administered by a faculty director, assisted by two university-wide committees, to oversee the implementation of curricular policy as set by the Provost and the Faculty Senate. To provide quality control, all Core courses are reviewed and student learning in them assessed at least once every five semesters by the Core Curriculum Executive Council. The Core is also subject to program review on a regular schedule established by the Illinois Board of Higher Education and the Higher Learning Commission of North Central Accreditation Association.

Further information about the University Core Curriculum is available from its director and the program's webpage <<http://www.siu.edu/~corecurr>>.

University Core Curriculum Goals

1. Expose students to the universe of human knowledge and to provide perspective across disciplines in an academically challenging course of studies.
2. Improve communication and numerical literacy.
3. Develop students' critical and analytical abilities.
4. Encourage intellectual maturity through interaction with instructors and peers.
5. Enhance understanding and appreciation of diverse cultures and environments.
6. Prepare students for ethical and responsible citizenship.

University Core Curriculum Requirements

I. <i>Foundation Skills</i>	12
Composition	6
Both English 101 and 102 are to be completed with a grade of <i>C</i> or better. English 120, if completed with a grade of <i>C</i> or better will complete the composition requirement. Linguistics 101 and 102, also to be completed with a grade of <i>C</i> or better, satisfy the composition requirement for International students.	
Mathematics	3
Mathematics 110, 113 or any higher-level mathematics course numbered 108 or above with the exception of 114, 120, 300i.	
Speech Communication 101	3
II. <i>Disciplinary Studies</i>	23

Fine Arts	3
Select one course from the following: Art and Design 100a, b, 101, Cinema and Photography 101, English 119, 206a,b, Foreign Language 200a, b, c, History 201, Music 103, Theater 101.	
Advanced University Core Curriculum courses: Architectural Studies 231 and 232, Music 357a,b, Theater 220.	
Human Health	2
Select one course from the following: Biology 202, Food and Nutrition 101, Health Education 101, Kinesiology 101, Physiology 201.	
Advanced University Core Curriculum courses: Allied Health 241, Kinesiology 201, Physiology 310.	
Humanities	6
Select two courses from the following or select a sequence:	
Art and Design 207a, b, c, Classics 230, 270, 271, East Asian 102, English 121, 204, French 101a,b, German 101a,b, History 101a,b, Linguistics 200, Philosophy 102, 103a,b, 104, 105.	
Advanced University Core Curriculum courses: History 207a,b, Philosophy 304, 305a and b, 340, a third semester of a foreign language or a first semester or more advanced course in Latin or Classical Greek.	
Sequence I: Art and Design 207a,b,c (select two)	
Sequence II: English 121, 204	
Sequence III: French 101a, b	
Sequence IV: German 101a,b	
Sequence V: History 101a,b	
Sequence VI: Philosophy 103a,b	
Science	6
Select one course [If Geology 111 is chosen, Geology 112 must also be completed] from each group ¹ .	
Group I: Chemistry 106, Geology 111 and 112, Physics 101, Physics 103.	
Advanced University Core Curriculum courses: Applied Sciences and Arts 126; Chemistry 140a, 200 and 201; Geology 220 and 223, 221 and 224, 222 and 223; Physics 203a and 253a, 203b and 253b, 205a and 255a, 205b and 255b; Science 210a.	
Group II: Plant Biology 115, 117, Zoology 115.	
Advanced University Core Curriculum courses: Biology 200a,b; Microbiology 201; Physiology 201 and 208 (if not used for health); Plant Biology 200; Science 210b; Zoology 118, 220a,b.	
Social Science	6
Select two courses from the following: (Students may take no more than one course in history to satisfy this area requirement.) Anthropology 104, Economics 113, Geography and Environmental Resources 100, 103, History 110, 112, Political Science 114, Psychology 102, Sociology 108.	
Advanced University Core Curriculum courses: Agribusiness Economics 204, Economics 240, 241, History 301.	
III. Integrative Studies	6
Students are strongly advised to complete their Disciplinary Studies courses before enrolling in the Integrative Studies courses.	
Multicultural: Diversity in the United States	3
Select one course from the following: Art and Design 227, 267, Administration of Justice 203, Anthropology 202, 204, Black American Studies 215, English 205, French 200, History 202, 210, Kine-	

siology 210, Linguistics 201, Mass Communication and Media Arts 204, Music 203, Philosophy 210, 211, Political Science 278, Psychology 223, 233, Sociology 215, 223, Speech Communication 201, Women's Studies 200, 201, 223.

Advanced University Core Curriculum courses: English 225, 325, History 300, 368, Women's Studies 225.

Interdisciplinary 3

Select one course from the following: Agriculture 300i, Architecture 314i, Art and Design 307i, 317i, Black American Studies 332i, Classics 315i, Economics 302i, English 304i, 307i, Engineering 301i, 303i, Foreign Language 301i, Geography and Environmental Resources 300i, 303i, Geology 327i, 328i, 330i, Journalism 306i, 314i, Liberal Arts 300i, Linguistics 320i, Mathematics 300i, Music 303i, 362i, Philosophy 303i, 307i, 308i, 309i, Plant Biology 301i, 303i, Political Science 314i, 332i, 352i, 372i, Radio and Television 362i, Sociology 304i, 306i, Speech Communication 301i, Women's Studies 301i, 307i, 320i, Zoology 312i.

Advanced University Core Curriculum courses: Architecture 444 (for three credit hours), Zoology 304.

Total 41

¹The engineering and engineering technology majors will satisfy the science requirement by taking two physical science courses and a biological science course in the human health area.

Some programs and upper division academic units require specific Core Curriculum courses. A student may determine these requirements by referring to specific major requirements in Chapter 5.

Meeting University Core Curriculum Requirements

Core Curriculum requirements may be met by any of the following, subject to the rules and limitations listed:

1. Completion of Core Curriculum courses with a satisfactory grade. Each student must complete the Foundation courses (Composition, Speech, Mathematics) or their approved Advanced Core courses prior to or upon completing 56 semester hours of coursework. The student, working with the academic advisor, shall have the responsibility of meeting this requirement.

2. Transfer students may satisfy the requirements of the University Core Curriculum by successful completion of the Illinois Transferable General Education Curriculum. Transfer students who have not completed all Core Curriculum requirements prior to enrolling at SIUC can have their transcripts evaluated and comparable courses will be applied toward the University Core Curriculum requirements on a course-by-course basis.

3. Completion of an AA or AS degree in a baccalaureate-oriented program in an accredited Illinois two-year institution provides that the student will (a) be accepted with junior standing and (b) be considered to have completed the University Core Curriculum requirements (see The Compact Agreement). Associate degrees earned at other than Illinois two-year institutions will be reviewed by the Office of Records and Registration. If the degree is determined to be baccalaureate-oriented and to have comparable content and credit hour criteria, the same benefits will be extended to those graduates. Credit from an accredited two-year institution is limited only by the provision that students must earn at least 60 semester hours of work at the University or at any other approved four-year insti-

tution and must complete the residence requirements for a degree from the University.

4. Students who have received a bachelor's degree from an accredited institution will also be considered to have their University Core Curriculum complete.

Additional information concerning admission of a transfer student and the evaluation of transfer credit can be found in the sections of this catalog pertaining to those specific programs. (See Chapter 2 for admission and *University Core Curriculum and Transfer Students* in this chapter for more information on transfer of courses.)

5. Completion of courses listed as Advanced Core courses for University Core Curriculum or proficiency credit by examination for Core Curriculum courses or approved Advanced Core courses. All Core Curriculum courses are eligible for proficiency credit, subject to specified restrictions. (See proficiency examinations in Chapter 2.) Students should contact the individual department for specific information. Completion of courses listed as Advanced Core courses are limited to 12 hours.

6. Proficiency credit via General Examinations of the College Level Examination Program (CLEP) or Advanced Placement (AP). Credit given through the High School AP or CLEP examinations will be nonresident, will not carry a grade, and will not be used in computing the student's grade point average. The credit will be validated after 12 hours of C grade or better in residence at Southern Illinois University Carbondale. A \$15 charge will be assessed for proficiency examinations taken at Testing Services.

7. No Core course or Advanced Core course may satisfy more than one requirement, nor may any Advanced Core course in combination with the Core course for which it substitutes be used to satisfy a Core requirement.

List of Approved Advanced Core Courses. The following courses for the major have been approved for the University Core Curriculum requirement. In no case does an Advanced Core course satisfy more credit hours than the credit hours allowed in a comparable University Core Curriculum course. Under no circumstances can a Core course satisfy more than one Core requirement. Students should consult their academic advisors concerning any prerequisite for these courses.

CORE CURRICULUM	APPROVED ADVANCED COURSES
ARC 314I	ARC 444 (must be taken for three credit hours)
CHEM 106	CHEM 140a or 200 and 201
ECON 113	ECON 240, 241 or ABE 204
ENGL 205	ENGL 225, 325 or WMST 225
GEOL 111/112	GEOL 220 and 223, 222 and 223, 221 and 224
HIST 101a,b	HIST 207a,b
HIST 110	HIST 301
HIST 202	HIST 368
HIST 210	HIST 300
KIN 101	KIN 201
MUS 103	MUS 357a or 357b
PHIL 102	PHIL 304 or 305 a and b
PHIL 104	PHIL 340
PHSL 201	PHSL 310 or AH 241
PHSL 101/103	PHYS 203a and 253a; 203b and 253b; 205a and 255a; 205b and 255b or ASA 126
PLB 115	BIOL 200a or b, MICR 201, PLB 200, ZOOL 118, 220a or 220b
PLB 303I	ZOOL 304
THEA 101	THEA 220
ZOOL 115	BIOL 200a or b, MICR 201, PLB 200, ZOOL 118, 220a or 220b

Sci Group I	Science 210a (for Elementary Education, Child and Family Services, and Preschool-Primary majors only)
Sci Group 2	Science 210b or PHSL 201 and 208 (if not used for health)
Fine Arts	Architectural Studies 231 and 232
Humanities	A student may substitute up to a maximum of three credit hours with either a third semester of a foreign language or a first semester or more advanced course in Latin or Classical Greek.

A maximum of twelve semester hours of approved advanced coursework may be accepted for University Core Curriculum credit, with the exception of approved University Honors courses. A maximum of three semester hours of the University Honors Program may be accepted in each of the sub-areas of Fine Arts, Human Health, Multicultural: Diversity in the United States, and Interdisciplinary; and a maximum of six semester hours of the University Honors Program may be accepted in each of the sub-areas of Humanities, Science and Social Science, subject to the advance determination by the director of the University Honors Program and the approval of the University Core Curriculum Executive Council.

University Core Curriculum Courses

The first entry for each course is a three digit numeral plus, in some cases, a single letter which together with the subject area, serves to identify the course. The number followed by the dash represents the semester credit hours.

Next is the title, followed by a description of the course. If certain requirements must be satisfied before enrollment in a course, they are listed as prerequisites.

I. FOUNDATION COURSES

ENGL 100-3 Basic Writing. This course prepares students for the writing demands of English 101 and of the University. It teaches students processes for developing ideas, developing and organizing sentences and paragraphs, drafting, revising, and editing. Placement in this course is determined by a combination of ACT score and a writing placement exam, or by a diagnostic essay exam given the first week of class in English 101.

ENGL 101-3 English Composition I. [IAI Course: C1 900] This course provides students with the rhetorical foundations that prepare them for the demands of academic and professional writing. To this end, English Composition I teaches students how to recognize and deploy the strategies and processes that translate into effective written products in a variety of contexts for a variety of purposes. Class discussion and readings focus on the function and scope of literacy in professional and personal contexts. Prerequisite: English 100 with a minimum grade of C or placement by a combination of ACT score and Writing Placement Exam, or by diagnostic essay exam given the first week of this class. To receive credit in the University Core Curriculum, a student, must earn a C or better in English 101.

ENGL 102-3 English Composition II. [IAI Course: C1 901] The second course in the two-course sequence of composition courses required of all students in the University. Using culturally diverse reading materials, the course focuses on the kinds of writing students will do in the University and in the world outside the University. The emphasis is on helping students understand the purpose of research, develop methods of research (using both primary and secondary sources), and report their findings in the appropriate form. Prerequisite: English 101 or equivalent with a minimum grade of C. To receive credit in the University Core Curriculum, a student, must earn a C or better in English 102.

ENGL 120-3 Advanced Freshman Composition. [IAI Course: C1 901] A grade of C or better in this course fulfills the Foundation Skills composition requirement. Students will write critical essays on important books in the following categories: autobiography; politics; fiction; eyewitness reporting; and an intellectual discipline such as philosophy or science. Prerequisite: top 10 percent in the English section of the ACT or the qualifying score on the CLEP test.

LING 101-3 English Composition I for ESL Students. [IAI Course: C1 900] The first course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in academic writing in English. To this end, Linguistics 101 teaches students processes and strategies for planning, drafting, revising, and editing their English writing for academic audiences. Course assignments focus on writing from primary and secondary sources. ESL equivalent to University Core Curriculum English 101. To receive credit in the University Core Curriculum, a student must earn a C or better in Linguistics 101.

LING 102-3 English Composition II for ESL Students. [IAI Course: C1 901] The second course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in research writing for academic audiences. To this end, Linguistics 102 focuses on writing from secondary sources, teaching processes and strategies for plan-

ning, drafting, revising and editing papers that incorporate published material. All aspects of the research process are addressed, from locating and evaluating relevant sources to incorporating and documenting these sources in papers written for various purposes. Prerequisite: Linguistics 101 or English 101 with a grade of C or better, or equivalent. ESL equivalent to University Core Curriculum English 102. To receive credit in the University Core Curriculum a student must earn a C or better in Linguistics 102.

MATH 108 and above-3 Mathematics courses that may be used for the three hour University Core Curriculum mathematics requirement include all MATH prefix courses with the exception of Mathematics 107, 114, 120 and 300i.

MATH 110-3 Non-Technical Calculus. The elements of differentiation and integration. The emphasis is on the concepts and the power of the calculus rather than on technique. It is intended to provide an introduction to calculus for non-technical students. This course does not count towards the major in mathematics. No credit hours for this course may be applied to fulfillment of any degree requirements if there is prior credit in Mathematics 140, 141 or 150. Prerequisite: three years of college preparatory mathematics including algebra I, algebra II, and geometry. In addition, students must have satisfactory placement scores or obtain the permission of the Department of Mathematics.

MATH 113-3 Introduction to Contemporary Mathematics. [IAI Course: M1 904] Elementary mathematical principles as they relate to a variety of applications in contemporary society. Exponential growth, probability, geometrical ideas and other topics. This course does not count towards the major in mathematics. Prerequisite: Mathematics 107 or three years of college preparatory high school mathematics including geometry and intermediate algebra. New students must present satisfactory placement scores or obtain the permission of the Department of Mathematics.

SPCM 101-3 Introduction to Oral Communications: Speech, Self and Society. [IAI Course: C2 900] This course provides theory and practical application relevant to students' development of basic oral communication competencies appropriate to a variety of contexts as situated in a culturally diverse world.

II. DISCIPLINARY STUDIES

Fine Arts

AD 100A-3 Foundation Studio A. [IAI Course: ART 907] A fundamental class with emphasis on contemporary and traditional two-dimensional processes, concepts and materials. Students will also experiment with digital and time-based work. Projects are designed to introduce and fuse content, skill and composition. Emphasis will be placed on solving visual problems and thinking critically and creatively. Studio fee \$30. Incidental expenses will be incurred.

AD 100B-3 Foundation Studio B. [IAI Course: ART 908] A fundamental class with emphasis on contemporary and traditional three-dimensional processes, concepts and materials. Project is designed to introduce and fuse content, skill and the principles of design and composition. Emphasis will be placed on solving visual problems and thinking critically, analytically and creatively. Studio fee \$30. Incidental expenses will be incurred.

AD 101-3 Introduction to Art. [IAI Course: F2 900] A course in the comparative study of visual art in the history of civilizations. The course, using slide lectures, studio labs taught by graduate assistants, readings in textbooks, and examinations, raises the student's familiarity and practical knowledge of formal, social and critical issues germane to the visual arts. The courses pedagogical method is inclusive of diverse cultures and traditions by means of comparative and thematic analysis.

CP 101-3 Film History and Analysis. [IAI Course: F2 905] An introduction to the world history of cinema from its origins to the present, featuring important and influential films of various types and genres from many countries. Basic formal and technical aspects of the medium and means of analysis are also introduced. Students purchase texts. This is a University Core Curriculum course, which counts as Fine Arts credit in the Illinois Articulation Initiative. It is also the required foundation course for the Cinema Specialization in the Cinema and Photography major. Screening fee: \$20.

ENGL 119-3 Introduction to Creative Writing. This course offers an introduction to the art and craft of writing poetry and short fiction. Requirements will include writing exercises; reading and analyzing published poetry and fiction, conferences, and the creation of a portfolio of original poetry and fiction. There may be examinations, journal writing, and/or compilation of an anthology of published or original works.

ENGL 206A-3 Literature Among the Arts: The Visual. A theoretical and historical examination of American graphic novellas, comic books and "comix" from their origins in the 1930s to the present, emphasizing the opportunities that a new and developing medium makes available for redefining narration, for social critique, and for examining the historical.

ENGL 206B-3 Literature Among the Arts: Music. A theoretical and historical examination of American and British rock and roll and pop, from their origins in the 1950s to the present, emphasizing the opportunities that a new and developing medium makes available for redefining narration, for social critique, and for examining the historical.

FL 200- 3 to 9 (3,3,3) Masterpieces of World Literature. Readings and discussion of Western literature taken from the Middle Ages to modern time. (a) France and Francophone Countries. (b) Germany, Switzerland, Austria. (c) Spain. All readings and lectures in English.

HIST 201-3 Art, Music and Ideas in the Western World. [IAI Course: HF 902] The historical evolution of the visual arts, architecture and music in the context of society and literature, from ancient Greece to the present. It emphasizes the fundamental historical relationship of the different genres of human expression in Western culture.

MUS 103-3 Music Understanding. [IAI Course: F1 900] A study of the historical development of Western music and the listening skills necessary to perceive the expressive aspects of each style.

THEA 101-3 Theater Insight. [IAI Course: F1 907] Through lectures, discussions, project, text readings and written critiques, students examine how plays are written and produced, and how these plays reflect the people and cultures that produce them.

Human Health

BIOL 202-2 Human Genetics and Human Health. Acquaints the student with the role played by genetic information in human development and disease. Discussion topics will include genetics and human diversity, the interaction of genetic information and the environment, the concept of genetic disease, the mechanisms and ethics of gene therapy, and the possibilities of manipulating the genetic material.

FN 101-2 Personal Nutrition. This course integrates nutrition and promotion of health through prevention of disease and will answer questions found daily in the media regarding nutrition. Topics emphasized are functions of basic nutrients, impact of culture, gender, ethnicity, social environments and lifestyle on nutrition and health.

HED 101-2 Foundations of Human Health. This course is designed to examine contemporary health-related issues for all dimensions of the individual—physical, mental, social, emotional and spiritual—through focus on health promotion and disease prevention. Emphasis is placed on maintaining or improving quality of life by developing personal and social skills (decision-making, communication, stress management, goal setting) across health education content areas, as well as identifying and accessing appropriate health-related resources.

KIN 101-2 Current Concepts of Physical Fitness. To foster a thorough understanding of scientific principles of physical fitness and to enhance the ability to utilize physical exercise toward achievement of healthful living.

PHSL 201-3 Human Physiology. [IAI Course: L1 904] A course, which relates the normal function of the human body to the disruptions, which occur in a variety of disease states. Three lecture hours per week. Not open to students who have taken 310.

REHB 205-3 Disability and Chronic Disorders. (University Core Curriculum) This course focuses upon the common characteristics of physical, sensory, developmental, medical, and psychiatric disabilities. The course will discuss the definition and classification of each particular type of disability. Emphasized will be the diagnostic criteria and the biological, cognitive, behavioral, and social aspects of each particular disorder as they occur over the lifespan.

Humanities

AD 207A-3 Introduction to Art History I. Studies the origins and nature of art in a variety of ancient civilizations from around the world, such as Ancient Egypt, Greece, China and the Americas. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

AD 207B-3 Introduction to Art History II. Studies art from Ancient Rome to the Early Renaissance in Europe, Africa and Asia. Sculptures, paintings, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

AD 207C-3 Introduction to Art History III. This class studies art from the Renaissance to the present from around the world. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

CLAS 230-3 Classical Mythology. [IAI Course: H9 901] An inquiry into the nature of myth and its relevance today while studying selected myths principally of the Greeks and Romans.

CLAS 270-3 Greek Civilization. An introduction to the life and culture of ancient Greece. Greek contributions to western civilization in literature, art, history, and philosophy. No knowledge of Greek or Latin is required.

CLAS 271-3 Roman Civilization. An introduction to the life and culture of ancient Rome. Rome's function in assimilating, transforming, and passing on the Greek literary and intellectual achievement. Rome's own contributions in the political, social, and cultural spheres. No knowledge of Greek or Latin is required.

EA 102-3 East Asian Civilization. An introduction to East Asian Cultural traditions, literature, philosophy, history, art and social organization of China and Japan.

ENGL 121-3 The Western Literary Tradition. [IAI Course: H3 900] The course offers a critical introduction to some of the most influential and representative work in the Western literary tradition. Emphasis is on the interconnections between literature and the philosophical and social thought that has helped to shape Western culture.

ENGL 204-3 Literary Perspectives on the Modern World. [IAI Course: H3 900] This course introduces the literature of the twentieth century using representative works from the beginning through the close of the century. Course material may be drawn from fiction, verse and drama, as well as including examples from supporting media (film, performance). Course may be taken as a sequence to English 121, *The Western Literary Tradition*, but 121 is not a prerequisite for this course.

FR 101A-4 French Language and Culture I. This course offers an introduction to the language and culture of the French-speaking people. It combines an overview of French political, economic, social, and aesthetic developments with the acquisition of elementary-level written and spoken French. No previous knowledge of French is required. Must be taken in a,b sequence. Lab fee: \$8 per credit hour.

FR 101B-4 French Language and Culture II. This course offers an introduction to the language and culture of the French-speaking people. It combines an overview of French political, economic, social, and aesthetic developments with the acquisition of elementary-level written and spoken French. Prerequisite: 101a with a passing grade. Lab fee: \$8 per credit hour.

GER 101A-4 German Language and Culture I. This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. No previous knowledge of German required. Must be taken in a,b sequence. Lab fee: \$2 per credit hour.

GER 101B-4 German Language and Culture II. This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. Must be taken in a,b sequence. Lab fee: \$2 per credit hour. Prerequisite: 101a with a passing grade.

HIST 101-6 (3, 3) The History of World Civilizations. (a) [IAI Course: S2 912N] To industrialization **(b)** [IAI Course: S2 913N] Since the Age of Encounter. A survey of various civilizations in the world from prehistory to the present with particular attention to non-Western cultures.

LING 200-3 Language, Society and the Mind. What distinguishes humans from other animals? This course addresses how language is a uniquely human phenomenon by exploring issues in language and society and psychological aspects of language use. Topics include language in conversation, differences between speakers of different ages/genders/regions/social groups, first and second language acquisition, bilingualism, language meaning and change, and the relationship between language and culture.

PHIL 102-3 Introduction to Philosophy. [IAI Course: H4 900] This course introduces fundamental philosophical issues across a broad spectrum. Problems in metaphysics, epistemology and ethics will be among the areas explored. Emphasis throughout is on developing in the student an appreciation of the nature of philosophical questioning, analyzing and evaluating arguments reflecting on the nature of human existence.

PHIL 103-6 (3, 3) World Humanities. [IAI Course: HF 904N] This course will explore the rise, development and interaction of the major world civilizations as embodied in ideas and their expressions in religion, philosophy, literature and art. The great traditions of Near Eastern, European, Central Asian, Indian, Chinese and Japanese cultures will be examined. **(a)** The first semester will cover the beginnings of mythic symbolization, the development of moral and religious ideas in the early river civilizations, the dawn of philosophical reflection, and the rise and collapse of the unifying empires of Rome, the Gupta and the Han. **(b)** The second semester will cover the rebirth of civilizations in Islam, medieval Europe and China; their transformations in the modern era, especially due to science and technology; and the question of contemporary global coexistence and understanding. Philosophy 103a and 103b can be taken out of sequence.

PHIL 104-3 Ethics. [IAI Course: H4 904] Introduction to contemporary and perennial problems of personal and social morality, and to methods proposed for their resolution by great thinkers past and present.

PHIL 105-3 Elementary Logic. [IAI Course: H4 906] Study of the traditional and modern methods for evaluating arguments. Applications of logical analysis to practical, scientific and legal reasoning, and to the use of computers.

Science

CHEM 106-3 Chemistry and Society. [IAI Course: P1 903L] Exploration of the many implications that chemistry has upon modern society. Topics include air and water quality, global warming, acid rain, fossil, solar and nuclear fuels, nutrition and drugs. Three lectures per week except that every other week a three-hour lab is substituted for one of the lectures that week. Lab fee: \$30.

GEOL 111-2 Geology and the Environment. [IAI Course: P1 908L] Examines human interaction with geologic processes and hazards, including earthquakes, volcanoes, landslides and flooding; occurrences and availability of geologic resources, such as energy, water and minerals; and human impacts on the environment including global warming, waste disposal, and pollution. Two lectures per week. Must be taken concurrently with or upon completion of Geology 112. If Geology 111 is dropped the laboratory course must also be dropped.

GEOL 112-1 Geology and the Environment Laboratory. Laboratory to accompany Geology 111. Hands-on and inquiry-based learning in topics such as earth materials, topographic maps, stream dynamics, floods, coastal processes, landslides, groundwater, earthquakes, volcanoes, and human impacts on the environment. One laboratory session per week. Must be taken concurrently with or upon completion of Geology 111.

PHYS 101-3 Physics that Changed the World. This course will survey some of the most important developments in physics, which have occurred over the past two millennia. Along the way, students will be introduced to fundamental physical principles such as energy conservation. Topics will include early astronomy, laws of motion, electricity, magnetism, waves, quantum mechanics and relatively. Lab fee: \$10.

PHYS 103-3 Astronomy. Fundamental concepts of the physical sciences are used in the exploration of the observable universe. Studies include the history and techniques of astronomy, planets, stars, black holes, galaxies and cosmology. Lectures are supplemented by outdoor astronomical observations and/or indoor laboratory exercises. Lab fee: \$10.

PLB 115-3 General Biology. (Same as Zoology 115.) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Lab fee: \$15.

PLB 117-3 Plants and Society. [IAI Course: L1 901L] The relationship between plants and human society: historical and modern applications of plants to the human experience; centers of botanical origins and domestication of crop plants; theories on native plant and crop conservation; medicinal plants; making sound decisions on current and future problems of the environment; and plant genetics and biotechnology. Labs will include: hands-on experimentation; fieldwork in natural plant communities, supermarkets and farmer's market; and visitations to plant research facilities. A field trip fee of \$15 will be assessed.

ZOOL 115-3 General Biology. (Same as Plant Biology 115.) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems.

Social Science

ANTH 104-3 The Human Experience: Anthropology. [IAI Course: S1 900N] This course explores different human life ways around the world, past and present. It investigates the question of what is universal to all humans and the myriad ways they differ, through studying modern people, the remains of past cultures through archaeology, and human origins and physical variation.

ECON 113-3 Economics of Contemporary Social Issues. An examination of the basic economic problems confronting U.S. society and the world today. The analysis is undertaken utilizing fundamental economic concepts with emphasis on alternative economic policies. Topics as diverse as health care, the national debt, crime, pollution and international trade are addressed.

GEOG 100-3 Environmental Conservation. Human activity has changed every place on planet Earth. This course explores how and where these changes take place, and practical ways people can interact with the environment in a more sustainable manner. Themes to be explored include: biodiversity, global climate change, human population growth, and sustainability of food, soil, and water resources. Through lectures, discussions, and field trips students will investigate and map patterns integral to understanding environmental conservation issues. Lab fee: \$20.

GEOG 103-3 World Geography. [IAI Course: S4 900N] Examination of the world's major geographic patterns, the diversity of environments, cultures and economic activities, differences between developing and developed nations, interdependence of nations and regions through communication and trade, and in-depth assessment of representative environmental issues.

HIST 110-3 Twentieth Century America. The history of the United States since 1900. Surveys cultural, social, economic and political development, with special emphasis on domestic pluralism and changing international roles.

HIST 112-3 The Twentieth Century World. [IAI Course: S2 913N] The history of Europe, Asia, Africa and Latin America since 1900. Emphasis on political conflict, economic development, social change and cultural transformation in an increasingly integrated world.

POLS 114-3 Introduction to American Government and Politics. [IAI Course: S5 900] Examines the structure of American national government, the cultural context, and the operation of our political system. Focuses on constitutional foundations of American government, how difference in race, gender, and culture affect the political system, and the American attempt to deal with equality, liberty and order, conflict and cooperation.

PSYC 102-3 Introduction to Psychology. [IAI Course: S6 900] An examination of the variables related to the origins and modifications of human behavior using the viewpoints and techniques of contemporary psychology. Purchase of syllabus from local vendor is required.

SOC 108-3 Introduction to Sociology. [IAI Course: S7 900] An introduction to the sociological perspective on human behavior, the structure and processes involved in social relationships, social stratification and inequality, social institutions and social change. A survey of major areas of interest in sociology.

III. INTEGRATIVE STUDIES

Multicultural: Diversity in the United States

AD 227-3 History of African American Art. [IAI Course: F2 906D] A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the civil war era; the Harlem Renaissance and other 20th century movements to the present day.

AD 267-3 Picturing Difference: Native, African and European Americans in American Art. This course examines paintings, sculpture, photographs and films representing Native, European and African Americans. All have represented themselves, and been represented by others, in works of visual art from the 18th century to the present. These will be examined within their own historical periods, within the history of art and within the historical development of multicultural American identities.

AJ 203-3 Crime, Justice and Social Diversity. This course examines how social heterogeneity and inequality influence the processes involved in the definition and regulation of behavior through law, particularly the criminal law. Factors such as race, ethnicity, gender and class are related to definitions of crime and justice, and to the likelihood of being the victim of crime. The differential influence of the operations and outcomes of the criminal justice system on diverse groups in U.S. society is emphasized.

ANTH 202-3 America's Diverse Cultures. [IAI Course: S1 904D] The United States is a multicultural society in which differences of race, ethnicity, gender, class, region and religion deeply shape individuals' life chances. This course studies America's diversity of family organization, livelihood and life chances, under-

standing of illness and health care, religious beliefs and practices, and other topics. It provides tools to understand different cultural codes and forms of power, and to understand key issues that student will face as individuals and citizens in a multicultural world.

ANTH 204-3 The Anthropology of Latino Cultures. The central concern of this course is the cultural aspect of the Latino experience in the United States. It focuses on the contemporary population, the political and economic issues that affect Latinos in this society, and the characteristics that Latinos share and yet that make Latinos the most diverse population in the United States. These characteristics include family, religion, socio-economic status, gender ideology, generational relations, and more. The course pivots around the construction of Latino identity: What helps shape it? How do Latinos perceive themselves? How do others perceive (us) them?

BAS 215-3 Black American Experience in a Pluralistic Society. A study and understanding of the evolution of issues of pluralism in contemporary African American society. Black American Experience in a Pluralistic Society provides an interdisciplinary analysis of ideological and practical problems of racism, integration, class, equity, social institutions as they relate to the Black American experience.

ENGL 205-3 The American Mosaic in Literature. [IAI Course: H3 910D] An introduction to the multicultural diversity of American literature. Topics may include the first encounters between Native Americans and European colonists; slavery; immigration and city life; African-American, Hispanic American, Asian-American, Irish American, and other representatives of the American pluralistic experience reflected in fiction and non-creative fiction.

FR 200-3 Women in French and Francophone Literatures. (Same as Women's Studies 200.) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

HIST 202-3 America's Religious Diversity. [IAI Course: H5 905] An introduction to the basic concepts and histories of the world's religions and their place in American society. The purpose is to increase our understanding of cultural and religious diversity and how the various religious traditions inform our world-views.

HIST 210-3 American Heritages. [IAI Course: S2 901] The American experience as expressed in key texts written prior to the Twentieth Century. Emphasis on American pluralism and controversies related to race, ethnicity, gender and class.

KIN 210-3 Diversity in American Sport. Explores how historical and contemporary forces have shaped opportunities and experiences of various cultural groupings in American sport. The course focuses on diversity issues related to race, ethnicity, gender, social class, sexuality and physical ability/disability. Class utilizes a variety of interactive classroom activities to explore multicultural dynamics in sport and society.

LING 201-3 Language Diversity in the USA. An examination of different varieties of English and the growing presence of other languages in the United States. Local, regional and national perspectives are used to review current patterns of language diversity and to explore the impact of language issues on policies and practices in education, the legal system and the work place.

MCMA 204-3 Alternative Media in a Diverse Society. The freedoms guaranteed in the First Amendment have resulted in a multitude of alternatives to the establishment media. These alternative media give voice to a range of communities ignored or suppressed by the dominant culture. Publications, alternative art spaces, film, radio and television messages and the groups and individuals that create them are examined. Not for graduate credit.

MUS 203-3 Diversity and Popular Music in American Culture. [IAI Course: F1 905D] A study of the development of American popular music, particularly in relation to the different cultural groups, which spawned it.

PHIL 210-3 The American Mind. [IAI Course: HF 906D] This course will survey the diverse traditions, ideas and ideals that have shaped American culture in the past and today. Major works from Native American, African-American, feminist, Puritan, Quaker and American Zen Buddhist writers may be used as well as those from such intellectual movements as the Enlightenment, Transcendentalism and Pragmatism.

PHIL 211-3 Philosophy and Diversity: Gender, Race and Class. This course is a philosophical introduction to diverse perspectives within modern American culture. It will address through reading and discussion important contemporary moral and social issues from the perspective of nontraditional orientations including African American, Native American and American feminism. The resources of philosophy and other related disciplines such as psychology, sociology and literature will be used to develop a culturally enriched perspective on important contemporary issues.

POLS 278-3 American Foreign Policy. A general survey of the American foreign policy process. Special attention is given to the diversity of ethnic, racial and religious groups in the US and how these groups attempt to shape foreign policies in ways that meet their specific domestic and international interests.

PSYC 223-3 Diversity in the Workplace. Examination of factors affecting the full utilization of women, race/ethnic minorities, older workers, disabled workers, and workers with nontraditional sexual orientations in the workplace. Individual processes, such as group identities, stereotyping, prejudice; group processes such as intergroup conflict; and organizational processes such as structural barriers and informal integration will be studied. The class utilizes a lecture and small discussion-section format with in-class, team and individual exercises and projects.

PSYC 233-3 Psychology of Gender in Diverse Context. The course will examine how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability, and age, as they interact with gender.

SOC 215-3 Race and Ethnic Relations in the United States. [IAI Course: S7 903D] Current theory, research, and events in race-ethnic relations in the U.S., including the intersection of class, gender and sexuality. Topics include the European colonization of North America, dynamics of immigration, identity formation among ethno-racial groups, and political economy of racism.

SOC 223-3 Women and Men in Contemporary Society. (Same as Women's Studies 223) Examines theories of women and men's roles in society. Survey contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movements, alternative family/lifestyles and childrearing.

SPCM 201-3 Performing Culture. A critical examination of human communication—from everyday conversation to cultural formation—as performance. Lecture and discussion format with consideration of primary texts drawn from conversational transcript, multicultural literature and popular culture.

WMST 200-3 Women in French and Francophone Literatures. (Same as French 200.) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

WMST 201-3 Multicultural Perspectives on Women. This survey will cover important issues within women's studies in the United States and will be interdisciplinary and multicultural in nature. The topics will include language, media, education, family, labor, politics, literature and the arts. Issues of race, class, gender and culture will be examined consistently within each topic.

WMST 223-3 Women and Men in Contemporary Society. (Same as Sociology 223) Examines theories of women and men's roles in society. Surveys contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movement, alternative family/lifestyles and childrearing.

Interdisciplinary

AD 307I-3 Women in Visual Arts: Social and Educational Context. (Same as WMST 307I) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

AD 317I-3 Contemporary Native American Art: Anthropological Perspective. This interdisciplinary course considers contemporary Native American art and the social forces that have shaped it. Native American artistic traditions and the centrality of art to Native American life and culture will be addressed with an emphasis on 20th-century artists who have shaped the contemporary Native American art movement.

AGRI 300I-3 Social Perspectives on Environmental Issues. (Same as Liberal Arts 300I.) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

ARC 314I-3 Expressions in Architecture. A study of the interconnected nature of the arts, history, environmental psychology and architecture using the built environment as the foundation for the study. Students will learn to critically examine the built environment by learning how architecture expresses human cultures, social structures, economic and political status, and spiritual beliefs.

BAS 332I-3 Introduction to Civil Liberties and Civil Rights. (Same as Political Science 332I.) This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court decides which rights and liberties get which protections, at which times. Specifically, our focus will be on the First Amendment, the Right to Privacy, Discrimination, and Voting Rights. Special emphasis will be placed on how the Supreme Court defines, establishes and protects these liberties through its interpretation of the Constitution.

CLAS 315I-3 Classical Themes and Contemporary Life: Seminar Series. [IAI Course: H9 900] Specific aspects of Classical Civilization are compared with aspects of our own society. In alternate years, the course will treat different themes, e.g., Drama's Birthplace: Classical Athens; Roman Heroes and Anti-Heroes, or Athletics, Sports and Games in the Ancient World. When offered in Europe, the course will focus on how these values are reflected in architecture, art, the military and the arena from ancient times through the Renaissance and beyond.

ECON 302I-3 History and Philosophy of the World's Economic Systems. An investigation into how economic systems coexist with, and determine, or are determined by, the political and social structures in internationally diverse countries. Utilizing both economic concepts and an institutional approach the evolution of systems in nations such as Russia, Japan, the United States, China and other will be explored.

ENGL 304I-3 The Politics of Empire. A comparative perspective on the historical, political and sociological dimensions of literature. Readings and writing assignments encourage students to address key theoretical and analytical issues relevant to the role of ethnicity, race, gender and culture in shaping the common historical experience of political and cultural colonization and decolonization.

ENGL 307I-3 Film as Literary Art. [IAI Course: F2 908] This course examines the influential role literature has on the cinematic tradition both in the past and present. It intends to emphasize the artistic and visual debt cinema owes to literature by concentrating on major achievements and analyzing them accordingly.

ENGR 301I-3 Humans and Their Environment. [IAI Course: L1 905] An introduction to the study of the relationship between humans, resource consumption, pollution and the resulting environment. The effects of current human pollution and resource consumption on the environmental quality of the future. The interrelationship of human population, resource consumption and pollution. Methods of minimizing resource consumption and human pollution through both technological controls and changes in human behavior.

ENGR 303I-3 The Role of Energy in Society. Lectures, discussions and class projects directed at understanding the role of energy, power and related concepts in society; in the past, the present and the future. Review of current energy resources and use patterns, as well as projections for new energy conservation techniques and the development of alternative energy technology. An overview of worldwide energy needs, seeking to identify future limits on energy use attributable to environmental, economic, political and other technological and evolutionary constraints. Prerequisite: satisfactory completion of three hours of Core Curriculum Science recommended.

FL 301I-3 Cross-Cultural Orientation. Students are introduced to a wide variety of interaction patterns in cross-cultural social and professional settings. Through readings, interactive classroom activities, and out-of-class contact with the international community at Southern Illinois University Carbondale they acquire conceptual tools, which allow them to discover appropriate behavior patterns in diverse cultural settings.

GEOG 300I-3 Geography, People and the Environment. An introduction to human and environmental geography with a focus on food production, water and energy resources, and the services provided by Earth's ecosystems are the foundations of human life on Earth. Skillful use of visual information such as maps and satellite imagery and the challenge of sustainability are emphasized.

GEOG 303I-3 Environmental Geography. [IAI Course: P1 909L] This course answers the question: How do Earth's systems work, and how do they interconnect? Fundamental concepts underpinning biogeography, geomorphology and climatology lay the groundwork for exploring the ways these systems are linked. Natural hazards serve as a major theme of the course by bridging natural and social systems. Lab fee: \$20.

GEOL 327I-3 The World's Oceans. The world's ocean comprises up to 80% of the earth's surface. It plays a significant role in global climate, contains mineral resources and harbors a wealth of plant and animal life. "The World's Oceans", through the scientific method, will provide a greater understanding of the processes and components of the oceans and their importance to our every day life. The course will include lectures, discussion sessions, readings and exercises from the text, laboratory exercises and short field excursions.

GEOL 328I-3 Dinosaurs and the Age of Reptiles. What we know about dinosaurs - their fossils, morphologies, origin, types, relatives, relationships, lifestyles, distributions (in time, in space, in paleoenvironments), biotic associates and extinction; and how we know it - interdisciplinary application of basic scientific concepts of geology, paleobiology, paleoecology and paleoenvironmental analysis.

GEOL 330I-3 The Planets. The geology of the planets and moons of the solar system, their origin and history, the origin of the universe and the solar system and the search for other planetary systems and life in the universe. The geologic processes of vulcanism, tectonism, weathering and meteorite impact on the various planets will be examined and compared. A main focus of the course will be examining the methods of discovering information about the solar system involving the interdisciplinary application of the pertinent basic scientific concepts of geology, geochemistry, geophysics, meteorology and cosmology.

JRNL 306I-3 International Media Systems. An overview of the mass media systems of the world; comparison of the theoretical models and actual practice. Explores differing conceptual models of the mass media and their underlying philosophies; actual operations of different press systems with specific economic, political and cultural structures including historical development and current status. Not open to students with credit in Journalism 401.

JRNL 314I-3 American Politics and the Mass Media. (Same as Political Science 314i) Analysis of the role of the mass media in American politics. Emphasis will be on the way in which the media covers political actors and institutions, the effects of media on political attitudes and behavior, and the expanding role of new media, such as the Internet, in politics.

LAC 300I-3 Social Perspectives on Environmental Issues. (Same as Agriculture 300i.) Case studies (e.g., rural village in developing nation; small town in the U.S., city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

LING 320I-3 Language, Gender and Power. (Same as Women's Studies 320i) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the field of linguistics, anthropology, psychology, sociology and speech communication will be used.

MATH 300I-3 History of Mathematics. This course examines how diverse cultures and history from the ancient past to the present have shaped the development of mathematical thought and how developing mathematical ideas have influenced history and society. Particular attention will be given to the evolution of the concepts of number and space; the emergence and applications of calculus, probability theory, non-Euclidean geometries and technology; and to the changes in the concept of mathematical rigor. Does not count towards the mathematics requirements of the mathematics major. Open to all students. Prerequisite: 150.

MUS 303I-3 Women, Blues and Literature. Explores traditional aesthetic processes of the blues as a mode of self-expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions - instrumental and vocal, musical and literary - from fiction and poetry to jazz, r&b and rap. In-depth analysis of blues music and literature.

MUS 362I-3 Sound Art and Practice. (Same as Radio and Television 362i) Create a unified view of how sound impacts media, society, and to some extent, the individual in a variety of applications and careers. This course will provide students with a philosophical understanding of the concepts and practices used in

sound art and practice today and historically, and more importantly in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in media society, regardless of their desire to pursue sound as a career.

PHIL 303I-3 Philosophy and the Arts. [IAI Course: H9 900] An examination of (1) literary and other artistic works which raise philosophic issues and (2) philosophic writings on the relationship between philosophy and literature. Possible topics include: sources of and contemporary challenges to the traditional Western idea that literature cannot be or contribute to philosophy; the role of emotion, imagination and aesthetic value in philosophic reasoning; the role of literature in moral philosophy; philosophic issues of interpretation.

PHIL 307I-3 Philosophy of Science, Nature and Technology. Interdisciplinary study of major humanistic critiques of technology, science and nature; analysis of topics such as ecology, the information revolution, aesthetics and ethics in various branches of science and technology, relation of science to technology.

PHIL 308I-3 Asian Religions: A Philosophical Approach. [IAI Course: H4 903N] This course examines three major areas of Asian religious traditions from a philosophical perspective: South Asia, East Asia, and Buddhist traditions. Since it is not possible to be all-inclusive, concentration will be on those with continuing significant spiritual, philosophical, social, political, aesthetic and literary influence. More specifically, it is an introduction to some of the major Asian religious traditions, such as Hinduism, Buddhism, Confucianism, Taoism, and Zen Buddhism, approached through philosophical reflection. Emphasis is on classical traditions, since this provides a solid foundation upon which students are then able to pursue further independent readings in more recent developments. Furthermore, this emphasis permits an extended exploration of the interaction among contemporary economic, sociological and religious developments and classical traditions.

PHIL 309I-3 Philosophy of Politics, Law and Justice. An exploration of classical and modern theories of law and justice with special attention to their implications for important contemporary political issues.

PLB 301I-3 Environmental Issues. Fundamental biological and ecological processes important in the individual, population and community life of organisms integrating with the philosophical and ethical relationships of the contemporary, domestically diverse human society are examined. Emphasis is placed on a pragmatic understanding of environmental issues. Prerequisite: strongly recommend completion of University Core Curriculum Science requirements. Lab fee: \$15.

PLB 303I-3 Evolution and Society. An introduction to the basics of biological evolution and the effect of biological evolution on society. Historical and modern interpretations of biological evolution on the human experience will be developed. This will include legal, political, religious, scientific, racist, sexist, philosophical and educational aspects. Topics will be covered via discussions, presentations, papers and debates. Prerequisite: strongly recommend completion of University Core Curriculum Science requirements. Lab fee: \$15.

POLS 314I-3 American Politics and the Mass Media. (Same as Journalism 314i) Analysis of the role of the mass media in American politics. Emphasis will be on the way in which the media covers political actors and institutions, the effects of media on political attitudes and behavior, and the expanding role of new media, such as the Internet, in politics.

POLS 332I-3 Introduction to Civil Liberties and Civil Rights. (Same as Black American Studies 332i.) This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court decides which rights and liberties get which protections, at which times. Specifically, our focus will be on the First Amendment, the Right to Privacy, Discrimination, and Voting Rights. Special emphasis will be placed on how the Supreme Court defines, establishes and protects these liberties through its interpretation of the Constitution.

POLS 352I-3 Ethnicity, Nationalism and Culture in a Global Era. This course examines the causes, consequences and management of ethnic conflict and nationalism. Theoretical analysis is combined with empirical case studies of ethnic and cultural competition, conflict and cooperation both within and between countries. Contributions from various scholarly disciplines will be incorporated into the examination of these issues. Additionally, moral dilemmas in the sphere of ethnicity and nationalism will be examined.

POLS 372I-3 International Political Economy. Examines the interaction of politics and economics and of states and markets at the international level. Special attention to inequalities of wealth and power and to the politics of international trade, finance, investment, production, energy, transportation, information, technology and development.

RT 362I-3 Sound Art and Practice. (Same as Music 362i) Create a unified view of how sound impacts media, society, and to some extent, the individual in a variety of applications and careers. This course will provide students with a philosophical understanding of the concepts and practices used in sound art and practice today and historically, and more importantly in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in media society, regardless of their desire to pursue sound as a career.

SOC 304I-3 Global Perspectives on the Family. [IAI Course: S7 902] People around the world experience family life under different circumstances and from different perspectives. This course will focus on these differences and how societies have evolved to meet the needs of family units within their different social settings. Other key topics that affect families around the world will be discussed: global economy and families, gender inequality, familial violence, and environmental concerns.

SOC 306I-3 Popular Culture in Society. Sociological analysis of the meaning of popular culture, the organization of popular cultural production and the relationship between popular culture and social change.

SPCM 301I-3 Communication Across Cultures. This course provides an introduction to communication between and among people from different cultures, focusing on the application of intercultural communication.

tion theory and research. Class assignments and exercises examine everyday encounters with individuals from different races. Ethnicity, religions, gender, ages, sexual orientations and physical abilities.

WMST 301I-3 Women in Science, Engineering and Technology. This course will explore the historical contributions of women and challenges they faced as they entered educational programs and careers in various fields of engineering, science, and technology. The course will also consider the current status of women in those fields.

WMST 307I-3 Women in the Visual Arts. (See Art and Design 307I) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

WMST 320I-3 Language, Gender and Power (Same as Linguistics 320i) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the fields of linguistics, anthropology, psychology, sociology and speech communication will be used.

ZOOL 312I-3 Conservation of Natural Resources. [IAI Course: L1 905] This course teaches an ecological perspective on current issues in natural resource conservation and management. Economic, political and social pressures that influence consumptive use of natural resources are considered, along with ecological consequences of resource exploitation. A conservation perspective is developed in which humans are viewed as participants in, rather than masters of the natural environment. Credit may not be used for a major in zoology.

Multicultural Applied Experience Option

The Multicultural Applied Experience course is a three unit, elective credit intended to enhance the diversity requirement in the University Core Curriculum and deepen student and faculty involvement in extra-academic service. Students who elect this unit may also wish to sign up for Saluki Volunteers. The Saluki Volunteers can evaluate the Multicultural Applied Experience and those hours may be counted toward the 30-hour minimum per year for participation in the Volunteers. In addition to having their Volunteer hours noted on their transcript, the student will receive an involvement transcript from the Volunteers documenting their activities. This can be added to the resume. For more information about Saluki Volunteers, contact Saluki Volunteers in Student Development.

Multicultural Applied Experience Courses

An applied experience, service-oriented credit in diversity involving a group different from the student who elects the credit. Things such as age, gender, ethnicity, nationality, political affiliation, race or class can manifest difference. Students can sign up for the three credit experience to fulfill the multicultural requirement for the University Core Curriculum. Students should consult individual departments for course specifications regarding grading, work requirements, and supervision. With prior approval by the director of the University Core Curriculum and the participating academic units, students may take non-Core service learning courses to satisfy this curricular option.

ANTH 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular Core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision.

AVM 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum, or the credit can be coordinated with a particular Core Course on American diversity, although neither is a requirement. Students should consult the respective department for course specifications regarding grading, work requirements and supervision. Prerequisite: Approval of the site representative, faculty supervisor and department chair.

EST 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested

by things such as age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum, or the credit can be coordinated with a particular Core Course on American diversity, although neither is a requirement. Students should consult the respective department for course specifications regarding grading, work requirements and supervision. Prerequisite: Approval of the site representative, faculty supervisor and department chair.

FL 298-3 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular Core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision.

FN 298-1 Multicultural Applied Experience. This course is designed to provide multicultural experience in food selection, eating habits, meal patterns and food preparation. Students will interact with community members of various ethnicity throughout the semester. Shopping and cooking projects will provide firsthand experience. Prerequisite: concurrent or prior registration in one of the following: Anthropology 202, History 210, Philosophy 210, 211 or Sociology 215.

HCM 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race or class. Students can sign up for the one credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or the credit can be coordinated with a particular Core course on American diversity, although neither is a requirement. Students should consult the Department of Health Care Professions for course specifications regarding grading, work requirements and supervision. Prerequisite: Health Care Professions major only and junior standing.

LING 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular Core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision.

SOC 298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular Core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail only.

WMST 298-3 Multicultural Applied Experience Option. An applied experience, service-oriented credit in American diversity involving interaction with those exemplifying life experiences centering on women's issues, organizations, services, etc. Students should consult the women's studies program staff to discuss placement options, supervision and grading. Prerequisite: approval of the women's studies director and site supervisor.

Capstone Option

The Capstone Option is for the student who has earned or will soon earn, an Associate in Applied Science (AAS) degree or equivalent certification and whose SIUC major is one that participates in the option. The Capstone Option makes it possible for students to earn a bachelor's degree in 60 additional hours and allows them to complete an abbreviated University Core Curriculum requirement (30 hours versus 41 hours).

Key features of the Capstone Option are: (1) gives occupational students who have changed their educational and occupational goals an opportunity to pursue a four-year degree; (2) is an alternative option to obtaining the four-year degree involving no more than two additional years of college; (3) seeks to recognize similar objectives in both two-year occupational programs and four-year baccalaureate degree programs; and (4) seeks to recognize similar objectives in certain work experiences and in four-year baccalaureate degree programs.

The Capstone Option at Southern Illinois University Carbondale can lead to the baccalaureate degree in any of the following areas:

College of Agricultural Sciences	Health Care Management
Agribusiness Economics	Information Systems Technologies
Agricultural Systems	Mortuary Science and Funeral Service
Animal Science	Radiologic Sciences
Food and Nutrition	Technical Resource Management
Plant and Soil Science	College of Education and Human Services
College of Applied Sciences and Arts	Rehabilitation Services
Automotive Technology	Workforce Education and Development
Aviation Management	College of Engineering
Aviation Technologies	Industrial Technology
Dental Hygiene	College of Liberal Arts
Electronic Systems Technologies	Paralegal Studies
Fire Service Management (off-campus only)	

REQUIREMENTS FOR THE BACCALAUREATE DEGREE THROUGH CAPSTONE

A student completing the degree through the Capstone Option must complete the hour requirements, residence requirements, and average requirements required for all bachelor's degrees. These requirements are explained in Chapter 2. The course requirements for the Capstone Option are explained below.

The following University Core Curriculum requirements must be satisfied:	
<i>University Core Curriculum Requirements for Capstone</i>	30
Science	6
Select one course from each group. ¹	
Social Science	6
Select two courses from the approved list. No more than one course from history may be selected. ¹	
Humanities	3
Select one course from the approved list. ¹	
Fine Arts	3
Select one course from the approved list. ¹	
Multicultural: Diversity in the U.S.	3
Select one course from the approved list. ¹	
English Composition	3
English 101 or equivalent with a grade of C or better.	
Speech Communication 101	3
Mathematics	3
Mathematics course numbered 108 or above, with the exception of 114, 120 and 300i.	

<i>Minimum Total</i>	30
----------------------------	----

¹For explanation of groups or list of approved courses see University Core Curriculum requirements above.

In addition to the University Core Curriculum requirements, the student must complete the requirements specified in a contract to be developed between the student and the academic unit or department representative. The contract must include two years of work (60 semester hours) after receiving the associate degree or equivalent certification and must list the remaining requirements for the baccalaureate degree, which will include the remaining University Core Curriculum requirements.

PROCEDURES FOR APPLYING TO THE CAPSTONE OPTION

- To qualify for admission to the Capstone Option, the student must:
1. Have entered a bachelor's degree program at SIUC which participates in the Capstone Option.
 2. Have made application for admission to Capstone by no later than the end of the first semester in the bachelor's degree program. The student must not have

earned more than 12 semester hours of major coursework toward the bachelor's degree program prior to approval for Capstone. A student who is registered in a program that does not participate in Capstone, and later changes to a program that does participate, must submit the Capstone application by no later than the end of the first semester in the new bachelor's degree program and have earned no more than 12 semester hours in the new program. The student who has been approved for Capstone in one program, and who then changes to another program that also participates in Capstone must reapply for Capstone for the new program by no later than the end of the first semester in the new program and have earned no more than 12 semester hours toward the new bachelor's degree program.

3. Have earned an associate degree, or equivalent certification, in a non-baccalaureate-oriented program of 60 semester hours by no later than the end of the first semester in the bachelor's degree program at SIUC. Equivalent certification, for the purpose of Capstone admission, is defined as the formal completion of a technically oriented program of two years duration (60 semester hours), resulting in the receipt of the equivalent of an associate degree (certificate, diploma, or other documentation as provided by the student's educational institution).

4. Have submitted all documentation of work taken prior to the awarding of the associate degree by no later than the end of the second semester at SIUC. This documentation includes all official transcripts from other institutions and may include test reports, evaluation of military experience, work experience or whatever other kind of training has been used to award the associate degree. Official transcript from other institutions must not be more than 30 days old when received by SIUC.

5. Have earned a minimum grade point average of 2.25 (4.0 scale) as calculated by SIUC grading regulations. The grade point average will be calculated on all accredited coursework taken prior to the awarding of the associate degree. An applicant denied admission to Capstone as a result of a low grade point average may not be considered again after raising the average in subsequent work (credit beyond the associate degree).

6. Have received certification from the academic unit at SIUC that the bachelor's degree program can be completed with no more than 60 semester hours of additional coursework. The certification will be determined after application to the Capstone Option has been made.

Capstone Option applications are available in the Academic Support Programs division of Records and Registration in Woody Hall or on the Web at <http://registrar.siu.edu/eval/pdf/capsapp.pdf>.

The student is encouraged to submit a Capstone application at the same time as the Undergraduate Admission application or as soon thereafter as possible. If the Capstone application should be received prior to the receipt of the Undergraduate Admission application, it will not be processed until the student has been admitted to SIUC.

University Core Curriculum and Transfer Students

There are four different ways to complete Core Curriculum requirements:

1. Completion of an Associate in Arts or an Associate in Science degree at a public Illinois community college (see Compact Agreement below);
2. Completion of the Illinois Transferable General Education Core Curriculum as certified by a participating Illinois Articulation Initiative institution prior to enrollment at Southern Illinois University;
3. Completion of SIUC's Core Curriculum requirements; or

4. Admission to and completion of SIUC's Capstone Option for students with an AAS.

The Compact Agreement

SIUC has recognized the Illinois regionally accredited community college transferable baccalaureate oriented Associate of Arts or Associate of Science degrees under the Compact Agreement since 1970. SIUC will continue to recognize the baccalaureate oriented associate degree (A.A. or A.S. degree) under the Illinois Articulation Initiative. The Associate in Engineering Science (A.E.S.), the Associate in General Studies (A.G.S.), and the Associate in Fine Arts (A.F.A.) do not carry the same benefits as the A.A. and A.S. as described below.

Illinois community college graduates who hold an A.A. or an A.S. will be:

1) admitted to SIUC if enrollment occurs after earning the associate degree and prior to coursework attempted at another institution;

2) considered a junior in class standing; and

3) evaluated as having completed the SIUC University Core Curriculum (general education) requirements required for graduation purposes. Major courses that are also core curriculum courses may not automatically be completed by earning the A.A. or A.S. degree.

Students without an A.A. or A.S. from an Illinois Accredited Community College

Transfer students who have not earned a baccalaureate oriented Associate of Arts or Associate of Science degree from an accredited Illinois public community college prior to attending SIUC, but who have been certified by a participating Illinois Articulation Initiative institution as having completed the Illinois Transferable General Education Core Curriculum (IAI GECC) will be considered as having fulfilled the SIUC Core Curriculum requirements required for general graduation.

Transfer students who have not been certified as stated above must complete the SIUC Core Curriculum requirements.

SIUC will waive a fraction of a semester hour of an SIUC Core Curriculum course requirement for a satisfactorily completed and approved course from an accredited institution participating in the Illinois Articulation Initiative. Students must complete a minimum of 37 semester (56 quarter) hours to satisfy the SIUC Core Curriculum requirements.

Transfer students with an AA or AS from a regionally accredited out-of-state institution or an Illinois institution that does not participate in IAI, who present 37 or more semester hours of general education credit prior to initial enrollment will be evaluated to determine completion of the SIUC Core Curriculum model. If the student has completed the SIUC model, the student will be considered as having fulfilled the SIUC Core Curriculum requirements.

The transfer student who has not fulfilled the IAI GECC, the SIUC model, or an Illinois AA or AS will be required to complete the SIUC Core Curriculum requirements (general education).

Transfer students who have earned the Associate in Applied Science (AAS) degree may qualify to complete their University Core Curriculum requirements under the Capstone Option. Information about the Capstone Option and the participating majors is explained in a previous section of this chapter.

Evaluation of courses taken at regionally accredited colleges and universities will be completed by Academic Support Programs in Records and Registration at the time of the student's admission to the University. Any Illinois Transferable General Education Core (IAI) course that is articulated to a SIUC core curriculum course will be utilized toward completion of the SIUC Core Curriculum. Transcripts submitted for evaluation must not have an issuing date of more than thirty days old.

The Illinois Articulation Initiative Transferable General Education Core (IAI) is in effect for students who began an associate or baccalaureate degree as first-time freshmen Summer 1998 or thereafter. Students transferring from SIUC to another institution may request that SIUC audit their record for completion of the Illinois Transferable General Education Core. If the core is complete, the student will receive certification of that completion on the transcript. The student must have 37 or more semester hours of general education credits prior to this request. IAI general education core courses are listed below.

SIUC reentry students who have not earned an Illinois baccalaureate oriented AA or AS degree, or students concurrently enrolled at another institution while attending SIUC, must complete the SIUC Core Curriculum requirements. These SIUC native students may not use the IAI to complete their SIUC Core Curriculum requirements. Concurrently enrolled students should seek advice from Academic Support Programs in Records and Registration on acceptable course equivalents to the SIUC Core Curriculum or visit the web site:
<<http://www.registrar.siu.edu/eval/articpg.htm>>.

Illinois Articulation Initiative

SIUC is a participant in the Illinois Articulation Initiative (IAI), a statewide agreement that allows transfer of the completed Transferable General Education Core Curriculum between participating institutions. Completion of the General Education Core Curriculum at any participating college or university in Illinois assures transferring students that general education requirements for the bachelor's degree have been satisfied. This agreement is in effect for students entering an associate or baccalaureate degree-granting institution as a first-time freshman in summer 1998 (and thereafter).

Students who have completed the Illinois Transferable General Education Core and have been certified as complete by the sending institution will have completed the University Core Curriculum requirements at Southern Illinois University Carbondale.

Certification of the Illinois Transferable General Education Core must contain the minimum requirements shown below:

ILLINOIS TRANSFERABLE GENERAL EDUCATION CORE CURRICULUM MINIMUM REQUIREMENTS

Area	Number Courses	Semester Hours	Special Requirements
Communication	3	9	Two Writing, one oral communication (C or better is required for the writing sequence)
Mathematics	1 or 2	3-6	
Physical & Life Sciences ¹	2	7-8	One Life Science and one Physical Science; one must have a lab
Humanities & Fine Arts	3	9	At least one course selected from Humanities and one course from the Fine Arts
Social & Behavioral Science	3	9	Two Disciplines must be represented: Anthropology, History,

Social & Behavioral
Science

Economics, Human
Geography, Political
Science

Psychology, Sociology
Interdisciplinary Social/
Behavioral Science

Total	12-13	37-41
-------	-------	-------

* Students with appropriate preparation may substitute an initial major course designed for science majors.

Transfer courses from 1996 and forward will be audited to determine if they will fulfill the model above.

Students Transferring to Another Institution

Students may take SIUC courses to complete the Illinois Transferable General Education Core Curriculum prior to transferring to another participating institution. The following IAI codes identify qualifying general education courses:

- C (Communications)
- F (Fine Arts)
- H (Humanities)
- HF (Interdisciplinary Humanities and Fine Arts)
- L (Life Sciences)
- M (Mathematics)
- P (Physical Sciences)
- S (Social Sciences)

Students who do not complete the Illinois Transferable General Education Core Curriculum must meet the receiving institution's general education requirements. Credit for individual courses completed in the Illinois Transferable General Education Core Curriculum will be applied towards fulfillment of the receiving institution's general education requirements so long as the receiving institution requires that coursework.

The courses listed below are the SIUC courses that have been approved for inclusion in the Illinois Transferable General Education Core. These same courses can be found throughout the catalog in their major departments and are designated by [IAI: course number]. Major IAI courses that can be used for lower division major requirements may also be found in their major departments.

IAI GENERAL EDUCATION CORE COURSES OFFERED AT SIUC

IAI Course Number and Title	SIUC Course	SIUC Course Title
C1 900 (Writing Course Sequence)	ENGL 101	English Composition I
C1 901R (Writing Course Sequence)	ENGL 102	English Composition II
C1 901R (Writing Course Sequence)	ENGL 120	Honors Composition
C1 901R (Writing Course Sequence)	LING 102	English Composition II
C2 900 (Oral Communication)	SPCM 101	Intro: Oral Comm
F1 900 (Music Appreciation)	MUS 103	Music Understanding
F1 905D (Ethnic Tradition Am Music)	MUS 203	Diversity/Popular Music
F1 907 (Theatre Appreciation)	THEA 101	Theater Insight
F2 900 (Art Appreciation)	AD 101	Introduction to Art
F2 901 (History of Western Art I)	AD 207A	Intro to Art History I
F2 906D (Ethnic Traditions in Am Art)	AD 227	History African Am Art
F2 908 (Film Appreciation)	ENGL 307i	Film as Literary Art
H1 900 (Foreign Language IV)	CHIN 201B	Interm Chinese
H1 900 (Foreign Language IV)	CLAS 201B	Interm Greek II
H1 900 (Foreign Language IV)	CLAS 202B	Interm Latin II
H1 900 (Foreign Language IV)	FR 201B	Interm French

H1 900 (Foreign Language IV)	GER 201B	Interm German
H1 900 (Foreign Language IV)	JPN 201B	Interm Japanese II
H1 900 (Foreign Language IV)	RUSS 201B	Interm Russian
H1 900 (Foreign Language IV)	SPAN 201B	Interm Spanish
H2 903N (Non-Western Civilizations)	EA 102	East Asian Civilization
H3 900 (Introduction to Literature)	ENGL 121	Western Lit Tradition
H3 900 (Introduction to Literature)	ENGL 204	Lit Prsptct Mod Wrld
H3 900 (Introduction to Literature) ¹	ENGL 209	Forms of Literature
H3 901 (Introduction to Fiction) ¹	ENGL 210	Introduction to Fiction
H3 902 (Introduction to Drama) ¹	ENGL 201	Introduction to Drama
H3 903 (Introduction to Poetry) ¹	ENGL 202	Introduction to Poetry
H3 910D (American Ethnic Literature)	ENGL 205	Am Mosaic Literature
H3 910D (American Ethnic Literature)	ENGL 325	Black American Writers
H3 911D (Literature and Gender)	ENGL 225	Women in Literature
H3 911D (Literature and Gender)	WMST 225	Women in Literature
H4 900 (Introduction to Philosophy)	PHIL 102	Intro to Philosophy
H4 903N (Non-Western Philosophy)	PHIL 308I	Asian Philosophy
H4 904 (Ethics)	PHIL 104	Ethics
H4 904 (Ethics)	PHIL 340	Ethical Theories
H4 906 (Intro to Logic/Critical Thinking)	PHIL 105	Elementary Logic
H5 905 (Religion in American Society)	HIST 202	Am Religious Diversity
H9 900 (Interdisciplinary Humanities)	CLAS 315I	Classical Themes
H9 900 (Interdisciplinary Humanities)	PHIL 103B	World Humanities II
H9 900 (Interdisciplinary Humanities)	PHIL 303I	Philosophy/Literature
H9 901 (Mythology)	WMST 230	Classical Mythology
HF 902 (Western Humanities I)	HIST 201	Art, Music, Ideas
HF 902 (Western Humanities I)	WMST 101	Classical Civilization
HF 904N (Non-Western Humanities)	PHIL 103A	World Humanities I
HF 906D (Am Ethnic Cultr Expression)	PHIL 210	The American Mind
L1 900L (General Education Biology)	PLB 115	General Biology
L1 900L (General Education Biology)	ZOOL 115	General Biology
L1 901L (Plants and Society)	PLB 117	Plants and Society
L1 901L (Plant and Society)	PLB 200	General Plant Biology
L1 902 (Animals and Society) ¹	ANS 121	Intro Animal Science
L1 902L (Animals and Society)	ZOOL 118	Animal Biology
L1 903L (Microbes and Society)	MICR 201	Elem Microbiology
L1 904 (Human Biology)	PHSL 201	Human Physiology
L1 904L (Human Biology) ¹	PHSL 208	Lab in Physiology
L1 905 (Environmental Biology)	ENGR 301I	Humans/Environment
L1 905 (Environmental Biology)	ZOOL 312I	Consrsv Natrl Resources
L1 906 (Heredity and Society)	ZOOL 214	Human Heredity
M1 900 (College-Level Calculus)	MATH 141	Calculus for Bio Sci
M1 900-1 (College-Level Calculus I)	MATH 150	Calculus I
M1 900-2 (College-Level Calculus II)	MATH 250	Calculus II
M1 900-3 (College-Level Calculus III)	MATH 251	Calculus III
M1 902 General Education Statistics	MATH 282	Intro to Statistics
M1 902 General Education Statistics	MATH 283	Intro Applied Statistics
M1 903 Math for Elem Teachers I	MATH 314	Geometry Elem Teachrs
M1 904 (General Ed Mathematics)	MATH 113	Contemporary Math
M1 905 (Discrete Mathematics) ¹	CS 215	Discrete Mathematics
P1 900 (General Education Physics)	PHYS 203A	College Physics
P1 900L (General Education Physics)	PHYS 253A	College Physics Lab
P1 901L (Physics and Society)	PHYS 101	Phys That Chges World
P1 902 (General Education Chemistry)	CHEM 200	Intro Chem Principles
P1 902L (General Education Chemistry)	CHEM 140A	Chemistry
P1 902L (General Education Chemistry)	CHEM 201	Gen Chemistry Lab I

P1 903L (Chemistry and Society)	CHEM 106	Chemistry and Society
P1 907 (Introduction to Geology)	GEOL 220	Physical Geology
P1 907 (Introduction to Geology) ¹	GEOL 221	Earth Through Time
P1 908 (Environmental Geology)	GEOL 111	Geol and Environment
P1 908L (Environmental Geology)	GEOL 112	Geol Environment Lab
P1 909L (Physical Geography)	GEOG 303I	Earth's Bio Environ
P2 900 (Calculus-based Physics I)	PHYS 205A	University Physics
P2 900L (Calculus-based Physics I)	PHYS 255A	University Physics Lab
S1 900N (Introduction to Anthropology)	ANTH 104	Human Experience
S2 900 (United States History I)	HIST 300	Origins Am: 1492-1877
S2 901 (United States History II)	HIST 210	20th Century America
S2 901 (United States History II)	HIST 301	Mod Am Hist:1877-Pres
S2 902 (Hist of Western Civilization I) ¹	HIST 205A	Hist of Western Civ
S2 903 (Hist of Western Civilization II) ¹	HIST 205B	Hist of Western Civ
S2 910N (History of Latin America I) ¹	ANTH 205	Latin American Civ
S2 912N (World History I)	HIST 207A	World History
S2 913N (World History II)	HIST 207B	World History
S3 901 (Principles of Macroeconomics)	ECON 241	Intro to Macroecon
S3 902 (Principles of Microeconomics)	ECON 240	Intro to Microecon
S4 900N (Intro to Human Geography)	GEOG 103	World Geography
S5 900 (Am/U.S. Natl Government I)	POLS 114	Am Govt and Politics
S5 902 (U.S. State and Local Govt) ¹	POLS 213	State and Local Govt
S5 904N (International Relations) ¹	POLS 170	Global Politics
S5 905 (Comparative Government) ¹	POLS 207	Political Ideologies
S5 905 (Comparative Government) ¹	POLS 250	Politics-Foreign Nations
S6 900 (General Psychology I)	PSYC 102	Intro to Psychology
S7 900 (Introduction to Sociology)	SOC 108	Intro to Sociology
S7 902 (Marriage and Family) ¹	CI 227	Marriage and Family
S7 902 (Marriage and Family) ¹	WMST 286	Marriage and Family
S7 903D (Racial and Ethnic Relations)	SOC 215	Race/Ethnic Relatn: US
S7 904D (Racial and Ethnic Relations)	SOC 223	Women/Men Cntmp Soc
S7 904D (The Sociology of Sex & Gender)	WMST 223	Women/Men Cntmp Soc

¹These SIUC and corresponding IAI courses will not satisfy SIUC's University Core Curriculum requirement, but will satisfy the Illinois Transferable General Education Core.

These courses will be updated periodically. For a complete list or for more information about IAI, visit their web site at: <<http://www.itransfer.org>>.



4 / College and Academic Programs



College of Agricultural Sciences

Gary L. Minish, *Dean*

The College of Agricultural Sciences offers the following majors with specializations leading to the Bachelor of Science degree.

Major (B.S. degree)	Specialization
Agribusiness Economics ¹	Agribusiness Economics: curriculum individually designed to fit student needs
Agricultural Systems ¹	Agricultural Education Agricultural Production Agricultural Systems Technology General Agriculture
Animal Science ¹	Animal Production Equine Science Pre-Veterinary Medicine Science
Food and Nutrition	Dietetics Hospitality and Tourism
Forestry	Forest Resources Management Outdoor Recreation Resources Management Urban Forest Management Forest Hydrology
Plant and Soil Science ¹	Business Environmental Studies Landscape Horticulture Turfgrass Science General

¹Minor available

It is recommended that high school students who are planning to pursue one of the above majors include the following in their high school program: four years of English, three years of mathematics (algebra, geometry, advanced mathematics); three years of science (biology, chemistry, physics); three years of social studies; and two years of art, music, vocational education (may include agriculture), or foreign languages. For prospective agriculture majors or food and nutrition majors, high school classes in agriculture or family and consumer sciences education respectively are beneficial but are not specifically required.

For transfer students wishing to pursue a major in one of the agricultural, food and nutrition or forestry areas, courses taken prior to entering the University should include physical and biological sciences, social sciences, and humanities. In addition, courses in speech and appropriate sequences in English composition and college algebra should be included as well as a general botany course. A potential transfer student who has already identified a major for the bachelor's degree may select with greater precision the courses, which will be transferred by consulting the curriculum for that major.

A student planning to take preprofessional courses in veterinary science should register in the College of Agricultural Science's four-year curriculum in Animal Science (Science and Pre-Veterinary specialization).

Qualified candidates for the Capstone Option are accepted into Agribusiness Economics, Animal Science, Agricultural Systems and Plant and Soil Science, and Food and Nutrition, Hospitality and Tourism specialization. The Capstone Option is described in Chapter 3.

Of the recent graduates of the College of Agricultural Sciences, about 45% have been employed in private industry, 10% management and about 15% have been employed in each of: government (federal, state, county, and city); education or extension; graduate study or professional schooling.

Typical employment opportunities for Agribusiness Economics graduates include positions in credit and financial management, professional farm management, sales, and grain merchandising. A graduate from the Agricultural Systems major can be employed in the farm machinery or implement industry, as a high school agricultural educator, as a news editor, or in agricultural sales or service. Animal Science majors seeking employment can investigate positions in livestock management or sales, and governmental positions such as meat inspectors, as well as veterinary school. Food and Nutrition majors will find numerous opportunities as registered dietitians or in the hospitality and tourism industry. The major employer of Forestry graduates is the federal or state government, but they also work as private forestry consultants, in urban forestry, in private industry, or not-for-profit organizations. The Plant and Soil Science graduate with a concentration in agronomy will find opportunities in industry such as agricultural chemical sales, in production agriculture, or with a governmental agency such as the Soil Conservation Service. Horticulture graduates can seek employment in nursery management, golf course and turf management in the florist or interior plant maintenance industry, or with landscape design firms.

College of Agricultural Sciences students come from both rural and urban homes. Almost 40% of the undergraduates and nearly 45% of the graduates are women. Individual faculty advisors prior to registration counsel students who elect any one of the six majors in the College of Agricultural Sciences. Faculty members offer an open-door policy and much personal attention to their advisees as well as to students enrolled in their classes.

The Agriculture Building houses the offices, classrooms, and laboratories for the agriculture and forestry programs. The Food and Nutrition program has offices, classrooms, and laboratories in Quigley Hall. Other research and teaching facilities include over one-third acre in greenhouses plus 2,000 acres of farm and timberland.

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

College of Applied Sciences and Arts

Paul D. Sarvela, *Dean*

Career and technically oriented academic programs in the College of Applied Sciences and Arts can lead to one of fourteen Bachelor of Science degrees and four Associate in Applied Science degrees. These programs provide career paths for entry-level students or transfer students from SIUC or other institutions.

Requirements for Bachelor of Science and Associate in Applied Science degrees as well as additional information for each major offered can be found in specific program information in Chapter 5.

Schools and programs within the College of Applied Sciences and Arts are:

School Name	Major	Degree
Architecture	Architectural Studies	Baccalaureate
	Interior Design	Baccalaureate
	Fashion Design and	

	Merchandising	Baccalaureate
School Name	Major	Degree
Transportation ¹	Automotive Technology	Baccalaureate
	Aviation Flight	Associate
	Aviation Management	Baccalaureate
Transportation ¹	Airport Management & Planning	Minor
	Aircraft Product Support	Minor
	Aviation Technologies	Baccalaureate
	Aircraft Maintenance Specialization	
	Aviation Electronics Specialization	
	Helicopter Specialization	
	Aircraft Product Support	Minor
Allied Health ¹	Dental Hygiene	Baccalaureate
	Dental Technology	Associate
	Health Care Management	Baccalaureate
	Mortuary Science and Funeral Service	Baccalaureate
	Physical Therapist Assistant	Associate
	Physician Assistant	Baccalaureate
	Radiologic Sciences	Baccalaureate
	Medical Diagnostic Sonography (Ultrasound) Option	
	Magnetic Resonance Imaging and Computed Tomography Option	
	Radiation Therapy Option	
	Respiratory Therapy Technology	Associate
Information Systems and Applied Technologies ²	Electronic Systems Technologies	Baccalaureate
	Electronics Management Specialization	
	Information Systems Technologies	Baccalaureate
	Information Technology	University-Wide Minor
	Technical Resource Management ²	Baccalaureate
	Fire Service Management	Baccalaureate

¹Participates in University-wide minor in Information Technology.²Anyone interested in the Construction Management Emphasis should refer to Chapter 5.

Anyone interested in the following off-campus programs should contact the Office of Off-Campus Academic Programs, ASA 120, (618) 536-6609.

Aviation Management	Fire Service Management
Electronic Systems Technologies	Health Care Management

Students with educational and/or occupational backgrounds or with career objectives in the fields of architecture, automotive technology, aviation, electronics, fire service, health care, information systems or interior design are encouraged to apply for admission to these career-specific programs. Students also may choose to apply for admission to Technical Resource Management which is a baccalaureate degree program designed especially for technically oriented students seeking career enhancement where no other specific Bachelor of Science degree in the

college is available. Requirements for degree programs and information for each of these majors can be found in Chapter 5.

Students eligible for admission to the Bachelor of Science programs must meet University entrance requirements and program requirements for admission to the major. Transfer students admitted to SIUC in good standing are eligible to apply for admission to one of the college's programs. Students must complete all course work with a 2.0 average *C* or better on a 4.0 point scale to qualify for completion. Students may be admitted to the college's off-campus academic programs if requirements stated in the *SIUC Military Programs Supplement* to the *SIUC Undergraduate Catalog* have been met. Additionally, students must fulfill all SIUC requirements including the University Core Curriculum, total hour, residence, and gpa requirements to qualify for completion.

A partnership between John A. Logan College and SIUC provides students enrolled at John A. Logan College's Construction Management Technology AAS program an opportunity to reside on the SIUC campus while attending John A. Logan College (JAL). John A. Logan Construction Management Technology students who simultaneously enroll in SIUC have access to SIUC services such as the Recreational Center, Health Services, Student Center, Morris Library, athletic events, and registered student organizations. After successful completion of the AAS in Construction Management Technology, students may be admitted to Technical Resource Management.

The Capstone Option is available to qualified students. Students eligible for the Capstone Option are able to complete their bachelor's degree in no more than 60 additional semester hours as approved by the program. To make an application to the Capstone Option, the student must have a 60-hour Associate in Applied Science degree or its equivalent from an occupational or technical training program; a 2.25 or higher grade point average on all accredited work prior to the associate degree; and submit the application for the Capstone Option by no later than the student's first semester in a participating Capstone major. The student may not have more than 12 hours of course work from the chosen baccalaureate major prior to application. Capstone Option information can be found in Chapter 3.

The College of Applied Sciences and Arts has several articulation agreements with community colleges located in California, Illinois, Indiana, Iowa, New Jersey, Texas, and Wisconsin. Agreements exist for the following programs: Automotive Technology, Aviation Management, Aviation Technologies, Electronic Systems Technologies, Fire Service Management, Information Systems Technologies, and Technical Resource Management. Additionally, linkage agreements exist for several health care programs. For specifics, refer to the program information in Chapter 5.

Additional information on the College of Applied Sciences and Arts programs and course offerings is available through the Office of Enrollment Services, College of Applied Sciences and Arts, Southern Illinois University Carbondale, Carbondale, Illinois 62901 phone: (618) 453-7283 or e-mail: <casenrol@siu.edu> or the college's web page site at <<http://www.siu.edu/~asa>>

College of Business and Administration

Gregory P. White, *Interim Dean*

Departments: Finance; Management; Marketing

School: Accountancy

The College of Business and Administration aims to prepare students to perform successfully in business and other organizations such as government and other not-for-profit organizations functioning within a changing social, economic, and political environment. Study provides the student with fundamental principles and practices of organizational behavior and allows the mastering of knowledge and skills for effective management. The curriculum provides a broad base for

understanding business while simultaneously allowing in-depth study within an area of concentration and exposure to current information technology. Students find business, governmental units, and other public institutions desire the professional education they receive in the college. The advanced curriculum and related programs provide students not only with a meaningful education but also with a means of relating that education to organizations and commerce.

The College of Business and Administration offers the following majors leading to the Bachelor of Science degree:

Accounting	Business Economics	Management
Business and	Finance	Marketing
Administration		

All programs offered in the College of Business and Administration are accredited by AACSB International, The Association to Advance Collegiate Schools of Business, 777 South Harbour Island Boulevard, Suite 750, Tampa, FL, 33602-5730.

The College of Business and Administration offices are located in Henry J. Rehn Hall; and classes are conducted in various buildings throughout the campus.

Pre-College Preparation

High school and preparatory school students are urged to follow a program which includes at least four units of English and three units of mathematics, with a substantial portion of the remainder of their study programs devoted to such academic subject areas as humanities, the sciences, and social studies.

Transferred Credits in Business Courses

Subject to the policies of the University and of AACSB International regarding acceptance of transferred credits, the college accepts college-level credit earned in business and economics courses from accredited two- or four-year institutions of higher education and counts such credit toward the 120 semester hours required for graduation. However, if such courses are offered at the lower division (freshman and sophomore level) at the institution where completed, only those courses shown below will be treated as equivalencies to college- or departmental-required courses.

Subject Hours

Principles of accounting	6
Economic principles	6
Business economics statistics	3
(where college algebra is a prerequisite)	
Basic computer course ¹	3
Legal and social environment of business	3

¹Computer coursework completed at other universities and colleges will be accepted as transfer credit for the College of Business and Administration core computer requirement if that course has been approved as an equivalent course by the College of Business and Administration.

Students also have the opportunity of validating additional coursework and nothing in the above statement abridges a student's right to satisfy graduation requirements by proficiency (or competency) examinations. Such examinations are treated as a student right by the college and are available for most courses.

Admission Policy

The College of Business and Administration admission policy shall be the same as that of the University. All qualified new students are admitted to the College of Business and Administration with a specific departmental major classification or as an unclassified student.

Reentering and Southern Illinois University Carbondale Students. Students who are currently enrolled or were previously enrolled at the University in a major outside the College of Business and Administration may request admission to a Business program. These students will be considered for admission to the College of Business and Administration provided that they are in good standing with the University.

International Students. International students must meet admission requirements comparable to those of native students. While admission credentials such as ACT and class rank are generally not submitted by international students, applicants do submit credentials which reflect their achievement in some subject areas similar to those of the United States students. Beginning international freshmen as well as transfer students will have their applications and documents reviewed in a manner similar to domestic students for admission to the College of Business and Administration.

Grade Point Average Calculation. In calculating a student's grade point average for admission purposes for continuing, new, and reentering students, the admission office will follow the SIUC grading policy and procedures for all collegiate (not remedial) work attempted at SIUC and other collegiate institutions.

Grade Point Average Requirement

Graduation from the College of Business and Administration requires achievement of a 2.00 grade point average in all business-prefix (ACCT, BUS, ECON, FIN, MGMT, MKTG) courses taken at Southern Illinois University Carbondale. Accounting majors are subject to the additional requirement of achieving a grade of C or better in accounting-prefix (ACCT) courses completed at the University; Marketing majors must earn a C grade in all marketing courses that are taken to satisfy major requirements; and Finance majors must maintain a cumulative 2.00 grade point average in Finance prefix courses taken at SIUC, excluding Finance 200, 270, 310, 323. Business courses may be taken only three times. If a course is failed, a student has two additional attempts to pass the course. Students may not repeat courses in which they have earned a grade of C or better.

Pass/Fail Policy of the College

Business majors may not register on a Pass/Fail basis for courses used to satisfy requirements in the College of Business and Administration unless the course is designated Mandatory Pass/Fail.

Course Sequencing

It is of the utmost importance that required courses be sequenced properly. Sequencing guides are available from the college's academic advisement center and are published in the College of Business and Administration's *Student Handbook*. Courses on the 300 to 400 levels are reserved for juniors and seniors.

Technology Fee

The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer semester up to six semester hours.

Fifty Percent Rule

At least 50% of the coursework of all business majors must be devoted to courses offered outside the College of Business and Administration.

University Core Curriculum Courses Prescribed for Business Majors

Students in the College of Business and Administration must complete the University Core Curriculum requirements. The following courses are required and will count toward partial fulfillment of these:

- Psychology 102 or Sociology 108
- Economics 241 to substitute for Economics 113 in the University Core
- English 101, 102
- Mathematics 139 to substitute for University Core Mathematics
- Speech Communication 101

Professional Business Core

The professional business core, required of all College of Business and Administration students, is comprised of the following courses:

<i>Courses</i>	<i>Semester Hours</i>
Accounting 220, 230	6
Business 123, 302.....	2
English 291 ⁶	3
Management 208 ⁵ , 304, 318, 345, 481	15
Computer Science 200b/Information Systems and Applied Technologies 229 ^{2,7}	3
Economics 241, 240	(3) ¹ + 3
Finance 270 ³ , 330	6
Marketing 304	3
Mathematics 139 ¹ and 140 ⁴	(3) ¹ + 4
Total	45

¹See University Core Curriculum courses prescribed for business majors.

²Computer coursework completed at other universities and colleges will be accepted as transfer credit for the College of Business and Administration core computer requirement if that course has been approved as an equivalent course by the College of Business and Administration.

³The combination of Finance 280 and 380 may be substituted for 270.

⁴Mathematics 150 may be substituted for 140.

⁵Also listed as Accounting 208.

⁶May substitute English 290, Management 202 or Workforce Education 302 if necessary

⁷Management majors with the MIS specialization shall substitute Computer Science 201 or 202 for Computer Science 200b/Information Systems and Applied Technologies 229.

College of Education and Human Services

Patricia Elmore, *Interim Dean*

Departments/School/Institute: Curriculum and Instruction; Educational Administration and Higher Education; Educational Psychology and Special Education; Health Education and Recreation; Kinesiology; Rehabilitation Institute; School of Social Work; Workforce Education and Development.

The College of Education and Human Services offers the following programs¹ leading to the Bachelor of Science degree:

Art

Science: designation in Biology

Communication Disorders and Sciences

Early Childhood Education

Elementary Education

English

English Language Arts

Foreign Language

French

German

Spanish

Health Education

Community Health³

School Health³

Social Sciences: designation in History

Mathematics

Kinesiology

Athletic Training³

Exercise Science & Physical Fitness⁵

Physical Education Teaching³

Recreation

Therapeutic

Leisure Services Management

Rehabilitation Services

Secondary Education²

Social Work

Special Education
Workforce Education and Development
*Business, Marketing and
Computer Education*³
*Family and Consumer Sciences*³

*Health Careers*³
*Technology*³
*Education Training & Development*³
*Human Resources*³

¹In addition to programs offered almost entirely within the College of Education and Human Services, certain programs are offered in cooperation with the College of Liberal Arts (e.g., English, art), or with the College of Agricultural Sciences and the College of Science (e.g., science with a designation in biology).

²This is not an academic major. Persons planning to teach in secondary schools should refer to Curriculum and Instruction program for a listing of academic majors and minors.

³Specialty Areas available.

The College of Education and Human Services is a multipurpose college that prepares students as human service professionals, as well as for the teaching profession. These programs include preparation in Athletic Training, Exercise Science, Child and Family Services, Community Health and Education, Physical Fitness, Recreation, Rehabilitation Services, Social Work, Training and Development.

Preparation of teachers at all levels and in all areas of instruction in the public schools from preschool education through high school is the special function of the College of Education and Human Services. In its graduate offerings the efforts of the College of Education and Human Services include professional work for prospective college teachers and administrators and several specializations in elementary and secondary school administration and supervision.

For most undergraduate students preparing to teach in high school, the subject-matter courses will be taken in other colleges and schools of the University. Professional preparation for teaching, including student teaching, will be completed in the College of Education and Human Services. Graduates of the College of Education and Human Services receive the Bachelor of Science degree.

Students who wish to become principals or superintendents in the public schools take graduate work in the Department of Educational Administration and Higher Education. The department's major emphasis is on graduate work, but it also participates in providing background for elementary and high school teachers. Likewise, students wishing to pursue a career in teaching or administration at the college and university level take graduate work in the department. The department does not offer an undergraduate major in higher education, but offers courses for undergraduate credit providing a broad background in higher education for elementary and high school teachers.

The College of Education and Human Services, housed in the Wham Education Building, is the oldest unit of the University, which was originally chartered as Southern Illinois Normal University.

Teacher Education Program

Southern Illinois University Carbondale is fully accredited by the National Council for Accreditation of Teacher Education (NCATE) and by the Illinois State Board of Education. The Teacher Education Program is an all-University function administered by the Dean of the College of Education and Human Services. An advisory committee composed of faculty, area teachers, and administrators serves in an advisory capacity to the Dean.

Teacher Education Programs approved by the Illinois State Board of Education are offered in elementary education, early childhood education, special education, various secondary education majors and minors, and in majors which lead to the special certificate in art, music and physical education. The special education major offers an undergraduate major in special education, which entitles the student to qualify for the State of Illinois Special Certificate with the Learning Behavior Specialist I endorsement. The special education major prepares teachers to teach students with disabilities, ages K to 21 receiving services along the full contin-

uum of service delivery options. Students who complete the Preschool/Primary Specialization of the early childhood education major are qualified to receive a *Letter of Approval* that entitles them to work as a teacher in early childhood special education programs.

Only those students who complete an approved Teacher Education Program are recommended for certification and may receive a teaching certificate through the entitlement process. Changes in state certification requirements may invalidate the following information regarding teacher education. Students need to contact an SIUC education advisor for updated information. Further information and procedures for receiving the certificate are explained below under Certification.

ADMISSION POLICY

The College of Education and Human Services admission policy shall be the same as that of the University. All qualified new students are admitted to the College of Education and Human Services with a specific major classification or as an undecided student. The same policy applies for reentering students and for students enrolled in Teacher Education Program majors in other colleges in the University.

Admission to the Teacher Education Program may occur when the student has completed a minimum of 30 semester hours. A student is eligible to make formal application for admission to the program when the following criteria have been met:

1. A minimum of 30 semester hours of completed work;
2. An overall grade point average of at least 2.75 (4.0 scale);
3. Completion of English 101 and 102 with a grade of C or better;
4. Two Recommendation Forms from College or University faculty;
5. A passing score on the Illinois Test of Basic Skills.
6. Successful criminal background check.
7. Successful completion of Education 210 (grade of "C" or better) or its equivalent.

Applications must be accompanied by verification that all of the above requirements have been met. Students are responsible for submitting their basic skills test scores, a transcript showing required coursework and hours completed with grades, and a check or money order for \$10, to Southern Illinois University Carbondale. Application forms, as well as information about the Teacher Education Program, are available from the College of Education and Human Services, Office of Student Services, in Wham Education Building, Room 135. Students are encouraged to investigate the feasibility of applying for a particular teaching field early in their undergraduate careers by contacting their advisor or the department in which they wish to specialize. Transfer students are encouraged to contact the College of Education and Human, Office of Student Services at least one semester prior to enrolling at Southern Illinois University Carbondale. All students are required to pass a criminal background check.

If a student's application is approved after being reviewed by the TEP Admissions Coordinator in the College of Education and Human Services, the student is entitled to begin work in the basic professional education courses, which are prerequisite to the professional semester of student teaching.

RETENTION POLICY FOR TEACHER EDUCATION PROGRAM

This retention policy became effective June 15, 2001, and applies to all students enrolled at Southern Illinois University Carbondale after June 15, 2001.

A total of at least 320 students will be admitted each year to the Teacher Education Program. Paperwork for admission should be submitted by September 20 for the October 1 admission date. October 1 admission is for enrollment in the teacher education sequence beginning the following spring semester. Paperwork for admission should be submitted by February 20 for the March 1 admission

date. March 1 admission is for enrollment in the teacher education sequence beginning the following fall semester. Paperwork for admission submitted by June 20 for the July 1 admission date is for enrollment in the teacher education sequence for either fall or spring semesters (contingent on space available for student teaching field placement).

Provisions for enrollment in Education 313:

1. Students who have not enrolled in and taken Education 313 within one year of being admitted to the Teacher Education Program will be dropped from the program. They must reapply to enroll in Teacher Education Sequence courses.
2. Students who wish to change majors after being admitted to the Teacher Education Program and prior to taking Education 313, must reapply under the new major and be admitted in the new major before they can enroll in Education 313. Students who change their major after enrolling in Education 313 may be required to take additional hours of Education 312 to meet the required 100 clock hours in their major field.
3. Students may not enroll in Education 313 more than two times. After two failures, students must demonstrate through external experiences with children/youth of the age they plan to teach that they have the potential for a successful third placement. This will require at least one semester of external experience and written documentation from the administrator of the school as well as from the person who provided direct supervision.

At the end of the first semester of participation in the TEP, the department offering the student's major is requested to submit a recommendation as to whether or not the student should be retained in the program. Criteria for this recommendation are available from the department or the student's advisor. Failure to obtain approval prohibits the student from continuing in the professional education courses and could lead to suspension from the program. In order to remain in the program and complete the requirements for graduation and teacher certification requirements, the student must attain a 2.75 grade point average in the major and receive departmental approval. Both of these requirements must be met before final clearance can be given for a student teaching assignment. All students must pass their Illinois content area test prior to beginning their student teaching assignment.

Students who withdraw from student teaching for whatever reason will be told specifically what criteria they must meet to enroll in student teaching a second time. Students who cannot finish a second student teaching assignment will not be readmitted to student teaching.

Students who are not able to meet the criteria of the Teacher Education Program or their major department will be counseled about alternative programs.

Collegiate Warning and Dismissal from the Teacher Education Program. Students who do not achieve an accumulative 2.25 grade point average in their major in any semester are subject to collegiate warning. Students who are on collegiate warning and do not earn a 2.25 grade point average in courses required by their major in a subsequent semester will be placed in a status of collegiate dismissal. Students registered in other colleges who are in the Teacher Education Program who do not meet this requirement will be dismissed from the Teacher Education Program. A student who has been placed on collegiate dismissal may seek transfer to another program if the student has an overall grade point average of 2.00 at Southern Illinois University Carbondale. Students who are placed on collegiate dismissal and have less than an overall 2.00 for work completed at the University but have not been suspended from the University will be *counseled regarding other possible majors*.

DEGREE REQUIREMENTS

Each degree candidate in a Teacher Education Program must complete the requirements listed below:

1. All requirements of the student's major.
2. The University Core Curriculum.
3. Psychology 102 as a prerequisite for Education 314 in the professional education sequence.
4. English 101 and 102 with a grade of *C* or better. The two composition courses are a prerequisite to admission to the Teacher Education Program.
5. A 2.75 grade point average in the student's major.
6. The professional education sequence of courses listed below. Each course that is part of the program prior to the professional semester must be completed with a grade of *C* or better as a prerequisite to admission to the professional semester. Students must receive a grade of *C* or better in Education 401 to receive recommendation for certification.

<i>Professional Education Sequence</i>	30
Decision Component	
Education 308	3
Education 313	3
Basic Professional Block ¹	
Education 210	2
Education 311	3
Education 314	2
Education 316	3
Education 317	2
Professional Semester	
Education 401	12

¹Includes Education 312 and 400 for Special Education majors.

Certification

A student nearing completion of the Teacher Education Program (usually during the last semester) can make application for entitlement to teacher certification from the Illinois State Board of Education through the College of Education and Human Services Office of Student Services, Wham Education Building, Room 135. Upon notification of entitlement from SIUC, students who meets the requirements will be able to apply for initial certification and register their certificate with a Regional Office of Education on-line through the Illinois State Board of Education (ISBE) On-Line Teacher Information System (OTIS) web-site. A paperwork certification procedure is also available for students who do not meet the on-line requirements.

Applicants for certification must register for and pass the Illinois Test of Basic Skills, the appropriate Illinois Certification Content Area Test and the appropriate Assessment of Professional Teaching Test, in addition to completing all other program requirements prior to being granted entitlement. The Illinois Certification Content Test must be passed prior to student teaching.

Once approved by the institution, ISBE will issue, through the entitlement process, an Initial Certificate in Early Childhood, Elementary, Secondary or Special to students who graduate from an approved Teacher Education Program. The first *initial* teaching certificate is valid for four years. An individual has 12 years in order to move from an initial to a standard teaching certificate. An individual must complete 4 years of teaching and complete one professional development option, outlined by ISBE, prior to obtaining a standard certificate. For additional information pertaining to teacher education, please contact the Certification Coordinator or refer to the ISBE web-site at: <www.isbe.net/certification>.

College of Engineering

William P. Osborne, *Dean*

Engineering is the profession in which a knowledge of the mathematical and natural sciences gained by study, experience and practice is applied with judgment to develop ways to utilize economically the materials and forces of nature for the benefit of people.

Vision. The College of Engineering at Southern Illinois University Carbondale will excel in engineering and technology education and research through the quality of its faculty, graduates, students, staff, facilities, and programs.

Mission. To provide world-class programs in engineering and technology education, research, and service so as to enhance the economic and social well being of the citizens of Illinois, the nation, and the world.

The strategic objectives and educational objectives consistent with the vision and mission statements are given on the colleges website:

<<http://www.engr.siu.edu>>.

Departments: Civil and Environmental Engineering; Electrical and Computer Engineering; Mechanical Engineering and Energy Processes; Mining and Mineral Resources Engineering; and Technology. The College of Engineering offers the following majors and specializations leading to the Bachelor of Science degree:

Civil Engineering

Civil Engineering - Environmental Engineering Specialization

Computer Engineering

Electrical Engineering

Electrical Engineering – Computer Engineering Specialization

Mechanical Engineering

Mining Engineering

Mining Engineering – Geological Engineering Specialization

Engineering Technology – Electrical Engineering Technology Specialization

Industrial Technology – Manufacturing Technology Specialization

All of the engineering programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (EAC/ABET), 111 Market Place, Suite 1050, Baltimore MD 21202-4012, (410) 347-7700. The engineering technology program with specializations in electrical is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. The National Association of Industrial Technology accredits the industrial technology program.

Specific requirements are listed for the various majors in chapter five. Seven academic programs: civil engineering, computer engineering, electrical engineering, mechanical engineering, mining engineering, engineering technology and industrial technology serve students who have different career goals.

Civil and Environmental Engineering. Civil and Environmental Engineers are responsible for the design, construction, maintenance, and management of the infrastructure consisting of highways, bridges, dams, water and wastewater systems, power generating stations, pollution control systems, airports, skyscrapers, and other industrial and commercial buildings. Design and management decisions consider a wide range of factors, including earthquakes, hurricanes, progressive collapse and environmental impact.

The civil and environmental engineering program leading to the Bachelor of Science degree in Civil Engineering is designed to provide the student with the broad educational background essential to be a successful entry level Civil Engineer in practice and to meet the technological challenges of the 21st century. The

program also provides additional coursework to the student who prefers to obtain a Civil Engineering degree with emphasis on Environmental Engineering. The technical electives in the senior year permit greater breadth and additional depth in the areas of structural engineering, geotechnical engineering, hydraulic engineering, environmental engineering, and land surveying.

The graduates from this program are eligible to become registered professional engineers (PE) after satisfying the state registration board's requirements. In addition, the program offers the coursework required for admission to the Structural Engineer License (SE) and Land Surveyor in Training (LSIT) examination.

Electrical and Computer Engineering. The Department of Electrical and Computer Engineering offers Bachelor of Science degrees in Electrical Engineering, Computer Engineering and in Electrical Engineering with a Specialization in Computer Engineering. The Department offers the option for a dual Degree in Electrical and in Computer Engineering.

Electrical engineering curriculum provides students with the opportunity to choose among advanced courses in the theory and applications of circuits, systems, control, signal processing, communications, digital systems, power systems, electronics, gaseous electronics, optics, electro-optics, electromagnetics, antennas and propagation.

The computer engineering curriculum provides emphasis on problem solving and design experiences through understanding of the fundamentals of both the hardware and software aspects of computer engineering.

Employment opportunities for electrical and computer engineers exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

Mechanical Engineering. Mechanical engineering is one of the most broadly based of the traditional engineering disciplines. Mechanical engineers design and develop a wide variety of systems for conversion, transmission, and utilization of energy; for material processing and handling and packaging; for transportation; for environmental control; and for many other purposes for the benefit of humanity. Therefore the curriculum contains a broad foundation in mathematics and the basic and engineering sciences, followed by more concentrated study in energy and machine systems. Mechanical engineers may be found in a variety of assignments including planning and design, research and development, supervision of installation and operation of complex systems, and management.

Mining and Mineral Resources Engineering. Mining engineers engage in planning, design, development, and management of surface and underground mining operations for extraction of the earth's mineral deposits. The mining engineering program prepares graduates to meet the challenges of the mining industry with emphasis on the coal and aggregate industries. Coursework in the program includes such areas as surface and underground mining systems, mine ventilation, ground control and rock mechanics, mineral and coal processing, material handling systems, mineral economics, mine health and safety engineering, operations research, and computer-aided mine design.

The Geological Engineering specialization permits students to gain a broader background in mine geology and engineering disciplines.

After completing the program, the graduate may work in an engineering or management position for mining industries, equipment manufacturers, research organizations, or government agencies. The coursework also provides strong preparation for further study at the graduate level.

Engineering Technology. Engineering technology is that part of the technological field in which engineering knowledge and scientific methods are combined with hands-on technical skills to support engineering activities. It lies in the occupational spectrum between that of the technician and the engineer with specific responsibilities depending upon the nature of the training and requirements of the job but lying more closely to engineering. Graduates are prepared to deal with technical and production problems, and to apply their knowledge to such activities as development, design, construction, maintenance and operational problems.

Industrial Technology. Industrial technology is a management-oriented technical profession that is built upon a sound knowledge and understanding of materials, processes, technical management, and human relations; and a proficiency level in the physical sciences, mathematics, and technical skills to permit the graduate to capably resolve technical-managerial and production problems. Graduates of this program are prepared for positions in processes, safety, quality control, supervision, robotics, methods analysis, and computer-aided manufacturing.

Readmission to the College

The readmission policy for the College of Engineering is the same as the University policy for a first suspension: students placed on academic suspension may seek reinstatement after a minimum of two semesters' interruption but must furnish tangible evidence that additional education can be successfully undertaken. Exceptions to this policy are sometimes made when students have extenuating circumstances. Students placed on academic suspension a second or subsequent time may reapply after an interval of no less than two calendar years. For information on procedures and requirements for readmission, students are advised to consult the Engineering advisement office.

Course Sequence

It is important that required courses in the program be taken in the proper sequence. Sequence guidelines are available from the college advisement office and the departmental offices. Courses on the 300-and 400-levels are reserved for juniors and seniors.

Transfer Students

Students enrolled in community colleges who plan to transfer to the College of Engineering at Southern Illinois University Carbondale should take courses that provide backgrounds in mathematics, physical sciences, social sciences, and humanities. Students may transfer at any time, but there are advantages in having completed a baccalaureate-oriented associate-degree program. Community college students should refer to the following website: <<http://www.engr.siu.edu>> under New Student Information for course recommendations applicable to majors in the College of Engineering.

All transfer credit from an accredited institution whose work is acceptable at the University, both two-year and four-year, will be used in fulfillment of program requirements. Equivalencies for courses will be determined by the departmental chair, advisement office, or office of the dean, College of Engineering.

Students who are attending a public Illinois community college and contemplating application to the College of Engineering should obtain program information, which has been prepared for their particular community college.

Qualified candidates for the Capstone Option are accepted with majors in industrial technology. The Capstone Option is described in Chapter 3.

Location

Administrative offices of the college are located in the Engineering Building near Lake-on-the-Campus.

College of Liberal Arts

Shirley Clay Scott, *Dean*

Departments: Administration of Justice; Anthropology; Art and Design; Economics; English; Foreign Languages and Literatures; Geography and Environmental Resources; History; Linguistics; Music; Philosophy; Political Science; Psychology; Sociology; Speech Communication; Theater.

The College of Liberal Arts offers the following majors leading to the Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Music or Bachelor of Science degrees. Minors are possible in most of these areas. For exceptions, refer to footnote 1.

Administration of Justice	Classical Civilization ¹	Mathematics
African Studies ¹	Classics	Museum Studies ¹
Anthropology	East Asian Civilization ¹	Music
Art	French	Paralegal Studies
Asian Studies ¹	German	Philosophy
Black American Studies ¹	Greek ¹	Political Science
Design	Japanese ¹	Psychology
Economics	Latin ¹	Speech Communication
English	Russian ¹	Sociology
Foreign Language	Spanish	Theater
and International Trade	Geography and Environ-	University Studies
Foreign Languages	mental Resources	
and Literatures	History	
Chinese ¹	Linguistics	

¹Minor only.

The College of Liberal Arts provides instruction in basic subject matter courses for the University Core Curriculum; majors in twenty-four subject areas; graduate programs for students pursuing master's and Ph.D. degrees; and pre-professional curricula for specialized schools such as law and courses offered through the Division of Continuing Education. The Bachelor of Arts, the Bachelor of Fine Arts, the Bachelor of Music, or the Bachelor of Science degree is granted to students who fulfill requirements for graduation from the College of Liberal Arts. The courses of study outlined by the departments determine the degree awarded. Students in the College of Liberal Arts may also prepare directly for teaching at the secondary level by including in their studies certain professional courses offered by the College of Education and Human Services.

Through the diversified offerings of the College of Liberal Arts, students develop the ability to seek and weigh evidence and to think critically and independently; they gain a fundamental understanding of the ever changing social, political, and physical environment, and a deeper understanding of people, cultures, art, and literature.

ACADEMIC REQUIREMENTS

To receive a degree from the College of Liberal Arts students must fulfill the following:

1. University requirements including those relating to University Core Curriculum, residency, total hours completed, and grade point average.
2. College of Liberal Arts academic requirements:
 - a. A minimum of one year (two courses) or higher of one foreign language, satisfaction by coursework or exam. Students may not use the same language courses to fulfill requirements in both the University Core Curriculum and the College of Liberal Arts. International students who have met the Office Records and Registration English language proficiency requirement may satisfy this requirement with their native language by providing a secondary school certificate from their native country. (Bachelor of Fine Arts de-

gree students in Art, Bachelor of Music degree students and Bachelor of Arts degree students in the Music Business Specialization do not have to fulfill the foreign language requirement.)

- b. One approved writing-intensive course designated by the major department as fulfilling the Writing-Across-the-Curriculum requirement.
- c. One English composition course, excluding creative writing, in addition to the Core Curriculum composition requirement. Students who have fulfilled the Writing-Across-the-Curriculum requirement may fulfill this requirement with a second College of Liberal Arts approved writing-intensive course.

3. Completion of an approved major in the College of Liberal Arts.

4. Completion of a minimum of 39 hours of course works at the 300- or 400-level.

Each year, a Valedictorian shall be selected using criteria including, but not limited to, grade point average, Honor's Program coursework, amount of coursework completed at SIUC, and College Level Examination Program (CLEP)/Advanced Placement Program (AP) credit. Liberal arts major requirements provide for a number of elective courses, giving students maximum flexibility in planning their overall program of study at the University. To assist students in planning their programs, the college maintains an academic advisement office in Faner Hall 1229, as well as faculty advisers in each department. Students are urged to consult these academic advisers on how they can best use their electives to fulfill their intellectual interests and to prepare for particular career opportunities. A carefully planned minor or second major field can lead to additional career opportunities for the liberal arts major. Students who are planning to attend graduate school or one of the professional schools such as law or medicine should consult with their advisers on how best to plan their undergraduate curriculum.

Technology Fee

The School of Art and Design assesses all undergraduate art and design majors a technology fee of \$6.00 per credit hour; a maximum of 12 credit hours will be charged each for fall and spring semesters and six for summer.

Writing-Across-the-Curriculum Courses

Administration of Justice 462, 492; Art and Design 308 and 318 sequence, 389, 400c, 401c, 402c, 403c, 404c, 405c, 406c, 413 and 443 sequence, 414c, 438, 452, 489b, 489d; Anthropology 480; Economics 308; English 301, 365, 471; Foreign Languages and Literatures: Chinese 320, 370, 435; Classics 332, 350, 370, 374, 376, 415, 416, 496, 497; French 320b, 410; German 320b, 410; Japanese 320, 410, 435; Russian 305, 411; Spanish 320b, 410; Geography and Environmental Resources 304; History 392 and 499, 462, 467a, 467b, 469, 492; Linguistics 406, 412; Music 357 sequence; Paralegal Studies 300a, 300b; Philosophy 304, 305; Political Science 200 and 300, or 330; Psychology 211, 451; Sociology 312, 462, 497, 498; Speech Communication 262, 310, 326, 381, 401, 411, 471, 476, 481; and Theater 311a.

University Studies Degree Program

In the University Studies Program students pursue either a Bachelor of Arts or Bachelor of Science degree through an individually designed, broad-based curriculum rather than a traditional specialization. The program accommodates multidisciplinary and non-traditional approaches to education and to related careers.

To determine eligibility for the University Studies Program as well as to explore specific possibilities, students should consult with the College of Liberal Arts Advisement office in Faner 1229 for further information.

Pre-Law

The College of Liberal Arts has a pre-law designation to identify and assist students interested in pursuing a career in the law and/or enrolling in law school. Students planning to apply to law school may select any major course of study and, because their undergraduate grades are important in the law school application process, they are encouraged to select a major in which they can perform very well.

APPLYING TO LAW SCHOOL

Students who plan on applying to law school will need to take the Law School Admission Test (LSAT) sometime during their junior or senior year. The LSAT is administered by a company called Law Services and is offered at SIUC. A practice LSAT is offered by SIU Testing Services and the SIU Division of Continuing Education offers a LSAT preparatory course. Students who perform exceptionally on the LSAT may subject to certain conditions, enroll and be admitted into the SIU School of Law as a junior.

More information about the LSAT and the law school application process can be obtained from advisors in the College of Liberal Arts (CoLA) Advisement Office (Faner 1229), from Law Service at <<http://www.lsac.org>>, or from the SIU School of Law, Office of Admissions and Student Affairs at <<http://www.law.siu.edu>>.

STUDENT ORGANIZATIONS

Students interested in a career in the law and/or enrolling in Law School can join the Pre-Law Association, a registered student organization that schedules speakers and events related to a legal career. Students are encouraged to visit the Pre-Law Association website at <<http://www.siu.edu/~prelaw>>. In conjunction with the Pre-Law Association, the Department of political science sponsors an annual moot court competition for pre-law students that are held in conjunction with the Model Illinois Government simulation.

SUGGESTED COURSES

Students interested in pursuing a legal career should recognize that certain courses available in the College of Liberal Arts might be helpful in preparing either for the LSAT, the study of law, and/or a career in the law.

For example, the Paralegal Studies program is one course of pre-law study in which a student takes a variety of legal courses including legal writing and research, civil procedure and torts. Students in the Political Science program can declare a pre-law specialization within their major, which includes courses in administrative law, civil liberties and constitutional law.

Any course, however, that develops or improves a student's analytical reasoning, reading comprehension, logical reasoning, or writing skills will be beneficial for the LSAT, the study of law, and/or a career in the law. Development or improvement of oral communication skills, which are currently not tested on the LSAT but are very important for the study of law or a legal career, is also strongly recommended.

A list of courses that offer the opportunity to improve or develop these skills appears below. This is not an exhaustive list. With some exceptions, students do not need to be enrolled in a particular major to take any or all of these courses. Students who are not in a CoLA program, therefore, are strongly advised to take one or more of these courses to supplement their studies. For more information about these courses, contact an academic advisor in the CoLA Advisement Office. Administration of Justice 203, 216, 310, 320, 408 and 474; Anthropology 202, 298, 300d, 370, 410a and 410e; Economics 240, 241, 340 and 341; English 290, 291, 300, 391 and 491; History 330a, 400, 450b, 462, 467a-b, 468 and 490; Linguistics 104, 200, 201 and 415; Philosophy 105, 309I, 320, 342, 344 and 441; Political Science 130, 330, 332i, 334, 433a,b, 435, 436, and 437; Psychology 211, 223, 301, 304,

311, 431 and 420; Sociology 308, 312, 372, 424, 473 and 484; Speech Communication 221, 310, 325, 326, 411, 421 and 463.

College of Mass Communication and Media Arts

Manjunath Pendakur, *Dean*

Departments: Cinema and Photography; Radio-Television

Schools: Journalism

The College of Mass Communication and Media Arts offers the Bachelor of Arts degree in Cinema and Photography, and Radio-Television. The Bachelor of Science degree is awarded in Journalism.

Students in the college are required to complete two core courses dealing with basic concepts. The two courses: Mass Communication and Media Arts 201, *Media in Society*; and Mass Communication and Media Arts 202, *Visual Literacy*, provide a common experience and conceptual framework for college majors.

Admission to the University is handled through the Office of Undergraduate Admissions, but those students who desire more specific information about a major should make an appointment with the academic advisor of that department or school. An academic and continuing advisor for incoming freshman and in each department or school of the college advises prospective students about major requirements, curriculum, extracurricular activities, careers, and opportunities. Transfer students may also discuss transfer credit and placement in courses at Southern Illinois University Carbondale.

Students who wish to first explore the academic majors in the college may apply for admission as an undecided major in Mass Communication and Media Arts. This gives students access to beginning courses in cinema, photography, journalism, radio and television, as well as to the required core courses in MCMA.

Faculty of the college is engaged in research and creative activities concerning mass communication and the media arts. They also provide consulting service and other community services to schools, newspapers, radio and television stations, museums, businesses, and government. They hold professional memberships and serve as officers in various local, state, national, and international organizations in mass communication and media arts. The college plans a number of special events each year, including lectures by noted artists and media professionals, photography exhibits, and film showings.

Opportunities for practical learning in real world settings include student employment at the *Daily Egyptian*, a student-run newspaper with a circulation of 27,000, a PBS television station, and an NPR radio station, all housed in the College. The *River Region Evening Edition*, a live newscast aired on PBS, is produced entirely by students under the supervision of a faculty member. Other opportunities include an Information Technology minor and a digital communication specialization.

Administrative offices of the college are located in the Communications Building, which includes the broadcasting facilities, film, video, and multimedia production facilities, the *Daily Egyptian*, and the *River Region Evening Edition*.

College of Science

Jack Parker, *Dean*

Departments: Chemistry and Biochemistry; Computer Science; Geology; Mathematics; Microbiology; Physics; Plant Biology; Zoology

The College of Science offers majors leading to the Bachelor of Arts and/or Bachelor of Science degrees in the following fields of study:

Biological Sciences	Mathematics	Plant Biology
Chemistry	Microbiology	Zoology
Computer Science	Physics	
Geology	Physiology	

Included in the curriculum of each department are survey courses that provide an introduction to the subject matter of that discipline while fulfilling the University Core Curriculum requirements of Southern Illinois University Carbondale. These courses assist all students to develop an understanding and appreciation of the impact of science on one's daily life. Elementary and advanced courses are provided to prepare students for professional employment or entrance into professional and graduate schools. Graduate training is also provided by each of the science departments leading to the M.S. or Ph.D. degree. Research interests of the faculty are extremely diverse.

Students in the College of Science may prepare for teaching at the secondary level by fulfilling the additional requirements of the College of Education and Human Services.

The Bachelor of Arts or the Bachelor of Science degree is granted to students who fulfill the University requirements for graduation, the College of Science requirements as given below, and the requirements of the departments in which the students declare their majors.

Regularly enrolled students must declare a College of Science major by the end of their sophomore year. Transfer students must declare a College of Science major by the beginning of their second semester following transfer. Students planning post-baccalaureate work in a professional field may designate their intention by declaring a preprofessional area as a secondary concentration, e.g., pre-medicine.

Each department has specific requirements for students to major in the selected field of interest. The College of Science has some minimum general requirements listed below.

ACADEMIC REQUIREMENTS

None of these general academic requirements may be satisfied by taking the required courses on a Pass/Fail grading basis.

Biological Sciences. Six semester hours in courses offered by the biological sciences departments in the college, with the proviso that this requirement cannot be satisfied in whole or in part by the University Core Curriculum courses, but may be substituted for the latter in meeting the University Core Curriculum requirements.

Mathematics. The mathematics requirement can be met: (a) by passing Mathematics 108 and 109, or 111 or its equivalent, or Mathematics 141 or 150 or equivalent, (b) by proficiency credit.

Physical Sciences. Six semester hours in courses offered by the physical science departments of the college, with the proviso that this requirement cannot be satisfied in whole or in part by University Core courses, but may be substituted for the latter in meeting the University Core Curriculum requirements.

Supportive Skills. Two courses, totaling at least six credit hours must be completed as supportive skills. Supportive skills courses are courses in communication or computation skills which have been approved by the major program and must be chosen from the following subject areas: (a) foreign language; (b) English composition or technical writing; (c) statistics; or (d) computer science. Students may not fulfill this requirement with courses offered by the student's major department or program. Because departments have different supportive skills requirements, students should consult individual program descriptions for approved courses for each major.

General Requirements. At least 40 hours of the student's 120 hours for graduation must be at the 300- or 400-level. The total may include transfer credit for courses judged by the department involved to be equivalent to its upper division courses. For transfer students submitting only the last year in residence, at least 24 of these must be at the 300- or 400- level.

PRE-HEALTH PROFESSIONAL PROGRAMS

SIUC does not offer degrees in pre-health professions. However, a student can major in a pre-health profession, choose a baccalaureate oriented major and fulfill both requirements simultaneously. Therefore, a student planning a professional career in any of the following fields should register in the College of Science immediately: dentistry, medicine, optometry, physical therapy, physician assistant, or podiatry. When undecided about an academic major, the student should list the preprofessional program as the primary major. At the time the academic major is chosen (junior year or earlier), the student should declare that major as the primary major and the preprofessional program as a secondary major.

International students should be aware that acceptance and attendance at American public medical and dental schools is difficult. As a general rule, no financial aid is available for non-citizens. A small number of international students are accepted at private schools, which are costly.

Students pursuing a career in veterinary science should register in the College of Science or the College of Agricultural Sciences.

SIUC does not have schools of nursing or pharmacy. Students wishing to prepare for these professional schools should declare a pre-nursing or pre-pharmacy major. Pre-nursing students may transfer after three or four semesters and pre-pharmacy after two or more years of rigorous course work at SIUC.

Graduate School

John A. Koropchak, *Vice Chancellor for Research and Graduate Dean*

Southern Illinois University Carbondale is a comprehensive university with an extensive offering of graduate programs and an equally strong commitment to research.

More than 4000 graduate students pursue advanced study and research under the leadership and direction of over 800 graduate faculty members. The Graduate School offers master's degrees through sixty-nine programs, and the doctoral degree through twenty-seven programs.

The highest degree awarded is the Doctor of Philosophy.

In addition to the Master of Arts and the Master of Science degrees, the master's degrees awarded are Master of Accountancy, Master of Arts in Teaching, Master of Business Administration, Master of Fine Arts, Master of Legal Studies, Master of Music, Master of Public Administration, Master of Public Health, Master of Science, Master of Science in Education, and Master of Social Work.

The Graduate School is fully accredited by the North Central Association of Colleges and Secondary Schools, and appropriate state and national accrediting associations have accredited specific programs.

SIUC is classified as a Carnegie Doctoral/Research-Extensive University. This Carnegie ranking places SIUC in the top 3.8% of U.S. institutions of higher learning.

A separate catalog describing admission, courses and graduation requirements for various programs in the Graduate School may be accessed at:

<<http://www.siu.edu/gradschl>>.

Library Affairs

David Carlson, *Dean*

Morris Library, named after the late Delyte W. Morris, University president from 1948 to 1970, features an Internet accessible information network providing entry to library catalogs, abstract and index services, full-text periodical databases, and local and national technological resources: <<http://www.lib.siu.edu>>. The Library contains over two and a half million volumes, some 12,500 current periodicals and serials, and three million microforms. Collections of government documents, maps, films and videotapes and sound recordings are notable as well. With the exception of materials in Special Collections, items are arranged on open shelves and available for browsing.

The Library's public computers provide access to the online catalog and to more than 100 electronic databases, including indexing and abstracting services and the full text of nearly 2,000 journals and newspapers. Many of these resources can also be accessed from personal computers in residence halls, offices, and homes by direct connection with the University computer network or via modem. SIUC at, the library's online catalog, provides access to our materials and over forty other academic libraries in Illinois. Additionally, users have access to 100 plus libraries in the state for interlibrary loan purposes.

In 2006-2007, the Library is undergoing renovation. As a result, various services and resources are dispersed throughout the campus. The first floor of Morris Library houses the Information Desk, where reference librarians and staff are available to help researchers with their search strategies and to acquaint them with the ever expanding range of electronic finding aids and journals. Reserved course-related materials in various media are made available to all class participants for limited-time usage. The central circulation desk, where all books are checked out, is also located on the first floor. Books recalled from the Library's off-site facilities are picked up at the circulation desk. The Browsing room collection, containing recent books of a popular nature to provide recreational and a vocational reading, is located on the first floor.

Other services/collections found in Morris Library during the renovation include a core collection of books, including the most recent purchases, and journals published in 1996 to present. Also located in Morris Library are: the map collection, Geographic Information Systems, capable of combining statistical, government and geographical data, and the Curriculum Materials Center.

Computer and network support can be obtained in the Northwest Annex. Instructional Support Services, which provides instructional design and instructional technologies, as well as a multimedia development lab, can also be found in the Northwest Annex. In addition, the Library Administrative Offices and reference librarians' offices are located in Northwest Annex.

The Special Collections Research Center houses the rare books and manuscript collections and maintains the University archives. It contains important research collections in American Philosophy, First Amendment Freedoms, American and British twentieth century literature and theatre, and the history of southern Illinois. During the renovation, these materials are housed in two off-site storage facilities.

A third off-site facility, McLafferty Annex, houses the bulk of the library book collection including journals published in 1995 and older, the Government Information documents, and the editorial offices of the Ulysses S. Grant Association, another unit of Library Affairs which collects, edits and published the entire correspondence of President Grant.

The Library faculty and staff recognize the complexity involved in using a research library and are eager to help students, faculty, staff and others in satisfying their research needs. Seminars, tutorials, printed handouts for electronic resources, the Internet, bibliographic instruction, library use, and information re-

trieval are provided without charge on a continuous basis by Library faculty and staff.

School of Law

Peter Alexander, *Dean*

The Southern Illinois University School of Law has established a positive, individualized learning environment in one of the most scenic areas of the Midwest. The student/faculty ratio (13 to 1, one of the best in the country) illustrates the school's commitment to personal education and allows students to develop the skills necessary to compete in today's legal environment. All law students enjoy 24-hour access to the Lesar Law Building and Library.

The School of Law offers interdisciplinary courses including six joint degree programs in Accountancy (MACC), Political Science (Ph.D.), Social Work (MSW), Public Administration (MPA), Educational Administration (M.S.Ed), and Business Administration (MBA). The school's joint JD/MD program, offered in conjunction with the SIU School of Medicine, is only one of a few concurrent law/medicine programs available in the country.

Students receive the very best in instruction from faculty drawn from distinguished practice and academic settings. Professionals who have expertise in the intersection of information systems and the law staff the Library. The *Southern Illinois University Law Journal* gives students the chance to achieve distinction in editing and publication. The *Journal of Legal Medicine* is regarded nationwide as one of the prominent publications in health law.

The School of Law's curriculum balances traditional legal education with practical skills training to produce an attorney who understands the law and how to apply it in real-world situations. In the first year, students take fundamental courses plus the school's innovative Lawyering Skills program which combines legal research and writing, interviewing, counseling, negotiation and oral advocacy. In 2005, the Lawyering Skills program was ranked number 16 in the country.

Second year students can try out for one of the school's award winning moot court, negotiation, and client interviewing and counseling competition teams. Third year students can enroll in one of five Legal Clinic programs in which they assist actual clients under the supervision of licensed attorneys with private, state, and Federal experience.

The School of Law believes that quality legal education should be affordable. Low tuition combined with generous scholarships and awards given to entering and continuing students result in a law school debt load significantly less than the national average.

The School of Law's combination of traditional legal education and practical skills enhance the law student's potential for employment. The Career Services Office works one-on-one with students to find employment and provides services such as resume and interview counseling, workshops, and database searches.

Interested students can contact the Office of Admissions by e-mail at <lawadmit@siu.edu>, by phone at (800) 739-9187, or by mail at School of Law Welcome Center, 1209 W. Chautauqua, Carbondale, Illinois 62901. Students are also encouraged to visit the School of Law's website at <<http://www.law.siu.edu>>. With advance notice, students and parents can request a tour, a meeting with law school staff, and an opportunity to sit in on a current law school class (when class is in session).

The School of Law is fully accredited by the American Bar Association and is a member of the Association of American Law Schools.

School of Medicine

J. Kevin Dorsey, *Dean*

Southern Illinois University School of Medicine was established in 1970 after the Illinois General Assembly passed a bill calling for a second state medical school to be established in downstate Illinois. The School graduated an advanced standing class in 1975 and its charter class of all Illinois students in 1976. Currently, 72 students are admitted each year. Today, the School encompasses a complete sequence of medical education beginning with the M.D. degree and progressing through residency training and on to continuing medical education for practicing physicians.

The School's competency-based curriculum has brought the school national attention. Since students are not evaluated in competition with their peers, they are stimulated to cooperate with one another, a situation which more closely resembles what takes place in the actual practice of medicine. Problem-based learning concepts, including active learning situations with paper and simulated patients, are used to help students work toward competency throughout the curriculum. The four-year M.D. degree begins the first year in Carbondale where students concentrate on the basic sciences. The remaining three years are spent in Springfield where students study clinical medicine along with medical humanities and various electives.

The instructional program in Carbondale is based in Lindegren Hall and Memorial Hospital. In Springfield, it is based in the Medical Instructional Facility, the SIU Clinics, Memorial Medical Center and St. John's Hospital.

The School's Medical Education Preparatory Program (MEDPREP) in Carbondale is designed to assist minority and other students with educationally disadvantaged backgrounds to prepare for success in medical and dental schools.

The University residency programs include dermatology, family practice, internal medicine, medicine/psychiatry, neurology, obstetrics and gynecology, pediatrics, psychiatry, radiology and five surgical specialties. There are eleven fellowships for advanced clinical work.

The School's continuing medical education program provides an extensive accredited schedule of conferences and symposia for physicians and other health care professionals in central and southern Illinois. Programs are held in Springfield, Carbondale and throughout the School's service area.

The faculty in Carbondale and Springfield's basic science departments divide their time between teaching responsibilities and independent and collaborative research projects and regional support services. Both clinical investigators and basic scientists collaborate on a wide-range of medical and scientific projects; they work in the various basic science laboratories on both campuses and in the clinical facilities located in the affiliated hospitals in Springfield. The faculty's commitment to research is further characterized by the offering of graduate programs leading to masters and doctoral degrees in physiology, in pharmacology and in molecular biology, microbiology and immunology, and a teaching certificate of anatomy.

Interfaced with all of its various educational and research programs is the provision of patient care through the various clinical departments and specialized clinics of the School and the practice of its physician faculty.

Preference is given to applicants from central and southern Illinois and other underserved (inter-city, rural) portions of the state that intend to practice medicine in the state. Inquiries regarding admissions and requests for a catalog from the School of Medicine should be addressed to the director of admissions, Southern Illinois University School of Medicine, P.O. Box 19624, Springfield, Illinois 62794-9624.

Academic Programs

Pre-Major Advisement Center

The Pre-Major Advisement Center is the academic home of students who are in the process of deciding on a major. The academic advisors in the unit have knowledge of the majors offered by the University and will help students explore and select majors in relation to their interests and abilities. Career counselors are available to assist students in completing a career exploration process. The Pre-Major Advisement Center is located in Woody Hall, C-117. Call (618) 453-4351 for information.

Center for Academic Success

The Center for Academic Success offers comprehensive support services to a select group of entering freshmen through intrusive academic advisement, peer mentoring, tutorial assistance, study/learning skills, and career counseling. For additional information, contact the director of the Center for Academic Success.

Individualized Two Plus Two Program

The Individualized Two Plus Two program allows baccalaureate oriented freshman students at community colleges to benefit from pre-advisement for a chosen major at Southern Illinois University Carbondale. The Individualized Two Plus Two program addresses specific departmental requirements that a student may not fulfill by completing their A.A. or A.S. at their community college. Students who apply for the Individualized Two Plus Two program are provided with a plan that will guide them to the most direct route to their bachelor's degree. The plan includes major gpa requirements and a listing of all required major and University Core Curriculum coursework. Participation in the Individualized Two Plus Two program also allows students to qualify for early admission to the University, automatic consideration for transfer scholarships, and early application of housing contracts. Students entering through this program are guaranteed personalized contact with an SIUC transfer representative.

Upward Bound

This is a pre-college support program funded by the federal government for students that meet specific income and educational requirements, which identifies and recruits ninth to twelfth grade students in specific areas of southern Illinois who have the potential for serious academic work. The program provides developmental, personal, and academic opportunities for students who might not otherwise see themselves as future college students. Persons interested should direct inquiries to the director, Upward Bound.

Southern Illinois Regional Career Preparation Program

The Southern Illinois Regional Career Preparation Program is sponsored by Southern Illinois University Carbondale. The program is designed to increase motivation, to provide academic enrichment, to encourage career exploration and continued enrollment in school for promising southern Illinois minority students who are 6th, 7th, 8th, 9th and 10th graders. Instruction in critical thinking, computer science, mathematics and career development is provided in the academic year and summer programs. Parents are given information about financial aid and specific guidance in assisting their children in academic and career pursuits. For additional information contact the project director.

Future Scholars Program

The Future Scholars Program at Southern Illinois University Carbondale is a program designed especially for traditionally underrepresented minority and other selected students who have a true desire not only to attend college but also

to excel. Students will have the opportunity to experience the University environment firsthand. Future Scholars Program normally occurs during four weeks in July. Students live in a campus residence hall and attend college credit courses.

Student Support Services

Student Support Services Program provides comprehensive services to a select group of undergraduate students who meet specific educational and financial criteria. Services include peer academic coaching and mentoring, academic advisement, workshops, financial aid counseling and other support services designed to help the students excel in their academic studies, graduate and reach their career goals.

Internships in Washington

Eligible students from Southern Illinois University Carbondale can combine a work and learning experience for credit through the Washington Center. Participants can intern in congressional offices, executive agencies, and with groups in many other areas such as the environment, consumer affairs, journalism, communications, legal affairs, labor relations, health policy, arts, education, science, public relations, urban affairs, and women's issues. Interns also attend seminars taught by representatives of major governmental agencies, interest groups, and corporations.

The Washington Center internships at the University are coordinated through the office of the University Honors Program.

The Writing Centers

The Writing Center staff, composed of English and Linguistics department graduate assistants and specially trained undergraduate tutors, invites all SIUC students to take advantage of the free services offered at the four SIUC Writing Centers. The Centers offer students help on their writing on either a regular-weekly or single-visit basis. Tutors can help students develop strategies for any stage in the writing process including getting started on essays, organizing and focusing ideas, developing and connecting points clearly, and correcting grammar and punctuation errors. At every stage, the emphasis is on helping students solve their own writing problems and become better writers.

If students want to see a tutor, they should visit one of our four Centers: The Writing Center, 2281 Faner (Entrance 6 or 7); Morris Library Writing Center, Room 30 (basement level next to the auditorium); Lentz Writing Center, Lentz Hall Learning Resource Center; or Trueblood Writing Center, Trueblood Hall Resource Center. If you have questions about the Center's services, phone 453-6863, or visit on-line at <<http://www.siu.edu/~write>>. Writing Center brochures are available at any of the four locations.

Division of Continuing Education

The Division of Continuing Education extends the University's educational mission beyond regular course offerings and campus boundaries. The Division's off-campus credit programs, the Evening/Weekend Program, credit free classes, workshops and conferences, distance education including Individualized Learning Program, online semester-based and 2-way interactive video, the Individualized Learning program, and the contractual services program offer the University's resources to a variety of groups and individuals both on and off campus.

Off-Campus Credit. Off-Campus credit programs are designed to meet the educational needs of adults wishing to pursue a degree but who are unable to travel to the Carbondale campus. The appropriate department approves faculty teaching off-campus courses. Graduate courses in agriculture, education, and rehabilitation administration, as well as a variety of upper division undergraduate

courses are offered at various locations throughout Illinois. An undergraduate degree program in University Studies is available to students at selected, off-campus sites.

Evening and Weekend Program. The Evening and Weekend Program provides individuals within commuting distance of the campus the opportunity to take up to 26 undergraduate hours of college work on a special admission basis. Tuition is the same for all other undergraduate courses; students in the program pay reduced fees.

Individuals who possess a high school diploma or GED certificate and who have not been academically suspended from Southern Illinois University Carbondale or any other institution of higher education during the twelve months prior to application for the Evening and Weekend Program are eligible for admission. Students may take course loads not to exceed eight semester hours during fall and spring semesters and up to five hours during summer session. Registration may be completed by telephone or mail.

Office of Distance Education. The Office of Distance Education, located in the Division of Continuing Education, coordinates distance education courses for the campus. Distance Education courses are offered in interactive, print-based and web-based formats. Print-based (correspondence) and Web-based courses are offered by the Individualized Learning Program (ILP) and administered by Division of Continuing Education. Online semester web-based courses and two-way interactive video courses are offered through the Office of Distance Education. Complete registration by phone (618) 536-7751, mail, fax (618) 453-5668 or on-line at: <<http://www.dce.siu.edu/siuconnected>>.

Individualized Learning Program. Individuals who cannot attend classes at scheduled times may wish to enroll in an individualized learning course. Such courses are designed to be completed by the students at their own pace and time and, in many instances, in their own home. All courses in the Individualized Learning program are developed by University faculty and approved for academic credit. These courses may be available in a print based (correspondence) or web-based (on-line, electronic) format.

Contractual Services. The contractual services office provides specialized educational services to groups, organizations, governmental agencies, and businesses on a cost-recovery basis. Services are provided regionally, nationally, and internationally.

Conferences and Professional Programs. Located in the Division of Continuing Education, conferences, workshops, seminars, short courses, institutes and teleconferences are offered both on and off campus. The Division assists with the development, implementation, evaluation and financial accounting for these programs. Major emphasis is on extending the educational, cultural and physical resources of the University to the local, state, national and international community.

The Professional Development Series is offered through short-term formats. This series features instruction by University faculty and carefully selected specialists from business and industry. Continuing Education Units (CEU) and Continuing Professional Development Units (CPDU's) are available for many of these offerings and may meet mandated professional education requirements. Participants in this program often include professionals from outside the University community.

An award winning Community Listener's Permit Program opens classrooms of SIUC to the people of Southern Illinois. It is a special program that provides people of all ages and walks of life the opportunity to access the college classrooms without enrolling for credit. For a modest fee and the permission of the instructors, participants can sample subjects that interest them the most from art his-

tory to zoology. For more information go to <<http://www.dce.siu.edu>> or phone (618) 536-7751.

Military Programs

The Office of Military Programs is the central administrative unit for the University's various programs for military personnel. Currently, baccalaureate programs are offered through the College of Education and Human Services, the College of Applied Sciences and Arts, and the College of Engineering. The office serves as the principal point of contact and represents the University with external agencies in matters pertaining to educational programs at military bases. For additional information refer to the section on the Financial Aid Office in Chapter 1, to the Capstone Option in Chapter 3, and credit granted for military experiences in Chapter 2. Students interested in admission should consult the Southern Illinois University Carbondale base representative on the appropriate military base.

The Paul Simon Public Policy Institute

Founded in 1997 by Paul Simon, a former two-term U.S. Senator from Illinois and one-time candidate for the Democratic Party nomination for President of the United States, the Paul Simon Public Policy Institute differentiates itself from similar organizations by addressing issues that are largely ignored by the mainstream policy organizations. Many of these organizations are considered "think tanks," which is not a title that aptly describes the Simon Institute. Paul Simon spoke of his institute as a "do tank" because it seeks—and achieves—positive results and concrete actions based on its work.

Simon headed the institute until his death on December 9, 2003. Mike Lawrence, former press secretary and senior advisor to Illinois Governor Jim Edgar, was named the institute's director after having served as its associate director since July 1, 1997. In addition to leading the institute, Lawrence also teaches courses in journalism and political science.

The institute acts on significant and controversial issues impacting the region, the state, the nation and the world. It engineered the most substantial reform of state campaign finance laws in nearly 25 years, helped recharge national literacy efforts, made specific recommendations to the United Nations on how to prevent future genocides, helped bring dental care to disadvantaged children in Southern Illinois and spearheaded efforts to develop a pilot program to combat smoking among college-aged women.

The institute has hosted scores of distinguished guests to campus for events, including such figures as three-time Pulitzer Prize winning New York Times columnist Tom Friedman, former First Lady Barbara Bush, former U.S. Senator and 1972 Democratic presidential candidate George McGovern, actor and social activist Mike Farrell, legendary CBS newsmen Walter Cronkite, human rights activist Coretta Scott King, former U.S. Secretary of State James A. Baker III, former Canadian Prime Minister Brian Mulroney, former New York City mayor David Dinkins and Japanese-American civil rights leader Fred Korematsu.

5 / Undergraduate Curricula and Faculty



Undergraduate Curricula and Faculty

This chapter contains information about the undergraduate curricula and courses offered by Southern Illinois University Carbondale. The course descriptions for only undergraduate courses are included. Courses offered for graduate students are included in the Graduate Catalog. Chapter 1 of this bulletin includes a listing of the undergraduate majors and minors offered. Those majors and minors are included in this chapter with a description of the requirements for their completion. This chapter is arranged in alphabetical order.

Explanation of the Curricular Requirements

In the areas of this chapter, which describe course requirements for programs, numerals in parentheses in columns of figures pertain to semester hours, which satisfy more than one requirement. They are in parentheses to avoid their being added to the total of the column, which would be a duplication of hours required. For example, under the Bachelor of Science major in Animal Science, Agribusiness Economics 204 satisfies part of the University Core Curriculum requirements and contributes three hours toward the 41 hours required. The three hours are also required for the major in animal science, but do not contribute to the printed total of 79 hours.

How to Read Course Numbers

The first entry for each course is a three-digit numeral, plus in some cases, a single letter that together with the subject area serves to identify the course. The first digit indicates that the course is for freshmen, sophomores, juniors, or seniors, depending on whether the digit is 1, 2, 3, or 4. If the digit is 0, the course is not properly in the above categories with the exception of Music courses. A letter following the three numerals may indicate a *part* of a course (where *a* means first part, *b* means second part, etc.) or may identify the topics or subject areas specified in courses such as readings or special problems. A numeral or numerals separated from the identification number by a dash indicates the number of hours of credit received in the course. For example, Physics 203-6 (3,3) indicates a sophomore-level, two-part course of 6 hours in the Department of Physics. The two parts of the course may be referred to as Physics 203a,b. The credit may also be variable, such as Accounting 491-1 to 6. Variable credit courses, which have a number of credit hours per semester or per topic that is limited, have those limits in parentheses following the total maximum hours of credit. An example of such a course is Administration of Justice 492-2 to 6 (2 to 3 per section). Next is the title, followed by a description of the course. If certain requirements must be satisfied before enrollment in a course, they are listed as prerequisites. If a course is a part of the pass/fail system, it is so indicated.

Some courses are cross-listed with other courses. These courses will have the other course name and number in parenthesis after the course title. Some courses will have an Illinois Articulation Initiative number listed which will appear in brackets; for example, English 121-3 The Western Literary Tradition [IAI course: H3900]. For more information on the IAI see Chapter Three.

Not all courses described here are offered every semester or even every year. To determine when and where a course is to be offered, consult the *Schedule of Classes* available on the Records and Registration website,
<<http://registrar.siu.edu/records/schedclass.htm>>.

Course Fees

Some courses have fees attached to their registration. These fees cover such items as laboratory fees, field trips, printing of materials, and supplies. These fees are published in the class schedule but are subject to change. For the correct fee, contact the department that offers the class or Records and Registration.

Accountancy (School)

The School of Accountancy is dedicated to the discovery, the interpretation and the dissemination of knowledge to students, the profession and colleagues.

Accounting is the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information. Such information is required and used by parties, both internal and external to a business, a not-for-profit organization, and other entities.

The curriculum is designed with sufficient flexibility to prepare students for the many career options available to accounting graduates. Among the principal career options are public accounting (Certified Public Accountants), corporate accounting, not for profit accounting and other business consulting or finance flavored careers. Illinois and most other states require 150 hours of college credit to sit for the CPA exam.

The curriculum consists of four segments, each designed for a specific purpose. The first segment, the University Core Curriculum, is designed to provide a solid grounding in the liberal arts and sciences, and promote analytic and imaginative abilities that are essential for a life of inquiry, creativity and informed civic participation. The second segment, the Professional Business Core, is required of all business majors. It provides a broad base of knowledge in accounting, finance, management, marketing, business law, technology, economics, communications and math required for the professional study of accounting. The third segment, the Accounting Core consists of essential accounting material all accounting professionals should master. The fourth segment is flexible and allows students to acquire knowledge and skills necessary for success in the pursuit of their individual career goals. Students preparing for a career in accounting will have access to separate courses in advanced accounting, accounting for public organizations, auditing, advanced cost, advanced taxation, and enterprise networks and communications. Those students preparing for a career in public accounting should also pursue a fifth year of study and the Master of Accountancy degree. Specialized courses of study in taxation and audit/systems are available.

Accounting majors must achieve a 2.0 grade point average in accounting prefix courses taken at Southern Illinois University Carbondale, as well as meet the College of Business and Administration's graduation requirement of 2.00 grade point average in business-prefix courses taken at Southern Illinois University Carbondale. In addition they must also achieve a grade of C or better in upper-level accounting-prefix courses taken at Southern Illinois University Carbondale offered to satisfy the requirements of the major in accounting. The School of Accountancy enforces all prerequisites for accounting prefix courses which in some cases include a grade higher than C. All 300 and 400 level accounting courses may be repeated for a grade only once.

TECHNOLOGY FEE

The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer semester up to six semester hours.

PROGRAM OBJECTIVES FOR STUDENTS

Students graduating with an undergraduate degree in accounting should possess a basic understanding accounting concepts (financial, taxation, auditing, managerial and accounting information systems) such that they would be able to prepare, analyze and communicate accounting information. Students graduating with an undergraduate degree should also be able to communicate effectively in a business setting both orally and in the written form. Graduates should be able to ap-

ply their accounting knowledge to unstructured problems, to work effectively in a team environment and to work effectively in a computer-based environment.

Accounting (Major, Courses, Faculty)

Bachelor of Science Degree in Accounting, College of Business and Administration

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core</i>	45
<i>Accounting Core</i>	18
Accounting 321, 322	6
Accounting 331, 360	6
Accounting 341	3
Accounting 460	3
<i>Accounting Electives</i>	9
Choose three of the following three-hour courses:	
Accounting 411, 421, 431, 441, 465, 471 or 495	
..... Electives	7
Total	120

Accounting Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BUS 123, UCC Human Hlth ..	1	2	ACCT 220, 230	3	3
ENGL 101, 102	3	3	ECON 241, 240	3	3
UCC Science	3	3	ACCT/MGMT 208	3	-
UCC Fine Arts	3	-	CS 200b or IMS 229	-	3
PSYC 102 or SOC 108	-	3	UCC Humanities, ENGL 291 ..	3	3
UCC Humanities	3	-	SPCM 101	3	-
MATH 139, 140	3	4	UCC Integrative Studies	-	3
Total	16	15	Total	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
ACCT 321, 322	3	3	ACCT 341, 460	3	3
ACCT 331, 360	3	3	ACCT 411, 421, 431, 441,		
MGMT 304, FIN 330	3	3	465, 471, 495	3	6
UCC Integrative Studies	3	-	MGMT 318, 481	3	3
MGMT 345, MKTG 304	3	3	FIN 270 ² or FIN 280/380 opt ...	3	-
BUS 302	-	1	Approved Elective ¹ (or FIN		
Approved Elective ¹	-	2	380 ²)	4	3
Total	15	15	Total	16	15

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with the academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for all students planning to sit for the CPA exam.

Accounting Minor

A minor in Accounting consists of a minimum of 15 semester hours, including Accounting 220, 230 and nine credit hours in Accounting at the 300 level or above. All prerequisites for these classes must also be satisfied. At least nine of the fifteen semester hours must be taken at Southern Illinois University Carbondale. An advisor within the College of Business and Administration must be consulted before selecting this field as a minor.

Accounting Courses (ACCT)

208-3 Business Data Analysis. (Same as Management 208) Uses of data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics, which are useful to the decision-maker. Problems stress solution to questions typically raised in businesses. Prerequisite: Mathematics 139 or equivalent.

210-3 Accounting Principles and Control. Prevalent accounting principles and practices employed in business organizations. Accumulation of data and usefulness of reports are considered. Tax implications of

business studied. Not open to students with a major in the College of Business and Administration. No credit given for 210 if credit is claimed for 220.

220-1 to 3 (1,1,1) Accounting I - Financial. Three sequential one credit courses which, in the aggregate, cover the basic concepts, principles and techniques used to generate accounting data and financial statements and to interpret and use the financial data to enhance decision making. Students must initially enroll in all three courses and must successfully complete 220a prior to beginning 220b and 220b before beginning 220c. Students who do not successfully complete all three course in the semester in which they initially enroll in the courses will receive a grade of *PR* for any of the courses not completed. Those students who receive a grade of *PR* in one or more of the courses must re-enroll in all unsuccessfully completed courses in subsequent semesters. Prerequisite: Mathematics 139 and sophomore standing.

230-3 Accounting II Managerial. The use of accounting information for managerial planning, control and decision making through budgeting, cost and variance analyses, and responsibility accounting. Prerequisite: 220, Mathematics 139, and sophomore standing. Accounting majors and minors must pass 220 with a grade of *C* or better.

240-3 Individual Income Tax. Preparation of income tax returns. Federal income tax as applied to individuals. No credit given for 240 if credit is claimed for 341. Not open to those with a major in accounting.

321-3 Intermediate Accounting I. Current accounting principles and procedures relating to elements of financial reporting. Particular emphasis on current and fixed asset valuation. Prerequisite: junior standing and limited to business majors and minors or consent of school; Mathematics 140 or equivalent; pass 220 and 230 or equivalent with a grade of *C* or better.

322-3 Intermediate Accounting II. Continuation of the study of accounting principles and procedures with emphasis on liabilities, corporate capital, and income determination. Preparation and use of special statements; analysis and interpretation of statements. Prerequisite: junior standing and limited to business majors and minors or consent of school; passed 321 with grade of *C* or better; Mathematics 140 or equivalent.

331-3 Cost Accounting. Interpretation and managerial implications of material, labor, and overhead for job order, process and standard cost systems, cost-volume-profit relationships, direct costing, and budgeting. Accounting for complex process production flows, joint and by-products, spoilage, and scrap. Responsibility accounting and reporting. Prerequisite: junior standing and limited to business majors and minors or consent of school; for accounting majors and minors, pass 230 with a grade of *C* or better; Mathematics 140 and Accounting/Management 208 or equivalent.

341-3 Introduction to Taxation. Background, principles, and procedures for the determination of taxable income as a basis for federal income tax. Particular attention is given those aspects, which are at variance with usual accounting treatment in the determination of net income. Includes practice in the methodology of tax solutions. Prerequisite: junior standing and limited to accounting majors and minors, or consent of school; for accounting majors and minors, a grade of *C* or better in both 220 and 230 or equivalent courses.

360-3 Accounting Systems Operations. Accounting information systems analysis and design. Focusing on internal controls, data modeling, databases, documentation tools and information retrieval to improve business decisions. Prerequisite: Mathematics 140, junior standing and limited to accounting majors and minors or consent of the department.

411-3 Enterprise Networks and Communication. (same as Management 411). Application of data communications and network technologies for improving business. Coverage includes, but is not limited to: introduction to the principles of data transmission technology, various communication architectures and protocols, basic network design principles, internet and intranet technologies, data security issues and elements of network management. Prerequisite: *B* in Computer Science 200b, Information Management Systems 229 or equivalent.

421-3 Advanced Accounting. Accounting principles and procedures relating to specialized topics, including partnership equity, installment and consignment sales, fiduciaries, international operations, branches, and business combinations. Prerequisite: junior standing and limited to accounting majors and minors or consent of school; a grade of *C* or better in 322.

431-3 Advanced Cost Accounting. Managerial decision making; profit planning and control through relevant costing, return on investment and transfer pricing, determination of cost behavior patterns, analysis of variances, capital budgeting, inventory models, probabilities, statistical methods, and operations research. Prerequisite: junior standing and limited to accounting majors and minors or consent of school; 331 with grade of *C* or better.

441-3 Advanced Tax. Study of income tax problems which arise from sole proprietorship, partnership, limited liability company, corporation, estate, and trust. Student does research in source materials in arriving at solutions of complicated problems. Prerequisite: junior standing and limited to accounting majors and minors, or consent of school; 341 with grade of *C* or better.

460-3 Auditing. Standards, objectives and procedures involved in examining and reporting on financial statements of business organizations. Prerequisite: junior standing and limited to accounting majors, minor and those with consent of school; a grade of *C* or better in 322. Graduate students may only take this course if they have a deficiency.

465-3 Internal Auditing. The course covers internal audit from a broad perspective to include information technology, business processes, and accounting systems. Topics include internal auditing standards, risk assessment, governance, ethics, audit technique, and emerging issues. It covers the design of business processes and the implementation of key control concepts and will use a case study approach that addresses tactical, strategic, systems, and operational areas.

471-3 Governmental and Not for Profit Accounting. Financial and managerial accounting concepts peculiar to the planning and administration of public and quasi-public organizations, such as governmental

units, institutions, and charitable organizations. Also includes the study of governmental auditing standards. Not for graduate credit. Prerequisite: 321 with a grade of C or better.

491-1 to 6 Independent Study in Accountancy. Independent study of specialized aspects of accountancy not available through regularly scheduled courses. Not for graduate credit. Prerequisite: a grade of C or better in each of 322, 331, 341, and consent of school.

495-3 Internship. Supervised work experience in professional accounting. Prerequisite: outstanding record in accounting and recommendation of the school committee on internship. Mandatory Pass/Fail only. Not for graduate credit.

Accounting Faculty

Basi, Bartholomew A., Professor, *Emeritus*, C.P.A., J.D., D.B.A., Indiana University, 1971.

Burger, Clifford R., Professor, *Emeritus*, C.P.A., M.S., Indiana State University, 1947.

Gribbin, Donald W., Associate Professor, C.P.A., Ph.D., Oklahoma State University, 1989.

Hahn, Randall, Associate Professor, C.P.A., D.B.A., University of Kentucky, 1984.

Karnes, Allan, Professor, C.P.A., M.A., J.D., Southern Illinois University, 1986.

Lumbattis, Cathy, Lecturer, C.P.A., M.B.A., Southern Illinois University Edwardsville, 1975.

Masoner, Michael, Associate Professor, C.P.A., Ph.D., University of Minnesota, 1975.

Odom, Marcus, Associate Professor, C.P.A., Ph.D., *Director*, Oklahoma State University, 1991.

Rivers, Richard A., Professor, C.P.A., D.B.A., Kent State University, 1976.

Rose, Anna, Assistant Professor, C.P.A. Ph.D., Texas A&M University, 1998.

Rose, Jacob, Associate Professor, Ph.D., Texas A&M University, 1998.

Sobery, Julie S., Associate Professor, C.P.A., Ph.D., St. Louis University, 1982.

Treece, Darla, Lecturer, C.P.A., M.A.S., Southern Illinois University Carbondale, 2000.

Tucker, Marvin W., Professor, *Emeritus*, Ph.D., University of Alabama, 1966.

Wacker, Raymond F., Associate Professor, C.P.A., Ph.D., University of Houston, 1989.

Welker, Robert B., Professor, Ph.D., Arizona State University, 1976.

Wright, Roland M., Professor, *Emeritus*, C.P.A., Ph.D., University of Iowa, 1962.

Wu, Frederick H., Professor, *Emeritus*, Ph.D., Texas Tech University, 1975.

Administration of Justice (Major, Courses, Faculty)

The Bachelor of Arts degree with a major in administration of justice meets the objectives of students interested in law enforcement, the courts, corrections, juvenile justice, criminal behavior and other aspects of crime and criminal justice.

The curriculum is designed to provide students with a broad view of crime and criminal justice. Building on the fundamental knowledge developed in core courses and a restricted set of electives, students can select from a variety of other courses to gain in-depth, specialized knowledge about their particular areas of interest within the curriculum. Under faculty guidance, students may take supplemental courses – computer science, accounting, management, and foreign language, for example – to complement their special interests. This approach provides a sound foundation in administration of justice while allowing the flexibility necessary to accommodate individual interests and needs.

A field internship placement may be an important element in the program and is encouraged for interested students who meet departmental criteria.

The program requires that each administration of justice major complete a minor in some other field of study. Completing the minor offered by any other four-year program at SIUC can satisfy this requirement.

Bachelor of Arts Degree in Administration of Justice, College of Liberal Arts

ADMINISTRATION OF JUSTICE MAJOR

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4)	11
<i>Requirements for Major in Administration of Justice</i>	33
Core Requirements: 201, 290, 310, 316, 492 (or another 400-level administration of justice course designated as fulfilling the CoLA Writing-Across-the-Curriculum requirement).....	15

Administration of Justice Electives: 18 hours, at least 9 of which must be selected from 302, 306, 317, 320, 350, 384, 415, 462, 473, 474; in addition at least 6 of the 18 hours must be selected from 400-level courses.		18
Minor		15-18
Electives		14-17
Total		120

Completion of Administration of Justice 201 and 290 (or consent of the instructor) is required for taking any 300- or 400-level administration of justice course. In addition, completion of Administration of Justice 316 (or consent of instructor) is required for taking any 400-level administration of justice course. Prerequisites may be associated with individual courses; refer to the catalog description of the specific course.

No more than three hours of Administration of Justice 395 can be counted toward the major.

At least 15 of the credit hours applied toward completion of the requirements of a B.A. in administration of justice must have been earned in Administration of Justice courses offered at SIUC.

Administration of justice majors is encouraged to take the Core Curriculum course, Administration of Justice 203. However, Administration of Justice 203 can be counted toward the 33 hours in the administration of justice major only if the student fulfills the Core Curriculum Integrative Studies (Multicultural) requirement with some course other than Administration of Justice 203.

A student may substitute Psychology 323 or Social Work 383 for Administration of Justice 301; Political Science 340 for Administration of Justice 302; Sociology 372 for Administration of Justice 290; Psychology 211, Sociology 312, or Political Science 300 for Administration of Justice 316.

Administration of Justice Suggested Curricular Guide

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
Core Sci ¹	3	3	3	SPCM 101 ¹	3	-	-
Core Soc Sci ¹	3	3	3	ENGL 290 or Equivalent ³	-	3	3
Core Humanities ¹	3	3	3	Core Integrated Stdy ¹	3	3	3
ENGL 101, 102	3	3	3	Foreign Languages ³	4	4	4
Core Mathematics, Fine Arts ..	3	3	3	AJ 201, 300-Level ²	3	3	3
				AJ 290, 316	3	3	3
Total	15	15	15	Total	16	16	16
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
Core Human Health ¹	2	-	-	AJ 492 or 462, AJ 400 level.....	3	3	3
AJ 310, Elective.....	3	3	3	AJ 300-400 levels.....	3	3	3
AJ 300-400 level	3	6	6	Minor courses.....	3	3	3
Minor courses	6	6	6	Electives	6	5	5
Total	14	15	15	Total	15	14	14

¹ See University Core Curriculum.
² Students may substitute Psychology 323 or Sociology 383 for Administration of Justice 301; Political Science 340 for Administration of Justice 302; Psychology 211, Sociology 312 or Political Science 300 for Administration of Justice 316; Sociology 372 for Administration of Justice 290.
³ See College of Liberal Arts Academic Requirements.

Minor

A minor in administration of justice consists of 18 hours of administration of justice courses, which must include 201 and 290. At least 12 of the 18 hours must consist of administration of justice courses taken at SIUC.

Courses (AJ)

201-3 Introduction to Criminal Justice System. Survey of the agencies and processes involved in the administration of criminal justice. The history of English law; the criminal justice process and system, including underlying ideologies, procedures, fundamental legal concepts, and the roles and functions of police, courts, and correctional services.

203-3 Crime, Justice and Social Diversity. (University Core Curriculum) This course examines how social heterogeneity and inequality influence the processes involved in the definition and regulation of be-

havior through law, particularly the criminal law. Factors such as race, ethnicity, gender and class are related to definitions of crime and justice, and to the likelihood of being the victim of crime. The differential influence of the operations and outcomes of the criminal justice system on diverse groups in U.S. society is emphasized.

216-3 Legal Studies in Liberal Arts. This course focuses on the relationship between law and other social institutions, patterns of law-making and law-breaking, the values that are expressed in law and shaped by legal structures and processes, and law as an instrument of public policy, social control and social change. The course is offered for those interested in the discipline of law as a field of critical inquiry within a framework of a broad liberal arts education.

290-3 Introduction to Criminal Behavior. Multidisciplinary study of the etiology and patterning of offender behavior.

300-3 Assessment of Offenders. Introduction to the procedures and issues of identifying and evaluating individual differences in offenders and among classes of offenders; analysis of typical diagnostic methods. Prerequisite: 201 and 290 or consent of instructor.

301-3 Human Relations in Criminal Justice. Delineation of major interactive patterns among staff members, between staff and clients, and among clients of probation and parole agencies and correctional agencies; introduction to problems of communication, bureaucracy, and leadership. Prerequisite: 201 and 290 or consent of instructor.

302-3 Introduction to Criminal Justice Administration. An introduction to the principles of administration and organization of criminal justice agencies. Prerequisite: 201 and 290 or consent.

303-3 Behavioral Aspects of Investigation. Principles of behavioral science are applied to the recurrent patterns of criminal investigation as a social and fact-finding process; survey of criminalistics. Prerequisite: 201, 290 or consent of instructor.

306-3 Policing in America. Examines police as part of society's official control apparatus. Major topics include historical development of the police, role of the police in the criminal justice system, functions and effectiveness of the police, and the relationship of the police to the communities they serve. Prerequisite: 201 and 290 or consent of instructor.

310-3 Introduction to Criminal Law. (Same as Paralegal Studies 315) The nature and theories of law and social control; legal reasoning and case analysis; simple legal research; statutory construction; principles and history of punishment; constitutional, historical, and general legal principles applicable to criminal law. Prerequisite: 201 and 290 or consent of instructor.

316-3 Introduction to Criminal Justice Research. A basic introduction to the scientific perspective, relationship of research and theory, research design, measurement issues, reporting of research and program evaluation. Emphasis on problems peculiar to criminological research. Prerequisite: 201 and 290 or consent of instructor.

317-3 Data Analysis in Criminal Justice. Covers basic statistical issues such as properties of single variables, association between pairs of variables, and statistical inference in relation to criminal justice data. Additional topics, such as analysis of aggregated data and prediction, address specific criminal justice concerns. Prerequisite: 201, 290, and 316 or consent of instructor.

320-3 Prosecution and Adjudication. Examination of the structure and process involved in the prosecution, adjudication, and sentencing of criminal defendants. The exercise of prosecutorial and judicial discretion is analyzed, with emphasis placed on understanding the influence of legal, organizational, and environmental contexts on decision-making. Prerequisite: 201 and 290 or consent of instructor.

330-3 Ethics in Criminal Justice. This course examines major ethical systems and their application to issues in criminal justice and the behavior of criminal justice practitioners in police, courts and corrections. Prerequisite: 201, 290.

344-3 Drug Use. Types of drugs, drug impact on the American culture, legal and illegal uses of drugs, offenses related to drug use, reaction of the criminal justice system to drugs and drug users, and the treatment and prevention programs coping with drug use. Prerequisite: 201 and 290 or consent.

348-3 Treatment Modalities. Various treatment methods used throughout the criminal justice system. Explanation and evaluation of various treatment techniques; e.g., behavior modification, transactional analysis and other individual and group therapies. Prerequisite: 201 and 290 or consent of instructor.

350-3 Introduction to Private Security. Examines the roles and functions of proprietary and contract security, loss prevention and asset protection measures in the private sphere. Emphasis is placed on examining contemporary events and factors, which influence how, when and why security measures can be applied and measuring their contribution and effectiveness. Prerequisite: 201 and 290 or consent.

384-3 Introduction to Corrections. Examination of the historical context, philosophical concepts, and major developments which have shaped corrections in the United States. Various sentencing options, correctional approaches and programs, the role of corrections in the larger criminal justice system, and contemporary correctional issues are examined. Prerequisites: 201 and 290 or consent of instructor.

390-1 to 8 (Maximum 4 semester hours per term) Readings in the Administration of Justice. In-depth, introductory and advanced readings in areas not covered in other Administration of Justice courses. The student must submit a statement describing the topic and relevant reading materials to the faculty member sponsoring the student's readings. Prerequisite: 201 and 290 and consent of instructor.

395-3 to 15 Supervised Field Experiences in the Administration of Justice. Familiarization and direct experience in applied settings. Under supervision of faculty and adjunct staff, the student assumes a student-participant role in the criminal justice agency. Student must submit internship application during the first thirty days of the preceding spring or fall semester. Prerequisite: 201, 290, 12 additional hours of administration of justice courses at SIUC; minimum gpa of 2.5 overall and in Administration of Justice courses prior to the internship experience or consent of department. Mandatory Pass/Fail.

- 402-3 Group and Family Treatment in Criminal Justice.** Presentation of theoretical knowledge and practical techniques utilized in major group and family treatment approaches for adults and juveniles in institutions, community-based correctional programs, and transitional living. Prerequisite: 201, 290, and 316 or consent.
- 403-3 to 9 (3 per topic) Enforcement Operations.** (a) Advanced investigation; (b) Enforcement management; (c) Enforcement discretion. Each course topic focuses on a major theme in law enforcement. Prerequisite: (a), (b), and (c) 201, 290, 306 and 316 or consent of instructor; additionally for (a) 303; and for (b) 302.
- 408-3 Criminal Procedure.** An introduction to the procedural aspects of criminal law pertaining to police powers in connection with the laws of arrest, search and seizure, the exclusionary rule, civil liberties, eavesdropping, confessions, and related decision-making factors. Prerequisite: 201, 290, 310, and 316 or consent.
- 415-3 Prevention of Crime and Delinquency.** Multidisciplinary analysis of the functions, goals, and effectiveness of measures to forestall delinquency and crime. Etiology of delinquent behaviors as related to community institutions such as police, courts, corrections, mental health clinics, schools, churches, and citizen groups. Prerequisite: 201, 290 and 316 or consent of instructor.
- 418-3 Criminal Violence.** Examination of historical, comparative, cultural and social structural aspects of homicide, robbery, rape and assaults. Course focuses on trends and patterns in criminal violence, the role of firearms, victim/offender relationships and post-arrest processing of the offender in the criminal justice system. Prerequisite: 201, 290 and 316 or consent of instructor.
- 450-3 Public and Private Security.** An overview of important issues related to security and loss prevention in the public and private sectors. Covers security's historical development, its current role, and the relationship between the public and private sectors. Prerequisite: 201, 290, 316 and 350 or consent.
- 451-3 Forensic Interrogation.** Forum on forensic interrogation. Conceptual framework for understanding behavioral and psychological aspects of the process; discussion of historical and philosophical development, use in criminal and private security investigations, legal proceedings, and role in a democratic society. Provides both theoretical grounding and hands-on experience. Prerequisite: 201, 290, and 316 or consent of instructor.
- 460-3 Women, Crime, and Justice.** (Same as Sociology 461 and Women's Studies 476.) Addresses the topics of women as offenders, as victims and as workers in the criminal justice system. Prerequisite: 201, 290, and 316, or consent of instructor.
- 461-3 White-Collar Crime.** Examines the physical and financial harm caused by wayward corporations and business employees from both theoretical and empirical perspectives. Emphasis is placed on ethics, theory, legal decision-making and the regulatory monitoring and control of illegal corporate activity. Prerequisite: 201, 290 and 316 or consent of the instructor.
- 462-3 Victims of Crime.** (Same as Sociology 462) Examines the extent and nature of victimization, theories about the causes of victimization, the effects of crime on victims and services available to deal with those effects, victims' experiences in the criminal justice system, the victims' rights movement and alternative ways of defining and responding to victimization. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 201, 290, 316 and consent of instructor.
- 468-3 Law and the Social Control of Women in American History.** (Same as History 468, Women's Studies 468) Examination of the ways in which the law affects the behavior, life chances, identities and experiences of women, from colonial times to the present. Team taught by faculty from history and administration of justice.
- 473-3 Juvenile Delinquency.** (See Sociology 473.) Prerequisite: 201, 290 and 316 or consent.
- 474-3 Juvenile Justice.** The evolving definition of juvenile misbehavior and the legal mechanisms that have emerged to control it. The problems and promise of juvenile justice in terms of the juvenile code and court, law enforcement, custodial and treatment institutions, and community treatment. Prerequisite: 201, 290, and 316 or consent of instructor; 473 or equivalent is recommended.
- 476-3 Comparative Criminal Justice.** Examination of sociocultural and political factors shaping criminality and responses to crime around the world. Similarities and differences in criminogenic conditions and practices of law enforcement and corrections are traced. Prerequisite: 201, 290, and 316 or consent of instructor.
- 477-3 Theoretical Analysis of Crime.** Examination of theories of crime and criminality. Major topic areas include types of theories, the development and testing of theories, explanations of the kinds and degrees of crime observed in society, and explanations of processes involved in the development of criminal behavior. Emphasis is on current directions in theories of crime. Prerequisite: 201, 290 and 316 or consent of instructor.
- 484-3 Correctional Institutions.** Examination of the roles, purposes, structures and functioning of institutional corrections within the United States. Emphasis is placed on understanding the philosophies, elements, structures and programs that shape current institutional operations and their impact on offenders, staff and the community. Prerequisite: 201, 290 and 316 or consent of instructor.
- 485-3 Corrections and the Community.** Traditional correctional functions are redefined to emphasize the development of resources in communities, diversion of convicted offenders from institutions, and direct involvement of correctional programs in community affairs. Prerequisite: 201, 290 and 316 or consent.
- 490-1 to 6 (3 credit hours per term maximum) Independent Study in the Administration of Justice.** Supervised readings or independent research projects in various aspects of crime control, treatment of offenders, and the management of criminal justice programs and agencies. Prerequisite: 201, 290, and 316 and consent.
- 492-3 Contemporary Issues in Administration of Justice.** A forum, geared toward seniors majoring in administration of justice, that focuses on criminal justice issues of concern to students and faculty. May enroll for a maximum of six credits. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 201, 290, 316, and consent of instructor.

Administration of Justice Faculty

Anderson, Dennis B., Associate Professor, *Emeritus*, Ed.D., University of Nebraska, 1970.
Armstrong, Gaylene S., Assistant Professor, Ph.D., University of Maryland, 2000.
Armstrong, Todd A., Assistant Professor, Ph.D., University of Maryland, 2000.
Burruss, George, Assistant Professor, Ph.D., University of Missouri-St Louis, 2001.
Ferdinand, Theodore N., Professor, *Emeritus*, Ph.D., University of Michigan, 1961.
Garofalo, James, Professor, Ph.D., State University of New York at Albany, 1978.
Giblin, Matthew J., Assistant Professor, Ph.D., Indiana University, 2004.
Henderson, Martha L., Assistant Professor, Ph.D., University of Cincinnati, 2000.

Hillyard, Daniel, Assistant Professor, J.D., Ph.D., University of California, Irvine, 2001.
Johnson, Elmer H., Distinguished Professor, *Emeritus*, Ph.D., University of Wisconsin, 1950.
LeBeau, James L., Professor, Ph.D., Michigan State University, 1978.
Lorinskas, Robert A., Associate Professor, *Emeritus*, Ph.D., University of Georgia, 1973.
McDermott, M. Joan, Associate Professor, Ph.D., State University of New York at Albany, 1979.
Robinson, Cyril D., Professor, *Emeritus*, LL.B., Northwestern University, 1952.
Schafer, Joseph A., Associate Professor, Ph.D., Michigan State University, 2000.
Wells, William, Associate Professor, Ph.D., University of Nebraska at Omaha, 1999.

Advanced Technical Studies (See Technical Resource Management)

Aerospace Studies (Air Force ROTC)(Department, Minor, Courses)

Aerospace Studies is a voluntary course sequence leading to a commission as an officer in the United States Air Force. When commissioned, all officers must have at least a baccalaureate degree; hence, completion of the program is contingent upon maintaining satisfactory progress toward graduation. Enrollment in the first two years (general military course) is unrestricted, and no military obligation is incurred. Students who do not intend to obtain a commission are welcome.

Aerospace Studies offers two, three and four-year programs. The four-year program is divided into the General Military Course (GMC), covering the freshman and sophomore years, and the Professional Officer Course (POC), covering the last two years for which cadets are competitively selected.

The GMC prepares students for the POC and provides them with an education using Air Force core values, whether they remain civilians or become officers in the U.S. Air Force. The courses of the POC are designed to provide the basic knowledge, understanding, and experiences, which are required to become an effective junior officer in the modern Air Force. The student learns about the wide range of USAF career specialties and has opportunity to request duty in those fields where qualified.

Acceptance into the last two years (professional officer course—POC level) is competitive and requires qualification on the Air Force Officer Qualifying Test and a physical examination. Students in the professional officer courses do incur a military obligation. They are paid a monthly tax-free subsistence allowance, and they may compete for scholarships, tuition and books. Graduate students, and those pursuing a second bachelor's degree that have at least two years remaining at the University, not counting summers, are eligible.

Students in the four-year program attend a four-week field-training course in the summer between their sophomore and junior years. Students can qualify to enter the two-year program at the POC level by attending a five-week field training course during the preceding summer; however, since field training selections are made in the early spring, students must indicate their intent as early as possible in the school year.

Students interested in an Air Force flying career (pilot, navigator, airborne battle management) are not required to get any specific degree, i.e., aviation management, aviation flight. Students interested in an Air Force flying career should pick an academic major in a career field in which they would like to work if they are not selected for an Air Force flying career.

Leadership Laboratory is a supervised laboratory taken concurrently with the aerospace studies courses. In the first two years, students develop leadership potential by participating in practical leadership situations, participating in and leading drill and ceremonies, learning customs and courtesies, and preparing for field training. In the final two years of AFROTC, students develop leadership potential by assuming command and staff responsibilities, supervising the GMC cadets and implementing the goals and objectives of the leadership laboratory.

Freshman and sophomore students (GMC cadets) enrolled in the four-year program are eligible to compete for full scholarships for their remaining years at the University. In addition to full tuition and fees, the scholarship provides a monthly tax-free subsistence allowance. Also, two-year AFROTC scholarships and State of Illinois tuition waivers are available on a competitive basis.

In addition to the courses offered by academic credit, Aerospace Studies sponsors related extracurricular activities. The Aerospace Club is open to all members of the student body. The Arnold Air Society, a national honorary service organization, is open to selected AFROTC cadets. The Saluki AFROTC Drill Team is open to selected AFROTC cadets on a competitive basis. Members participate in local community events and in selected drill competition meets throughout the region.

Further information may be obtained from the Department of Aerospace Studies (Air Force ROTC), 807 South University Avenue, Mailcode 6718, Carbondale, Illinois 62901, or by phone: (618) 453-2481, or on the Web at:

<<http://www.siu.edu/~afrotc/>>.

Aerospace Studies Minor

A minor in aerospace studies is structured to broaden the background of students not interested in a military career so they may learn more about the military, its role in society, its history and its officers. It is hoped that with a minor in Aerospace Studies, the civilian leaders of tomorrow will have a better understanding and appreciation of the vital role that the military plays in today's world. AFROTC cadets are also welcome to declare aerospace studies as a minor.

For non-AFROTC cadets, a minor in aerospace studies consists of a minimum of 16 semester hours, including AS 101, 102, 201, 202 (one semester hour each), 301, 302, 401 and 402 (three semester hours each).

For AFROTC cadets who have been accepted into the General Military Corps (GMC) or the Professional Officer Corps (POC), an aerospace studies minor also consists of a least 16 hours, including AS 258 (Field Training) for four semester hours, in addition to AS 301, 302, 401 and 402 (3 semester hours each). Cadets will also take additional hours in Aerospace Leadership Laboratories (LLAB): AS 101a, 102a, 201a, 202a, 301a, 302a, 401a and 402a (one semester hour each not required for special students).

Declaration and/or acceptance of Aerospace Studies as a minor does not constitute acceptance into the General Military Corps, Professional Officer Corps, or any other association with AFROTC. A student who is not an AFROTC cadet who wishes to work toward a minor by attending Aerospace Studies courses will be listed within the AFROTC detachment as a special student. He or she will not be required to attend any other AFROTC functions or classes, nor will the student be considered for any AFROTC scholarships, stipends, or privileges.

Courses (AS)

101-1 The Air Force Today. Survey course briefly treating chief topics relating to the Air Force and defense. It focuses on the organizational structure and missions of Air Force organizations, officership and professionalism and includes an introduction to communicative skills. Prerequisite: concurrent enrollment in 101a, Leadership Laboratory.

101A-2 Leadership Laboratory. Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.

- 102-1 The Foundation of the United States Air Force.** A survey course designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions and organization of the Air Force. Prerequisite: concurrent enrollment in 102a.
- 102A-2 Leadership Laboratory.** Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, and drill and ceremonies. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.
- 201-1 The Evolution of United States Air Force and Space Power I.** Features topics on Air Force heritage and leaders; introduction to air and space power through examination of competencies and functions; and continued application of communication skills. Its purpose is to instill an appreciation of the development and employment of air power and to motivate sophomore students to transition from Air Force ROTC cadet to Air Force ROTC officer candidate. In addition, aspects of the 200 course begin to prepare cadets for their experiences at field training. Prerequisite: concurrent enrollment in 201a.
- 201A-2 Leadership Laboratory.** Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, drill and ceremonies, and field training orientation. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.
- 202-1 The Evolution of United States Air Force and Space Power II.** Features topics on Air Force heritage and leaders; introduction to air and space power through examination of competencies and functions; and continued application of communication skills. Its purpose is to install an appreciation of the development and employment of air power and to motivate sophomore students to transition from Air Force ROTC cadet to Air Force ROTC officer candidate. In addition, aspects of the 200 course begin to prepare cadets for their experiences at field training. Prerequisite: concurrent enrollment in 202a.
- 202A-2 Leadership Laboratory.** Weekly laboratory consisting of Air Force customs and courtesies, health and physical fitness, drill and ceremonies, and field training orientation. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.
- 258-4 Field Training Equivalency.** Work experience credit for 101, 102, 201, and 202. This credit will be evaluated by the Department of Aerospace Studies. Pass/Fail only. Prerequisite: satisfactory completion of either the four-week or six-week field training course for AFROTC POC applicants.
- 301-3 Air Force Leadership Studies I.** Teaches cadets advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as juniors and seniors. Prerequisite: concurrent enrollment in 301a.
- 301A-2 Leadership Laboratory.** Weekly laboratory consisting of advanced leadership experiences in officer-type activities, giving students the opportunity to apply the principles learned. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.
- 302-3 Air Force Leadership Studies II.** Teaches cadets advanced skills and knowledge in management and leadership. Special emphasis is placed on enhancing leadership skills. Cadets have an opportunity to try out these leadership and management techniques in a supervised environment as juniors and seniors. Prerequisite: concurrent enrollment in 302a.
- 302A-2 Leadership Laboratory.** Weekly laboratory consisting of advanced leadership experiences in officer-type activities; giving students the opportunity to apply the principles learned. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program.
- 351-2 Field Work Experience.** Approved field work experiences with an Air Force or Department of Defense-related installation gives students opportunities to apply classroom theory to an active duty environment. Prerequisite: 302 or consent of department chair.
- 401-3 National Security Affairs/Preparation for Active Duty I.** Designed for college seniors and gives them the foundation to understand their role as military officers in American society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Not for graduate credit. Prerequisite: Concurrent enrollment in 401a.
- 401A-2 Leadership Laboratory.** Weekly laboratory consisting of advanced leadership experiences in officer-type activities. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program. Not for graduate credit.
- 402-3 National Security Affairs/Preparation for Active Duty II.** Designed for college seniors and gives them the foundation to understand their role as military officers in American Society. It is an overview of the complex social and political issues facing the military profession and requires a measure of sophistication commensurate with the senior college level. Not for graduate credit. Prerequisite: concurrent enrollment in 402a.
- 402A-2 Leadership Laboratory.** Weekly laboratory consisting of advanced leadership experiences in officer-type activities. A mandatory fitness program is included; a pre-participatory sports physical must be completed prior to entering the fitness program. Not for graduate credit.
- 471-1 to 3 Independent Study.** Supervised study or project to improve skills or to explore interests related to professional development of an Air Force officer. Not for graduate credit. Pass/Fail only. Prerequisite: 301 or concurrent enrollment or consent of department chair.
- 491-1 to 8 Advanced Leadership Skills.** Student applies special skills or interests to the professional environment of an Air Force officer. Original research or project to deal with current aspect of Air Force duty required. Amount of credit dependent on work involved. Not for graduate credit. Pass/Fail only. Aerospace Studies elective only. Prerequisite: 301 or concurrent enrollment and consent of department chair.

Aerospace Studies Faculty

Puckett, Curtis R., Adjunct Assistant Professor of Aerospace Studies, B.B.A., Business Management, University of Texas at San Antonio, 2001.
Riggs, Brian L., Adjunct Assistant Professor of Aerospace Studies, B.A., Administration of Justice, Southern Illinois University Carbondale, 1997.

Robertson, Michelle L., Adjunct Assistant Instructor.

Tomczak, Walter J., Adjunct Professor of Aerospace Studies, M.S., Operations Management, University of Arkansas, 1987; M.S., National Security Strategy, National Defense University, 2000.

African Studies (Minor)

An African Studies minor is available in the College of Liberal Arts. African studies is an interdisciplinary minor, involving courses in anthropology, art and design, Black American studies, English, history, linguistics and political science. Each of these departments or programs has one or more faculty who specialize in Africana studies and who are interested in assisting students. The requirements for the African Studies minor are listed below.

African Studies Minor

The African studies minor consists of 15 hours with 9 hours in required core courses and 6 hours of electives.

Required Core Courses: 9 hours selected from: ANTH 310a or BAS 310a, BAS 225, HIST 387a or BAS 314a, HIST 387b or BAS 314b, POLS 465 or BAS 465.

Electives: 6 hours selected from: AD 458, ANTH 410h or BAS 410h, ANTH 440c, BAS 135, BAS 311a, BAS 320, BAS 495, ENGL 493 (only when the topic focus is African literature and language), LING 450 (only when African languages are studied or 2-3 hours of reading courses on Africa sponsored by any of the department listed above).

Agribusiness Economics (Department, Major, Courses, Faculty)

The need to better utilize our natural resources and protect our environment, improve our rural infrastructure, and manage the activities of food/fiber production, processing, and distribution firms in an international setting is creating career opportunities at a quickening pace.

Agribusiness Economics offers a flexible program, which, under the supervision of a faculty adviser, allows the student to pursue either a comprehensive or more specialized course of study in preparation to assume an effective professional role in our dynamic, global, economic, and social environment.

Courses in Agribusiness Economics in the traditional areas of farm management and marketing emphasize accepted techniques to improve efficiency and farm profitability. Course offerings in agribusiness management, finance, sales, marketing, and commodity futures prepare students to assume positions with a broad range of businesses that comprise the agribusiness sector; from input suppliers to farmers through merchandising and processing agricultural commodities to retail sales to consumers. Course offerings in environmental and natural resource economics, agribusiness management, rural development, food policy and agricultural law introduce the needed applied economic skills for effective decision making, complement a more specialized course of study, and provide the basis for dealing with contemporary societal problems.

The Agribusiness Economics major involves a set 22 hours of agribusiness economics core requirements as well as 15 elective hours in agribusiness economics including at least six hours at the 400-level. Students also have 15 hours of business, economics and methodology requirements, six hours of communication

courses over and above the nine hours required by the University Core Curriculum, and 24 hours of electives. Students working with their faculty advisors will be able to plan an academic program tailored to their particular interests and/or career paths, e.g., Grain Merchandising/Futures Markets Trading; Applied Economic and Policy Analysis; Farm Management; Agribusiness Management, Finance, and Sales; Energy, Environmental, and Natural Resource Economics and Policy; Quantitative Methods in Agribusiness Economics, Appraisal, etc. Sample programs of study based on these and other areas of interest are available from the department. A few examples are provided in what follows; however, these are only a few of the possibilities open to students.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Agribusiness Economics, College of Agricultural Sciences

AGRIBUSINESS ECONOMICS MAJOR

<i>University Core Curriculum Requirements</i>	38
(204 substitutes for three hours of core)	
<i>Requirements for Major in Agribusiness Economics</i>	58
Agribusiness Economics Core	22
Agribusiness Economics 204; 318; 330; 340, 350 or 360; 351; 361 or 362; 381-1 to 4; 440, 444, 450, 451, 461 or 463	
Agribusiness Economics Electives (six at 400-level)	15
Communication Requirements	6
Speech Communication 221, English 291, Agricultural Systems 314, English 290, Management 202, Speech Communications 280 or equivalent	
Business, Economics, and Methodology Requirements	15
Accounting 220, Agricultural Systems 118, Economics 240, 241, Agribusiness Economics 419 or equivalent	
<i>Other Electives (at least nine at 300-level, six at 400-level)</i>	24
<i>Total</i>	120

In addition to the traditional major, the department participates in the University's Capstone Degree Program. Through this program, students who graduate with an Associates of Applied Sciences (AAS) from a community college can earn a Bachelor of Science degree by taking 60 hours of course work at SIUC. Through this program, an individualized study plan is written for each student. While our capstone-degree program is based on 70 hours, the vast majority of students transfer in 10 or more credit hours that apply to their capstone program, their individualized program reflects only the 60 hours they must complete under the rules of the university's capstone degree program.

DEPARTMENT OF AGRIBUSINESS ECONOMICS: CAPSTONE-DEGREE REQUIREMENTS

<i>University Core Curriculum Requirements</i>	30 ¹
<i>Requirements for Major in Agribusiness Economics</i>	40 ¹
Agribusiness Economics Core	22
Agribusiness Economics 204; 318; 330; 340, 350 or 360; 351; 361 or 362; 381-1 to 4; 440, 444, 450, 461 or 463	
Communication Requirements	6
Speech Communication 221, English 291, Agricultural Systems 314, English 290, Management 202, Speech Communications 280 or equivalent	

Business, Economics and Methodology Requirements	12
Accounting 220, Agricultural Systems 118, Economics 240 or 241, Agribusiness Economics 419, or equivalent	
Total	120

Agribusiness Economics Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
Core Science	3 or 4	3 or 4	Core Social Science	3	-
Core Fine Arts	-	3	Core Humanities	3	3
Core Human Health, ECON 240 ...	2	3	ENGL 291, SPCM 221	3	3
ENGL 101, 102	3	3	AGSY 118	-	3
ABE 204, SPCM 101	3	3	ECON 241, ABE 330	3	3
MATH 108 or higher ⁴	3	-	Core Multi/Interdisciplinry	3	3
Total	14-15	15-16	Total	15	15
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
ABE 340 ³ , 350 ³ or 360 ³	3	3	ABE 440 ³ , 444 ³ , 450 ³ , 461 ³ or 463 ³	3	3
ABE 318	3	-	ABE 381 ³	1	1
ACCT 220	3	-	ABE 419	-	3
ABE 351	3	-	Electives	9-15	9-12
ABE 361 ² or 362 ²	3	3			
ABE Electives	3	6-15			
Other Electives	3	6-15			
Total	15	15	Total	15-16	15-16

¹ Students required to take one of ABE 340, 350 (Fall) or ABE 360 (Spring)
² Students take either ABE 361 (fall) or ABE 362 (spring)
³ Students take one of ABE 440, 444, 450 (fall), 461 or 463 (spring)
⁴ Mathematics 108, 139, 140 recommended for students with appropriate preparation.
⁵ Students may take ABE 381 in either (fall or spring)

Capstone Option Suggested Curricular Guide

THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
ABE 340 ¹ , 350 ¹ or 360 ¹	3	3	ABE 440 ³ , 444 ³ , 450 ³ or 461 ³ or 463 ³	3	3
ABE 318	3	-	ABE 381 ³	1	1
ACCT 220, AGSY 318	3	3	ABE 419	-	3
ABE 351	3	-	ECON 240 or 241	3	-
ABE 361 ² or 362 ²	3	3	Elective or Core	9-12	9-12
ENGL 291 or SPCM 221	3	3			
Elective or Core	0-6	3-9			
Total	15	15	Total	15-16	15-16

¹ Students are required to take one of ABE 340, 350 (fall) or ABE 360 (spring)
² Students take either ABE 361 (gall) or ABE 362 (spring)
³ Students take either ABE 440 (spring) 444 (fall), 461 or 463 (spring)
⁴ Mathematics 108, 139 or 140 recommended for students with appropriate preparation
⁵ Students may take ABE 381 in either (fall or spring)

Examples of Agribusiness Economics Programs of Study for Different Career Tracks

Grain Merchandising/Futures Markets Career

- Suggested Agribusiness Economics electives:
Agribusiness Economics 360, 363, 453, 462, 401, 460
- Suggested College of Agricultural Sciences electives:
Plant and Soil Sciences 200, 300
- Suggested other electives (24 hours – minor in Economics)
Economics 315, 340, 341, 416, 429, Finance 310

Applied Economics and Policy Analysis

- Agribusiness Economics courses:
Agribusiness Economics 204, 318, 330, 340, 351, 381, 440 and 444
- Other Agribusiness courses:
Agribusiness Economics 401, 440 or 444, 453, 463
- Other suggested courses:
Accounting 230, Economics 240 and 241, 340 or 341, 408, For-
estry 485, Geography and Environmental Resources 418, Poli-
tical Science 444

Farm Management

Agribusiness Economics core courses:

Agribusiness Economics 204, 318, 330, 350, 351, 361 or 362, 381, 450

Other Agribusiness Economics courses:

Agribusiness Economics 340, 361 or 362, 363, 401, 460, 453

Other Agriculture courses students may wish to develop their technical skill in a particular production area by selecting other agricultural courses.

Animal Sciences 121, 122, 315, 430, 465, 485, Agricultural Systems 472, Plant and Soil Science 200, 220, 300, 333, 468, 419, 423, 432

Other Suggested Courses:

Accounting 230

Agribusiness Management & Finance**Agribusiness Economics core courses:**

Agribusiness Economics 204, 318, 330, 351, 360, 361 or 362, 461, 381

Other Agribusiness Economics courses:

Agribusiness Economics 333, 340, 363, 401, 453, 460, 463

Other Suggested Courses:

Accounting 230, Economics 240 and 241

Agricultural and Rural Real Estate Appraisal**Agribusiness Economics core courses:**

Agribusiness Economics 204, 318, 330, 350, 351, 362 or 362, 381, 450

Other Agribusiness Economics courses:

Agribusiness Economics 340, 361 or 362, 401, 451, 453

Other Suggested Courses:

Finance 320, 321, 322, 323, 330, Plant and Soil Science 240

Agribusiness Economics Minor

A minor in agribusiness economics is offered. A minor consists of 15 semester hours of credit. Normally 12 hours must be taken at Southern Illinois University Carbondale. An advisor within the department must be consulted before selecting this field as a minor.

Courses (ABE)

204-3 Introductory Economics of Food, Fiber, and Natural Resources. An introduction to the economics and policies underlying food and fiber production, distribution, and consumption as well as the use of environmental and natural resources. This course is a University Core Curriculum Social Science requirement in lieu of Economics 113.

257-1 to 10 Work Experience. Credit for on-campus work experience through a cooperative program developed between the department and the Office of Student Work and Financial Assistance. Prerequisite: consent of chair. Mandatory Pass/Fail.

258-1 to 30 Past Work Experience. Credit for career related employment based on the evaluation of the documentation of this experience by the Department of Agribusiness Economics. No grade for past work experience. Prerequisite: consent of chair.

302-2 Country Living Management and Information. Managing a small acreage as an avocation. Types of decision problems and sources of information.

318-3 Agribusiness Statistical Methods. Statistical methods applied to agribusiness economics, including survey design, sampling, graphic presentation of data, index numbers, statistical inference, basic linear regression and correlation.

330-3 Principles of Agribusiness Economics: Theory and Applications. The student will enhance their understanding of and ability to apply the principles of economics to the unique problems of the agricultural sector. The course covers the theory of resource allocation with a rural emphasis. The following topics are taken up in a case study framework: production of food and fiber, the agribusiness sector and markets, rural community development, and environmental and natural resource use and conservation. The roles of governmental policy, international trade organizations, and treaties are included throughout the course. Prerequisite: 204.

333-3 Professional Agri-selling. Focuses on professional Agri-selling and the sales process. Topics include different methods of selling, steps and techniques in the selling process, customer service, sales ethics, consumer behavior concepts and sales management. Critical skills of self-management, communication, and interpersonal values are examined. Opportunities of a career in Agri-selling are surveyed.

340-3 Domestic and International Food Policies. Examination of domestic and international policies that affect the production of food products. Topics will include a review of existing and former policies de-

signed for American producers (e.g., commodity programs to support farm income, risk management and conservation of resources). Food safety policies will be examined. In addition, aspects of international trade including policies (NAFTA), practices, and institutions (WTO, World Bank, etc.) as they relate to access to foreign markets will be reviewed. Prerequisite: 204 or consent of instructor.

350-3 Farm Management. Efficient organization and management of a farming operation. Emphasis on crop and livestock selection, management of farm resources, farm budgets and records analysis, and farm leases. Student will incur field trip expenses not to exceed \$5. Prerequisite: 204 or one course in economics.

351-3 Financial Management in Agriculture. Analysis of the capital structure of agriculture and sources of capital. Credit analysis of agribusiness firms using financial statements, firm growth, capital budgeting, and tax considerations. Prerequisite: 204 or equivalent.

359-1 to 6 Intern Program. Supervised work experience program in either an agricultural agency of the government or agribusiness. Prerequisite: junior standing or consent. Mandatory Pass/Fail.

360-3 Agribusiness Management and Organization. Problems and practices in agribusiness operations including management practices, decision-making tools, financial analysis, economic considerations in managing land, labor and capital, and the impact of alternative organizational forms are emphasized. The focus is on applications to real world problems. Students are provided an opportunity to interact with business managers through a series of guest speakers. Prerequisite: 204 or equivalent.

361-3 Agribusiness Marketing Management. An overview of marketing practices and strategies employed by agribusiness product and service firms. Market research, market segmentation and product mix development are among the topics reviewed. Students participate in case analysis and marketing plan development projects. Prerequisite: 204 or equivalent.

362-3 Marketing and Pricing Agricultural Products. Institutional arrangements in marketing agricultural products. Market structure, marketing costs, and alternative methods of pricing agricultural products are also examined. Prerequisite: 204 or equivalent.

363-3 Commodity Price Risk Management. The focus is on the use of financial instruments, including futures and options, to manage price risk in modern agribusiness. Topics covered include: commodity futures and options, cash forward and other over-the-counter contracts, hedging, spreading, basis risk and basis trading. Applications and examples are provided for commodity producers, end-users, and the processors. The mechanics of futures trading and speculation are considered. Students are given the opportunity to observe and participate in futures market transactions.

381-1 to 4 (1,1,1,1) Agricultural Seminar. Discussion of special topics and/or problems in the field of agribusiness economics. Prerequisite: junior standing and consent of department.

388-1 to 16 (1 to 8 per semester) International Studies. Course work undertaken as a part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Prerequisite: major department or program approval.

390-1 to 4 Special Studies in Agribusiness Economics. Assignments involving research and individual problems. Field trips. Prerequisite: consent of chair.

391-1 to 4 Honors in Agribusiness Economics. Completion of honors paper or comparable project under the supervision of one or more faculty members. Subject matter depends upon the needs and interests of the student. Prerequisite: junior, gpa 3.0 with a 3.25 in major; approval of staff member, department chair.

401-3 Agricultural Law. Relations of common-law principles and statutory law to land tenure, farm tenancy, farm labor, farm management, taxation, and other problems involving agriculture. Prerequisite: junior standing or consent of instructor.

402-1 to 6 Problems in Agribusiness Economics. Designed to improve the techniques of agribusiness economics workers through discussion, assignment, and special workshops on problems related to their field. Emphasis will be placed on new innovative and currently developed techniques for the field. Prerequisite: consent of chair.

419-3 Agribusiness Economic Applications of Information Technology. Students will gain experience in applying information technology to a range of agribusiness-economic applications in the subject areas of record keeping, management, finance and marketing. Students will gain additional experience by integrating these applications in the development of a business plan. Not for graduate credit. Prerequisite: 350 or 351 or 360 and Agricultural Systems 318 or equivalent.

440-3 Natural and Environmental Resource Economics and Policy. Students will study the application of socioeconomic principles to problems related to natural and environmental resources. The course covers the policy context within which policies related to natural and environmental resources are developed and implemented as well as the range of policy tools available for addressing environmental/natural resource problems. The institutional setting for dealing with natural and environmental resources is presented along with the role of property rights and entitlements. Contemporary resource problems are used as examples. Prerequisite: six hours of agribusiness economics, economics, or geography; graduate status; or consent of instructor.

444-3 Agricultural Development. Analysis of the economic, social, political, cultural, and institutional factors related to economic growth and development in agricultural sector. Framework for evaluating outcome of alternative strategies in agricultural production, marketing, and government policies that affect output, income distribution, and resource use in agriculture and the related agroindustrial complex. Prerequisite: 204.

450-3 Advanced Farm Management. Application of production economic principles and modern decision-making techniques to farm management problems. The importance of information, sources of agricultural risk and management of risk in farm planning will be integrated. Prerequisite: 350 or equivalent and University Core Curriculum mathematics required.

451-3 Appraisal of Rural Property. Principles and practices of rural and farm appraisal. Applications of sales comparison, income capitalization and cost approaches for estimating market value. Consequences of environmental liabilities and regulations on appraisal practices. Understanding of special valuation methods for buildings, insurance, assessments, loans and condemnations. Field trips not to exceed \$10. Prerequisite: 350 or consent of instructor.

453-3 Agribusiness Planning Techniques. Application of mathematical programming to agribusiness and farm planning, including enterprise selection, resource allocation, least cost ration formulation, decision making under risk and uncertainty, transportation and location problems. Emphasis placed on modeling problems and interpretation of results. Prerequisite: junior standing or consent of instructor.

460-3 Agricultural Price Analysis and Forecasting. The focus is on the measurement and interpretation of factors affecting agricultural prices. Methods to analyze the seasonal, cyclical, and trend components of commodity prices are presented. Formal forecasting techniques, including an introduction to statistical and regression methods, are used and explained. Emphasis is placed on the presentation, communication, and evaluation of forecasts in a business environment. Students are given an opportunity to perform applied price analysis and present the results. Prerequisite: 318, 362 or equivalent.

461-3 Agriculture Business Management. Examination of agribusiness firm management with emphasis on the management and control of financial resources and the interrelationship between the agribusiness firm and human resource management. Other topics in agribusiness will include effective communication in the management process, business ethics, and workable credit programs for customers. Prerequisite: 351 and 360 or equivalent.

462-3 Advanced Agricultural Marketing. Advanced treatment of marketing issues from both theoretical and practical decision-making perspectives. Marketing margins, intertemporal, and spatial price relationships are reviewed in detail. Historical and current grain and livestock price series are utilized in decision-making exercises. Prerequisite: 362 or equivalent.

463-3 Managerial Strategies for Agribusiness. Application of Industrial Organization and Strategic Management (Competitive Strategy) principles to address economic and managerial issues related to agriculture and food industries. Particular emphasis on applying those principles to explain structural changes taking place in the agriculture and food supply chain in the United States. Prerequisite: 204, 350 or 360, Economics 240.

470-3 Interdisciplinary Approaches to Environmental Issues. Application of concepts from the biological, physical and social sciences, economics, humanities and law, used to understand the interdisciplinary complexities of environmental issues. Students will develop and demonstrate problem-solving skills as part of a team analyzing a regional environmental issue. Team-taught seminar style discussions. Not for graduate credit. Prerequisite: Plant Biology 301i and admission to Environmental Studies minor program.

Agribusiness Economics Faculty

Altman, Ira, Assistant Professor, Ph.D., University of Missouri-Columbia, 2005.

Beaulieu, Jeffrey, Associate Professor, Ph.D., Iowa State University, 1984.

Beck, Roger, Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1977.

Eberle, Phillip, Associate Professor, Ph.D., Iowa State University, 1983.

Harris, Kim, Associate Professor, Ph.D., University of Illinois, 1985.

Herr, William McD., Professor, *Emeritus*, Ph.D., Cornell University, 1954.

Keeper, Wendell E., Professor, *Emeritus*, Ph.D., Cornell University, 1938.

Kraft, Steven E., Professor and *Chair*, Ph.D., Cornell University, 1980.

Kurkalova, Lyubov, Assistant Professor, Ph.D., Iowa State University, 1999.

Moon, Wanki, Associate Professor, Ph.D., University of Florida, 1995.

Rendleman, C. Matthew, Associate Professor, Ph.D., Purdue University, 1989.

Sanders, Dwight, Associate Professor, Ph.D., University of Illinois, 1995.

Agricultural Sales

(SEE AGRIBUSINESS ECONOMICS)

Agricultural Sciences (College, Courses)

Courses (AGRI)

110-3 Agriculture and Society. An introductory and general inquiry about the role and characteristics of farm and off-farm agriculture in our non-agrarian society. To acquaint students with important aspects of the various fields of agriculture and agrarian relationships to our society.

259-2 to 40 Technology in Agriculture. For credit earned in technical or occupational proficiency above the high school level (by departmental evaluation).

300I-3 Social Perspectives on Environmental Issues. (Same as Liberal Arts 300i)(University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the U.S.; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

323-2 Career Development in Agriculture. Explores the information necessary for a participant to enter into an agricultural career with government, business or industry. Participants will complete a personal skills assessment, a resume, research a prospective employer, complete a mock interview and negotiate employment.

333-2 Agriculture and Forestry Environmental Problems. An overview course directed at the environmental problems of food, fiber, and forest products, production and processing and their potential solutions. A team taught course within the College of Agricultural Sciences.

388-1 to 16 (1 to 8 per semester) International Studies in Agriculture. Course work undertaken as a part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Prerequisite: College of Agricultural Sciences or department within the college approval.

401-3 Fundamentals of Environmental Education. (Same as Forestry 401 and Recreation 401.) A survey course designed to help education majors develop an understanding of environmental education principles and teaching both inside and outside the classroom. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: Ten hours of biological science or ten hours of recreation and/or education, or consent of instructor.

423-3 Environmental Interpretation. (Same as Forestry 423 and Recreation 423.) Principles and techniques of natural and cultural interpretation. Two hours lecture, three hours laboratory. Requires field trip transportation fee not to exceed \$40 per course registration. Prerequisite: ten hours biological science or ten hours of recreation.

450-2 Farming Systems Research and Development. An introduction to farming systems, which is an interdisciplinary approach to agricultural research and development emphasizing small farms. The whole farm is viewed as a system of interdependent components controlled by the farm household. Focuses on analyzing interactions of these components as well as the physical, biological, and socioeconomic factors not controlled by the household. Techniques of analysis are applicable domestically and internationally.

481-1 International Agricultural Seminar. Discussion of special topics relating to worldwide agricultural development. Prerequisite: consent of instructor.

Agricultural Systems (Major, Courses, Faculty)

The Agricultural Systems major is administered through the Department of Plant, Soil and Agricultural Systems. The Agricultural Systems program includes four specialized areas of study.

The primary objectives of this major are: to provide specialized academic preparation in agriculture appropriate for the specializations of the major, to provide a program for the student desiring a broad based agriculture major, optionally combined with another discipline and to provide the quality academic and professional preparation necessary for success in the various career fields of the four specializations. The following statements identify typical career opportunities for persons completing the respective specialization.

Agricultural Systems Technology Specialization. This specialization is intended for students interested in technical management of an agricultural related business involved in production, processing or manufacturing. This specialization combines an understanding of the agricultural, biological and physical sciences with managerial and technical skills. This understanding of science, systems management and applications engineering can be used in a career in the production and processing of food, fiber, feed and fuel. Students focus on the application of engineering principles, the study of agricultural technology and integration of business management concepts in the food and agricultural industry.

Agricultural Education Specialization. This specialization is intended for those students who plan to be involved in agricultural programs in communication, extension, post-secondary educational institutions and industry. Professional training for certification as a teacher of applied biological and agricultural occupations in secondary schools is available.

Agricultural Production Specialization. This specialization provides the student with the background and preparation for careers in production based areas of agriculture including sales and service positions in the supply and marketing chain, support industries, and agribusiness as well as production management positions and farming.

General Agriculture Specialization. This program is designed to provide the student with a broad-based background in agriculture and the flexibility so that the student, in conjunction with their advisor, can design a program of study that prepares them to meet their career goals. These customized programs often include emphasis other disciplines.

Qualified candidates for the Capstone Option are accepted in the major.

For a number of courses taught in the major, there will be additional charges for field trips, laboratory manuals, or supplies.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Agricultural Systems, College of Agricultural Sciences

AGRICULTURAL SYSTEMS MAJOR—AGRICULTURAL SYSTEMS TECHNOLOGY SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
To include Chemistry 106, Plant Biology 115 and Mathematics 108 or higher	
<i>Requirements for Agricultural Systems Technology Specialization</i>	39-40
General Agricultural Core Classes	21-22
Agribusiness Economics 204	3
Agricultural Systems 118, 170, 361, 375, 497	15
Plant and Soil Science 200 or Animal Science 121, 122	3-4
Select 18 hours from the following courses: Agricultural Systems 363, 372, 374, 402b, 461, 472, 473, 476, 483	18 ¹
<i>Electives</i>	39-40
<i>Total</i>	120

¹Must include at least nine semester hours of 400 level courses.

Agricultural Systems Technology Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
Select Core, Health	3	2	Select Core	6	6
ENGL 101, 102	3	3	SPCM 101	-	3
ANS 121	3	-	ABE 204, PLSS 200	3	3
ANS 122, AGSY 170	1	4	PLB 115	3	-
MATH 108, CHEM 106	3	3	CORE MATH, AGSY 118	3	3
Physical Science	-	3			
<i>Total</i>	13	15	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AGSY 375, 384	3	3	AGSY 483, 473	3	3
AGSY 372, 374	3	2	AGSY 461, 497	3	2
AGSY 363, 361	3	3	Select 400 (Ag Systems)	-	6
AGSY 314	3	-	Select (Ag or Other)	9	4
Select (AG Systems)	-	3			
Select ASE or Ag Elective	3	6			
<i>Total</i>	15	17	<i>Total</i>	15	15

AGRICULTURAL SYSTEMS MAJOR—AGRICULTURAL EDUCATION SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
To include Chemistry 106, Plant Biology 115 and Psychology 102 or approved substitutes plus the Non-Western Civilization requirement	
<i>Requirements for Agricultural Education Option</i>	68
General Agricultural Core Classes	20-21
Agribusiness Economics 204	3
Agricultural Systems 118, 170, 314,	10
Animal Science 121, 122	4
Plant and Soil Science 200 or 220	3-4
Agricultural Systems 311a, b and Agriculture 323	8
Agriculture or Forestry electives	11-12

Professional Education Requirements (See College of Education and Human Services)	28
Electives	11
Total	120

Agricultural Education Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
PLB 115, CHEM 106.....	3	3	Select Core	6	4
ENGL 101, 102.....	3	3	PSYC 102, Elective	3	3
MATH 108, AGSY 170.....	3	4	SPCM 101, ABE 204	3	3
ANS 121/122, Select Core.....	4	6	AGSY 314, PLSS 200	3	3
HED 101 or PE 101	2	-	ENGL 121 or 204	-	3
Total	15	16	Total	15	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Elective	3	-	AG Elective	7	-
AGSY 118, EDUC 315	3	3	EDUC 316	2	-
AG Electives	5	4	EDUC 317, 401	2	12
EDUC 308, EDUC 311	3	2	AGSY 311b	3	-
EDUC 310, EDUC 314	2	2	AGRI 323	2	-
AGSY 311a	-	3	Total	16	12
Total	16	14	Total	16	12

AGRICULTURAL SYSTEMS MAJOR—AGRICULTURAL PRODUCTION SPECIALIZATION

University Core Curriculum Requirements	41
To include Zoology 118, Mathematics 108 or higher and a substitute of three hours of Chemistry 140a	
Agricultural Production Specialization Requirements	51
General Agricultural Core Classes	23
Agribusiness Economics 204	3
Agricultural Systems 118, 170, 314, 375	13
Animal Science 121, 122	4
Plant and Soil Science 200	3
Plant Biology 200	4
Chemistry 140a, b	(3) + 5 ¹
Zoology 118	(3) + 1 ¹
Select 18 hours with 6 semester hours in each of the four following areas.....	18 ¹
Agribusiness Economics including either 350 or 351	6
Agricultural Systems	6
Animal Science 315 or 331 plus one production course	6
Plant and Soil Science 240 plus one production course	6
Electives	28
Total	120

¹Hours in parenthesis substitute into the University Core Curriculum.
² Must include at least 9 semester hours of 400 level courses.

Agricultural Production Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ZOOL 118, Core	4	6	Select Core	5	6
ENGL 101, 102.....	3	3	CHEM 140b, SPCM 101	4	3
ANS 121	3	-	PLSS 200, ABE 204	3	3
ANS 122, AGSY 170.....	1	4	PLB 200, AGSY 118	4	3
MATH 108, CHEM 140a	3	4	Total	16	15
Total	14	17	Total	16	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Select Core, AG Elective	3	6	AGSY Select	6	3
AGSY 375, AGSY Elective	3	3	ABE Elective	3	3
ABE 350 or 351	3	-	ANS Elective, PLSS Elective ..	3	3
ANS 315 or 331 or PLSS 240 ...	-	3-4	Select (Ag or Other).....	3	4
AGSY 314	3	-	Total	15	13
Elective (ABE, ANS, or PLSS)	3	3	Total	15	13
Total	15	15-16	Total	15	13

AGRICULTURAL SYSTEMS MAJOR—GENERAL AGRICULTURAL SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
To include Chemistry 106, Plant Biology 115, Sociology 108 or Psychology 102	
<i>General Agriculture Specialization Requirements</i>	46
General Agricultural Core Classes	23
Agribusiness Economics 204	3
Agricultural Systems 118, 170, 314, 375	13
Animal Science 121, 122	4
Plant and Soil Science 200	3
Agribusiness Economics elective	3
Agricultural Systems 311a, Agriculture 323	5
Animal Science elective	3
Plant and Soil Science elective	3
One additional course in speech or writing, beyond University Core Curriculum requirements	3
Agriculture or Forestry elective	6
<i>Electives</i>	33
<i>Total</i>	120

General Agriculture Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
Select Core	3	6	Select Core	3	3
ENGL 101, 102	3	3	SOC 108 or PSYC 102	3	-
MATH 108, ANS 121	3	3	SPCM 101, PLSS 200	3	3
AGSY 170, ANS 122	4	1	ABE 204, AGSY 314	3	3
PLB 115, CHEM 106	3	3	AGSY 118, Select	3	6
<i>Total</i>	16	16	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AGSY 314, 311a	3	3	AGRI 323, ANS Elective	2	3
2 nd Speech, PHSL 201	3	2	Writing, PLSS Elective	3	3
AG Elective, ABE Elective	3	3	AGSY Elective	3	-
Elective	6	7	Elective	6	8
<i>Total</i>	15	15	<i>Total</i>	14	14

Minor

A minor in Agricultural Systems is offered. A minor consists of 15 semester hours of credit. Normally 12 hours must be taken at Southern Illinois University Carbondale. An adviser within the department must be consulted before selecting this field as a minor.

Courses (AGSY)

110-3 Introduction to Agricultural Education. An entry level course introducing the philosophies of education, career and technical education, including: the history of and current issues in agricultural education; the nature of the educational process; the characteristics, duties, and responsibilities of successful teachers; the components of an agricultural education program; the role of professional organizations in agricultural education; state teacher certification requirements; and student difference and special needs.

118-3 Introduction to Computers in Agriculture. An introductory course about the use and role of computers in agriculture. The major thrust includes a basic understanding and application of micro-computers in agriculture with special emphasis on how to save time, money, and increase efficiency in agriculture.

170-4 Introduction to Physical Principles in Agriculture. An analytical introduction to physical and mechanical principles related to agricultural land measurement, power and machinery, electricity and electronics, structures, environment and handling of agricultural materials.

180-1 to 2 (1,1) Introduction to Agricultural Communications Experience. Study, observation and participation in (a) agricultural news activities, (b) graphic/photographic activities of an agricultural extension communication office. Prerequisite: consent of instructor.

257-1 to 10 Work Experience. Credit for on-campus work experience through a cooperative program developed between the department and the Financial Aid Office. Prerequisite: consent of chair. Mandatory Pass/Fail.

258-1 to 30 Past Work Experience. Credit for career related employment based on the evaluation of the documentation of this experience by the Department of Agricultural Systems. No grade for past work experi-

ence. Prerequisite: consent of chair.

311-6 (3,3) Agricultural Education Programs. Nature and scope of the different programs involved in teaching agricultural occupations and methods of developing them.

314-3 Agricultural Information Programs. Preparation for an agricultural information internship; an in-depth study into the nature, scope, integral parts, and methods of a total agricultural information program.

359-1 to 6 Intern Program. Supervised work experience in either an agricultural agency of the government or agribusiness. Prerequisite: junior standing or consent of instructor. Mandatory Pass/Fail.

361-3 Introduction to Control Programming. Entry-level course in the logic and procedures of computer programming for control and monitoring of electronically controlled equipment and systems in agriculture. Topics include problem solving strategies, software design concepts, control logic, and algorithm development and troubleshooting. The laboratory setting provides hands-on experience in programming electronic devices with immediate visual feedback. Laboratory fee \$10.

363-3 Agricultural Electrical and Electronics Systems. Electrical and electronic knowledge and basics skills are developed and implemented with practical exercises and projects. Electrical and electronics circuits and control systems will be planned and constructed, with emphasis on automation, convenience, codes and safety. Laboratory fee \$40.

364-3 Leadership of Youth and Peer Groups. (See Workforce Education and Development 364.)

372-4 Agricultural Machinery Systems Management. A machinery management course focusing on the principles and measurement of engine power and the selection, operation, maintenance and analysis of power and machinery systems for optimum performance and efficiency. The problem solving process is emphasized. Fee \$20.

374-3 Applied Graphics. Fundamentals of interpreting graphic illustrations, sketching, drawing, and lettering in agriculture, forestry and landscape design. Application of computers in the creation and interpretation of graphics will be emphasized.

375-3 Introduction to Agricultural Systems. Agricultural systems are studied from a manager's perspective as a specified group of components, operational functions and processes that are integrated to accomplish a designated, well-defined purpose. Topics include planning, evaluating and adjusting systems using strategies to maximize productivity with considerations for: reliability, manpower, scheduling, economy, packaging, human and animal factors and decision systems. Agricultural systems are studied in the context of a field production, manufacturing and processing, technical sales and marketing and technical communications. Lab fee: \$10.

380-1 to 2 (1,1) Agricultural Communications Seminar. Readings, discussions, and activities related to (a) current problems, issues, and practices in agricultural communication, (b) career opportunities, professional development, and ethical standards in agricultural communication. Prerequisite: junior and senior standing and consent of instructor.

381-1 to 4 (1,1,1,1) Agricultural Systems Seminar. Discussion of special topics and/or problems in the field of agricultural systems. Prerequisite: junior standing and consent of instructor.

384-3 Agricultural Construction Processes. Students will apply computer and hands-on techniques to different agricultural construction processes. The computer techniques will address construction challenges such as budget, deadlines, and limited resources. Safety, tool and equipment principles will be applied while completing specific agricultural construction projects. Lab fee: \$25.

388-1 to 16 (1 to 8 per semester) International Studies. Course work undertaken as part of an approved University residential study program abroad. May be taken for a maximum of eight semester hours per semester and may be repeated for a maximum of 16 semester hours. Prerequisite: major department or program approval.

390-1 to 4 Special Studies in Agricultural Systems. Assignments involving research and individual problems. Field trips. Prerequisite: consent of instructor.

391-1 to 4 Honors in Agricultural Systems. Completion of honors paper and comparable project within one of the specializations, under the supervision of one or more faculty members. Subject matter depends upon the needs and interests of the student. Prerequisite: junior standing, gpa 3.0 with a 3.25 in major; approval of staff members, department chair.

402-1 to 12 (1 to 6 per topic) Problems in Agricultural Education and Technologies. (Same as Plant Soil and Agricultural Systems 402.) (a) Agriculture education, (b) agriculture mechanization. Designed to improve the techniques of agricultural education and mechanization workers through discussion, assignment, and special workshops on problems related to their field. Emphasis will be placed on new innovative and currently developed techniques for the field. A limit of six hours will be counted toward graduation in master's degree program. Not for graduate credit. Prerequisite: consent of chair.

411-3 Program Development in Agricultural Extension. (Same as Plant Soil and Agricultural Systems 411.) Principles and procedures in developing extension programs with emphasis on program determination and methods. Prerequisite: junior standing.

412-3 Methods of Agriculture Mechanization. (Same as Plant Soil and Agricultural Systems 412.) Theory and use of educational materials and devices adaptable to the needs and interests of educators involved in agricultural mechanization laboratories. There is a \$15 laboratory fee for this course.

414-3 Adult Education Procedures, Methods, and Techniques. (Same as Plant Soil and Agricultural Systems 414.) Determining adult education needs and interests of the community. Securing and organizing the information needed for adult education programs and planning teaching activities.

415-3 Beginning Teacher Seminar. (Same as Plant Soil and Agricultural Systems 415.) The application in the professional field setting, of principles and philosophies of the education system. Includes application

of principles of curricula construction, programming student and community needs. Prerequisite: consent of instructor.

418-3 Applications of Integrated Software/Agriculture. (Same as Plant Soil and Agricultural Systems 418.) Design of agricultural or educational applications of integrated software. Spreadsheet, database, word processing, graphic and communications software will be applied to the solution of agricultural problems. Individual student projects will be the focus of the applied nature of the class. Prerequisite: junior standing or consent of instructor.

431-3 International Agricultural Systems. Introduction to world agriculture, farming systems, world crops, agricultural trade, and food production and processing. Influence of population and climate. Ethical issues surrounding rain forest, global agriculture, finance, world trade, crops and livestock, and the environment. Appropriate technologies and their social and economic impact on developing countries. Not for graduate credit.

438-3 Techniques in Plant Molecular Biology. (Same as Plant, Soil and Agricultural Systems 438) Students will gain hands-on experience with current molecular techniques being applied to questions in the plant sciences. These include isozyme electrophoresis, DNA and RNA extraction, restriction endonuclease digestions, Northern blotting, Southern blotting, PCR (polymerase chain reaction), gene cloning and DNA sequencing. Students will also gain some exposure to the use of computers in manipulating and analyzing molecular data. Prerequisite: either Biology 200b or Plant Biology 200 and junior standing.

461-3 Programming for Agricultural Systems. (Same as Plant Soil and Agricultural Systems 461.) Computer programming concepts and strategies are applied to agricultural problems and systems. Students will analyze problems, design solutions, develop software and test solutions. Student will be expected to develop software project related to their academic interests. Laboratory fee \$10. Not for graduate credit. Prerequisite: 361 or instructor consent.

472-3 Precision Agriculture. (Same as Plant Soil and Agricultural Systems 472.) A study of the basic principles of the Global Positioning System and how that system, along with currently available and emerging technologies is applied to the intensive management of production agriculture resources. Lab fee: \$5. Not for graduate credit. Prerequisite: junior standing.

473-3 Agricultural Automation. (Same as Plant Soil and Agricultural Systems 473.) This course introduces students to topics such as power distribution, programmable controllers, sensors and components, ladder control circuits and diagrams, and motor controls. The lab will address automation issues for different industrial processes such as pasteurization. Lab fee: \$20. Prerequisite: 363 or consent of instructor.

476-3 Agricultural Safety and Health. (Same as Plant Soil and Agricultural Systems 476.) Analysis of safety and health issues important to managers and supervisors in agricultural operations. Topics include agricultural accident data, causes and effects of accidents, hazard identification, strategies for accident prevention, response to accidents, and health risks and safeguards. Developments and documentation of accident and illness prevention activities in the workplace. Prerequisite: junior standing.

483-3 Agricultural Processing Systems. (Same as Plant Soil and Agricultural Systems 483.) This course provides students with an understanding of the design principles, equipment, procedures and processes utilized in handling, processing and storing agricultural products.

495-3 Food and Pharmaceutical Packaging. (Same as Plant Soil and Agricultural Sciences) Applied packaging and food engineering principles used in packaging, storing, preserving, and transporting food and drug products. Topics include packaging functions, graphic design, printing, sterilization, and food safety. Utilization of paper, glass, plastics, laminates, and metals. Applications of machinery and equipment. Not for graduate credit.

497-2 Agricultural Operations Management. Practical management skills and strategies are applied to the agriculture industry. This course is intended for students who desire to advance into management positions in the agricultural industry. Skills and strategies include: interpretation of financial reports, preparing and monitoring budgets, time and process management, critical thinking, advanced problem solving, professional development, strategy planning and communication, leadership, personal interaction and team-building. Prerequisite: senior standing or instructor consent.

499-3 Agriculture Information for Elementary Teachers. (Same as Plant Soil and Agricultural Systems 499.) A general inquiry into the agriculture literacy appropriate for elementary students. A framework for evaluating content appropriate for elementary students in the pursuit of agriculture literacy will be developed. Prerequisite: consent of instructor.

Agricultural Systems Faculty

Harrison, Tony V., Assistant Professor, Ph.D., University of Florida, 1995.

Legacy, James, Professor, *Emeritus*, Ph.D., Cornell University, 1976.

Pense, Seburn L., Assistant Professor, Ph.D., Oklahoma State University, 2002.

Shoup, W. David, Professor, Ph.D., Purdue University, 1980.

Stitt, Thomas R., Professor, *Emeritus*, Ph.D., Ohio State University, 1967.

Wakefield, Dexter B., Assistant Professor, Ph.D., Purdue University, 2001.

Watson, Dennis G., Associate Professor, Ph.D., Michigan State University, 1987.

Wolff, Robert L., Professor, *Emeritus*, Ph.D., Louisiana State University, 1971.

Allied Health (School, Courses, Faculty)

Courses (AH)

105-2 Medical Terminology. This course is an introduction to the study of medical language with a working knowledge of the most common word roots, prefixes and suffixes in medical terminology. Emphasis is placed on spelling, pronunciation, use of the medical dictionary and the *Physician's Desk Reference* (PDR), vocabulary building, common abbreviations and charting terms.

241-4 Introduction to Physiology and Human Anatomy. (Advanced University Core Curriculum course) A survey of the functions and structures of the ten basic systems of the human body: integumentary, skeletal, muscular, nervous, endocrine, hematocardiovascular, lymphoimmune, respiratory, genitourinary and reproductive. Satisfies the University Core Curriculum Human Health requirement in lieu of Physiology 201.

258-1 to 30 Work Experience Credit. Credit granted for job skills, management-worker relations and supervisory experience for past work experience while employed in industry, business, the professions, or service occupations. Credit will be established by school evaluation.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school evaluation.

300-1 to 3 Seminar in Allied Health. A topical seminar conducted by staff members or distinguished guest lectures on pertinent areas of allied health. Mandatory Pass/Fail. Prerequisite: consent of school.

313-3 Forensic Science for Allied Health Professions. This class is designed to provide basic knowledge for individuals interested in pursuing a career in the area of forensic science. Students will gain an understanding of and an appreciation for the various tasks and skills associated with forensic investigation. The student will gain an understanding of post-mortem examinations, post-mortem changes, crime scene identification, basic odontology and radiology as each relates to forensic science.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organizational, facility, and/or institution engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail. Prerequisite: consent of school.

Allied Health Faculty

Callaghan, Mary E., Assistant Professor, *Emerita*, R.D.L., M.A., University of San Francisco, 1962.

Chalem, Sylvia A., Clinical Assistant Instructor, B.S., Southern Illinois University Carbondale, 1999.

Collins, K. Scott, Assistant Professor, M.S., Southern Illinois University Carbondale, 2001.

Craven, Joyce M., Visiting Clinical Assistant Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1988.

Davis, Joan Mary, Assistant Professor, RDH, M.S. Ed., Southern Illinois University Carbondale, 1983.

Debeljuk, Luciano, Assistant Professor, M.D., University of Buenos Aires School of Medicine, 1974.

DeMattei, Ronda, Assistant Professor, RDH, M.S., Southern Illinois University Carbondale, 1986.

Dunn, Laurie R., Assistant Professor, PA-C, M.S., University of Nebraska Medical Center, 2001.

Fleege, Anthony T., Associate Professor, M.B.A., Southern Illinois University Carbondale, 1999.

Freeman, Julie K., Assistant Professor, Ph.D., Barry University, 1996.

Grace, Linda M., Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1985.

Grey, Michael, Associate Professor, RT(R), M.S., Southern Illinois University Carbondale, 1991.

Griffith, Cydney A., Associate Professor, M.S., Southern Illinois University Carbondale, 1991.

Having, Karen M., Associate Professor, RT(R), RDMS, M.S., Southern Illinois University Carbondale, 1996.

Hees, Alice Jane, Assistant Professor, *Emerita*, RN, Ph.D., Southern Illinois University Carbondale, 1991.

Hertz, Donald G., Associate Professor, *Emeritus*, Ed.M., University of Oklahoma, 1953.

Holland, Susan, Assistant Professor, *Emerita*, RRT, Ph.D., Southern Illinois University Carbondale, 1998.

Ijams, Kayleonne, Assistant Professor, *Emerita*, CDT, M.S., Southern Illinois University Carbondale, 1980.

Isbener, Fred R., Professor and *Associate Dean*, Ph.D., Southern Illinois University, Carbondale, 1984.

Jefferies, Danny, Assistant Professor, RDH, M.S., The University of North Carolina at Chapel Hill, 1986.

Jensen, Steven, Professor, RT(R), Ph.D., Southern Illinois University Carbondale, 1987.

Kelly, Cheri W., Clinical Assistant Professor, PA-C, M.S., Southern Illinois University Carbondale, 1990.

Laake, Dennis J., Associate Professor, *Emeritus*, CDT, M.S. ED., Southern Illinois University Carbondale, 1973.

Lautar, Charla, Associate Professor and RDH, Ph.D., University of Calgary, 1993.

Lloyd, Leslie, Associate Professor, Rh.D., Southern Illinois University Carbondale, 1993.
Lukes, Sherri M., Associate Professor, RDH, M.S. Ed., Southern Illinois University Carbondale, 1991.

Matthews, Eric P., Clinical Assistant Instructor, B.S., Southern Illinois University Carbondale, 2002

Maurizio, Sandra J., Associate Professor, RDH, Ph.D., Southern Illinois University Carbondale, 2001.

Miller, Faith, Associate Professor, M.S., Southern Illinois University Carbondale, 1999.

Morgan, Frederic L., Associate Professor, *Emeritus*, Ed.D., Ball State University, 1969.

Okita, Ted Y., Professor, *Emeritus*, PT, M.A., Northwestern University, 1964.

O'Neill, Nancy G., Assistant Professor, *Emerita*, Ph.D., Florida International University, 1998.

Paulk, Marilyn, Assistant Professor, *Emerita*, RDH, M.S., Southern Illinois University Carbondale, 1987.

Pearson, Stanley, Assistant Professor, RRT, M.S., Southern Illinois University Carbondale, 1986.

Rivers, Patrick A., Associate Professor, M.S., Ph.D., The University of Alabama, 1997.

Rogers, Janet L., Associate Professor, Ph.D., Southern Illinois University Carbondale, 1995.

Sarvela, Paul D., Professor and *Dean*, Ph.D., University of Michigan, 1984.

Shaw, Thomas, Associate Professor, M.B.A., Amber University, 1990.

Summers, Dwayne G., Clinical Assistant Professor, D.M.D., Southern Illinois University School of Dental Medicine, 1992.

Szekely, Rosanne, Assistant Professor, RT(R), M.S., Southern Illinois University Carbondale, 1995.

Tiebout, Leigh, Assistant Professor, CDT, M.S., Southern Illinois University, 1989.

Troutt-Ervin, Eileen, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1986.

Vitello, Elaine M., Professor, *Emerita* Ph.D., Southern Illinois University Carbondale, 1977.

Westphal, Dwight, Assistant Professor, *Emeritus*, CDT, B.S., Southern Illinois University Carbondale, 1977.

Wilson, Kevin J., Clinical Assistant Professor, M.S., University of Nebraska, 2002.

Winings, John R., Associate Professor, CDT, M.A., Governors State University, 1972.

Animal Science (Major, Courses, Faculty)

The animal science program is a part of the Department of Animal Science, Food and Nutrition. SIUC's nationally known animal science faculty is dedicated to teaching and to student development. Animal Science teachers at SIUC represent the range of topics in animal agriculture. There are specialists in animal genetics, reproductive physiology, nutrition and management for each of the species, international food programs, and veterinary medicine. The animal science teachers bring their exciting experience with them into every class they teach. The combination of the visionary and the practical makes a strong and vital faculty for students who want the best professional education they can get.

The department offers three specializations leading to a B.S. degree: production, equine science, and science and pre-veterinary medicine. The latter allows qualified students to transfer to accredited colleges of veterinary medicine prior to receiving the Bachelor of Science degree in Animal Science.

Most of the students' agriculture courses for the major will be in animal science, but students can also select courses from agronomy, horticulture, food and nutrition, forestry, agricultural education, microcomputers in agriculture, agricultural mechanization, agribusiness and economics, and farm management. Other classes help the student meet basic University requirements in a way that will strengthen their abilities to think, understand, and communicate about the social, physical and natural sciences important to animal scientists. Other departments offer supplemental coursework in physiology, genetics, nutrition, animal behavior, and other topics that many animal science students find valuable.

The animal science major is backed up with extensive facilities for several species of livestock, and every student has the opportunity to get involved in work, research, or observation at the University Farm. The core of our animal science program is the 2,000-acre farm system, which includes centers for beef, dairy, horses, and swine.

Hundreds of distinct occupations exist within the animal agriculture field. There are opportunities in animal production work at farm operations, ranches, feedlots, stables and zoos. There are opportunities in feed and meatpacking in-

dustries, equipment suppliers, government and international agencies, veterinary medicine, and numerous other supporting industries that serve producers. Within each of these areas, animal science graduates are employed in such jobs as sales, service, education, communication, finance and business management.

There may be extra expenses for field trips, manuals or supplies in some courses.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Animal Science, College of Agricultural Sciences

University Core Curriculum Requirements	41
Science and Mathematics: See requirements of the specialization	
Requirements for Major in Animal Science	79
Core Requirements	35
Animal Science 121, 122, 215, 315, 331, 332, 381, 431, plus one course from 409, 430, 465, or 485	25
Agribusiness Economics 204	(3) ¹
Agriculture electives, excluding Animal Science	5
Microbiology 201 or 301.....	4
Physiology 208	1
Specialization Requirements	44
Fulfill the requirements of one of the following specializations:	
Total	120

PRODUCTION SPECIALIZATION

Substitute Chemistry 140a,b for Chemistry 106	(3) ¹ + 5
Substitute Zoology 118 or Plant Biology 200 for Zoology 115	(3) ¹ + 1
Animal Science 210, 415 one additional course from Animal Science 409, 430, 465 or 485; and 5 elective credits from 300 or 400 level	
Animal Science course	16
Agribusiness Economics 350	3
Electives.....	19
Total	44

EQUINE SCIENCE SPECIALIZATION

Substitute Chemistry 140a,b for Chemistry 106	(3) ¹ + 5
Substitute Zoology 118 or Plant Biology 200 for Zoology 115	(3) ¹ + 1
Agribusiness Economics 350	3
Animal Science 209, 219, 409, 419, 490 and a minimum of 4 credit hours in 112, 212, 312 or 412	23-27
Electives	8-12
Total	44

SCIENCE AND PRE-VETERINARY SPECIALIZATION

Substitute Chemistry 200 for Chemistry 106	(3) ¹
Substitute Zoology 118 for Zoology 115	(3) ¹ + 1
Plant Biology 200	4
Chemistry 201, 210, 211, 340, 341, 350	13
Physics 203a,b and 253a,b	8
Mathematics 108 and 109	(3) ¹ + 3
Animal Science electives including one additional 300 or 400-level course	7
Electives	8

Total 44

¹The numbers in parenthesis are counted as part of the 41 hour University Core Curriculum requirements.

Minor in Animal Science

The minor in animal science requires 16 semester hours, of which at least 12 must be earned at Southern Illinois University Carbondale. An adviser within the department must be consulted before selecting this field as a minor.

Minor in Equine Studies

Any student not enrolled in the Animal Science major may earn the minor in equine studies. It requires a minimum of 17 semester hours, of which at least 12 must be earned at Southern Illinois University Carbondale. Courses required are Animal Science 209, 219, 215 or 315, 331 and 409. The minor in Equine Studies is not awarded to students who have a major in Animal Science.

Courses (ANS)

112-2 to 16 (2 per semester) Introduction to Riding. For students with little or no riding experience. A combination of mounted and classroom work will introduce the rider to safe and responsible riding practices. Students will gain an understanding of or the natural function of the horse under saddle and the influence of rider position and aids on horse, and rider safety and comfort. Riding emphasis will involve work on basic position and aids. Classroom work will cover safety procedures, before and after riding care, and care and use of tack. Facilities/riding expenses are \$300 per class. Prerequisite: no prior riding experience required. Consent of instructor.

121-3 Introduction to Animal Science. [IAI Course: AG 902] A general overview of dairy, meat animals (swine, beef, sheep), poultry, and horse industries with emphasis on how meat, milk, and poultry products are produced and distributed. The general application of genetic, physiologic, and nutrition principles for the improvement of animal production to further serve people.

122-1 Livestock Production Laboratory. Livestock facilities, demonstration of management practices of animals for human use and the processing of animal products.

123-1 to 8 (1 to 2 per discipline) Livestock Practicum. (a) Beef; (b) Dairy; (c) Horse; (d) Swine. Provides students with limited previous livestock experience an opportunity to participate in the routine care and management procedures at one of the University's livestock centers.

200-2 Companion Animal Care and Management. Principles and practice of proper feeding and care of companion animals, with emphasis on dogs and cats. Nutrition, digestive systems, reproduction, and health care will be discussed.

210-3 Livestock Products and Processing. Composition and quality of meat and dairy products. Nomenclature, identification, and current processing methods of meat and dairy products will be presented. Laboratory exercises complement lecture material. Fee \$10.

212-2 to 16 (2 per semester) Riding and Position Control. Through the combination of mounted and classroom work, students will learn theory and implementation of the six rein aids and three leg aids used in riding. Students will be introduced to the principles and use of basic training aids. Mounted work will center on obtaining an independent seat and mastery of intermediate aids. Riders will begin to deal effectively with the common challenges that can arise during riding. Classroom work will cover gait recognition and control, principles and use of tack, and mechanical aids. Facilities/riding expenses are \$300 per class. Prerequisite: 112 and/or permission of instructor (tryouts required).

215-2 Introduction to Nutrition. (Same as Food and Nutrition 215.) An up-to-date study of basic principles of animal nutrition including classification of nutrients (physical and chemical properties) and their uses in order to provide the student a working knowledge of livestock nutrition in today's animal environment.

219-4 Introductory Horse Management. Designed for the beginning science student or non-science majors with an interest in horses. Information on topics related to horse selection and care coupled with laboratory experience provide essential information for the care of horses owned for pleasure. Fee \$35.

250-3 Human Values in Livestock Production. Improvements in livestock production technology have resulted from research. These technologies contribute to the welfare of a growing population of humans. However, the application of new technologies often interact with a public perception of animals as exploited species in a manner conflicting with human values. These conflicts are discussed from a scientific and philosophical viewpoint.

309-3 Equine Evaluation and Perform. This course explores the conformation and functional anatomy of the athletic horse, particularly as it relates to locomotion. Gaits and movement will be studied. Methods to influence movement will be considered and how these impact athletic ability or potential. Fee \$25.

312-2 to 16 (2 per semester) Riding Form and Function. Mounted and classroom work will explore principles and practices used to develop the competitive equine athlete. Advanced training aids will be presented and practiced. Goals of riding will be to develop an independent seat through knowledge of all aids, and to apply these to mounted problem solving in a variety of riding disciplines. Classroom work will emphasize the evaluation of equine form in determining ultimate athletic function and performance potential.

Facilities/riding expenses are \$300 per class. Prerequisite: 212 and/or permission of instructor (tryouts required); concurrent or prior enrollment in 219 or equivalent.

315-3 Feeds and Feeding. Principles of applied animal nutrition. Ration formulation to meet specific nutrient needs of livestock. Feedstuff evaluation, including cost will be discussed. Prerequisite: University Core Curriculum mathematics.

319-2 Horse Handling and Horsemanship. Students will learn principles of communicating tasks to horses using aids natural to horse behavior. Many different groundwork exercises are practiced. Prerequisite: 112, 212, 312 or consent of instructor.

331-4 Physiology, Growth, and Development of Farm Animals. A comparative study of domestic animal function is presented using an organ system approach. How cell, tissue and organ structure is related to physiological function is emphasized. The mechanism of animal growth and development will be discussed. Prerequisite: course in biology.

332-3 Animal Genetics. Principles of molecular genetics, Mendelian genetics, population genetics and quantitative genetics and their application to animal improvement. Prerequisite: 121 or equivalent, Mathematics 108 or equivalent.

333-1 Animal Genetics Laboratory. One three-hour lab per week. Laboratory course provides experiences with genetic laboratory experimentation and interpretation of data.

337-3 Animal Health. Principles of prevention and control of infectious, nutritional and parasitic disease of farm animals. Prerequisite: a course in biology or physiology.

359-2 to 6 (2 to 3, 2 to 3) Intern Program. Work experience program in animal production units and agricultural agencies of the government or agribusiness. Prerequisite: junior standing and consent of chair. Mandatory Pass/Fail.

380-1 to 6 Field Studies in Foreign and Domestic Animal Agriculture. A travel course to observe and study the operation and management of farms, ranches, and feedlots as well as agribusiness firms supporting animal production such as food processors, feed manufacturers, and housing or equipment companies in either the United States or foreign countries. A written report is required. The travel fee charged to the student will depend on the nature and the length of the course.

381-1 Animal Science Seminar. Discussion of problems and recent development in animal science. Prerequisite: junior-senior standing.

390-1 to 4 Special Studies Animal Science. Assignment involving research and individual problems. Prerequisite: juniors and seniors only and consent of chair.

409-4 Equine Science. Designed for students interested in the more scientific aspects of equine physiology and management. The class will take a more advanced look at anatomy and physiology of the systems of the equine and consider how they relate to selection, use and management. Lecture and laboratory. Fee \$50. Prerequisite: 219 and 331.

412-2 Horsemastership. This course involves the advanced equestrian in the evaluation and resolution of special problems in horse training. Students will work with a single horse during the semester to master an individual training goal set in consulting with the instructor. Emphasis will be placed on the use of non-violent training techniques. Facilities/riding expenses are \$300 per class minimum. Not for graduate credit. Prerequisite: 312, permission from instructor.

415-4 Advanced Animal Nutrition. Advanced principles and practices associated with digestion, absorption, and metabolism of nutrients as related to domestic monogastrics, ruminants and horses. Prerequisite: 215 and 315.

419-4 Stable Management. Designed for the advanced equine science student planning a career in the horse field. Teaches in-depth management techniques on an applied basis. Students will have the opportunity to learn both theory and application of management in one course. One hour lecture, four hours laboratory. Lab fee: \$75. Prerequisite: 219, 409, and consent of department.

421-2 International Animal Production. A study of world animal production practices with emphasis on the developing countries. Adaptability of animals to environmental extremes and management practices employed to improve productivity. Prerequisite: junior standing plus 121 or one year of biological science.

425-3 Biochemical Aspects in Nutrition. (Same as Food and Nutrition 425) The interrelationship of cell physiology, metabolism and nutrition as related to energy and nutrient utilization, including host needs and biochemical disorders and diseases requiring specific nutrition consideration. Prerequisite: 215 or Food and Nutrition 360, Chemistry 140b, course in Physiology.

426-3 Mammalian Endocrinology. Comparative endocrinology of the effects of hormones on target tissues including mechanisms of hormone biosynthesis, release, transport, receptor kinetics, and signal transduction. Measurement of hormones, receptors, and signal transduction. Endocrine-related diseases and disorders. Prerequisite: course in physiology.

430-4 Dairy Cattle Management. Application of the principles of breeding, physiology, and economics to management of a profitable dairy herd. Breeds of dairy cattle, housing, milking practices, and quality milk production. Field trip. Students enrolled will incur field trip expenses of approximately \$25. Prerequisite: 315, 332.

431-4 Reproductive Physiology. Comparative anatomy and physiology of the male and female reproductive system of domestic animals; hormones; reproductive cycles; mating behavior; gestation and parturition; sperm physiology; collection and processing of semen; artificial insemination, pregnancy tests; diseases. Laboratory fee \$10. Prerequisite: 121 or a course in physiology.

433-4 Introduction to Agricultural Biotechnology. (Same as Plant and Soil Science 433.) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of

gene mapping, cloning, transfer and expression will be derived. Prerequisite: senior standing or consent of instructor.

434-2 Physiology of Lactation. Anatomy and physiology of milk secretion; endocrine control; milk precursors and synthesis; milk composition; physiology and mechanics of milking; lactation-related disorders and diseases; transgenic milk. Prerequisite: course in physiology.

435-1 to 4 Agricultural Molecular Biotechnology Seminar. (Same as Plant and Soil Science 435) Molecular biology is rapidly making important contributions to agricultural science through biotechnology. An appreciation of the techniques of molecular biology and their application to plant improvement is important to all in agriculture and biology. The relationships between plant molecular biology and the biotechnology industry will be discussed. Presentations on particular research problems will be made. Graded P/F only

455-2 Animal Nutrient Management. Scope and problems associated with animal nutrient management; current regulations and laws on environmental protection. Principles covering waste management technology and current livestock nutrient management systems are presented. Field trips will be scheduled. Prerequisite: junior standing.

465-4 Swine Management. Swine production systems and management techniques including breeding and selection, reproduction, nutrition, herd health and disease prevention, housing and waste management, marketing, production costs, and enterprise analysis. Field trip. Prerequisite: 315 and 332 or consent of instructor.

485-4 Beef Cattle Management. Beef cattle production systems and management, breeding and selection, reproduction, nutrition, and herd health with emphasis on the most economical and efficient systems. Field trip. Students enrolled will incur field trip expenses of approximately \$5. Prerequisite: 315 and 332 or consent.

490-8 Horse Industry Internship. Provides the equine science students with the opportunity for diversified, practical experience in their area of career-goal interest. One semester will be spent working in a commercial horse-related industry. Not for graduate credit. Prerequisite: 409, 419, senior standing, and consent of instructor.

Animal Science Faculty

Ajuwon, Kolopa M., Assistant Professor, Ph.D., Purdue University, 2004.

Apgar, Gary A., Associate Professor, Ph.D., Virginia Polytechnic Institute, 1994.

Arthur, Robert D., Professor, Ph.D., University of Missouri, 1970.

Atkinson, Reecca L., Assistant Professor, Ph.D., University of Wyoming, 2006.

Goodman, Bill L., Professor, *Emeritus*, Ph.D., Ohio State University, 1959.

Hausler, Carl L., Associate Professor, *Emeritus*, Ph.D., Purdue University, 1970.

Jones, Karen L., Associate Professor, Ph.D., Texas A&M, 1999.

King, Sheryl S., Professor, Ph.D., University of California at Davis, 1983.

Kroening, Gilbert H., Professor, *Emeritus*, Ph.D., Cornell University, 1965.

Olson, Howard H., Professor, *Emeritus*, Ph.D., University of Minnesota, 1952.

Speiser, Stephanie A., Instructor, M.S., Southern Illinois University Carbondale, 2000.

Strack, Louis E., Associate Professor, *Emeritus*, D.V.M., University of Illinois, 1961.

Winters, Todd A., Associate Professor and *Interim Chair*, Ph.D., University of Wisconsin, 1992.

Woody, H. Dee., Associate Professor, *Emeritus*, Ph.D., Michigan State University, 1978.

Young, Anthony W., Professor, *Emeritus*, Ph.D., University of Kentucky, 1969.

Anthropology (Department, Major, Courses, Faculty)

Anthropology is the study of humans and their cultures in terms of universal features, variability, and development through time. The major subdivisions are socio-cultural anthropology, linguistics, archaeology, and physical anthropology. Anthropology provides capable students with an intensive program emphasizing early integration into upper division coursework. This major is appropriate for the outstanding liberal arts student seeking a distinctive program. Grades below C in Anthropology courses will not be accepted as fulfilling major requirements.

Students are expected to gain a broad background in all subfields, after which the options of further general study or specialization are available. Students are encouraged to supplement their anthropological studies with work in other social sciences, and where appropriate in biology, earth sciences, humanities, mathematics, or other areas.

Most professional anthropologists find employment as teachers and researchers in colleges and universities. However, a major in anthropology provides the student with a unique liberal arts background bridging the humanities, social, earth, and biological sciences, which leads to many other professional opportunities outside of teaching and research.

An anthropology major is required to take Anthropology 300a, b, c, d, and one each of the 310 and 410 course series. Anthropology seniors are required to participate in the Senior Seminar (Anthropology 480) usually held in the Fall semester. No more than six hours of Anthropology 460 and no more than six hours of 200-level course work may be applied to the major. It should be noted that graduate departments often require foreign language and mathematical background beyond that required by the undergraduate program. Students not interested in advanced study will be advised on an individual basis reflecting their own particular interests and aspirations.

Students with exceptional scholarly promise may be invited into the departmental honors program, which includes the writing of an honors thesis, usually in the Spring semester of the senior year, under the direction of a departmental faculty member.

Bachelor of Arts Degree in Anthropology, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4)	14
<i>Requirements for Major in Anthropology</i>	32
Anthropology 300a, 300b, 300c, 300d and 480 required, and an additional nine hours: three of 310 series, three of 410 series, and three more of 400-level course work in anthropology.	
<i>Electives</i>	33
<i>Total</i>	120

Anthropology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
Select ¹ (Sci)	3	3	Select ¹ (Math, Multicultural) ...	3	3
Select ¹ (Soc Sci)	3	3	SPCM 101 ¹	3	-
Select ¹ (Hum)	3	3	Select ¹ (Interdisciplinary Study)	-	3
ENGL 101, 102 ¹	3	3	Foreign Language ²	4	4
Select ¹ (Fine Art)	-	3	ANTH 300a,d ^{3,4}	3	3
Select ¹ (Hum Hlth)	2	-	ANTH 300b,c ⁴	3	3
<i>Total</i>	14	15	<i>Total</i>	16	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
ANTH 310, 410	3	3	ANTH 480	3	-
ANTH 4XX	3	-	Anthropology Elective	3	3
ANTH 3XX or 4XX	-	6	Elective 300 or 400 level	9	10
ENGL	3	-			
Elective	6	6			
<i>Total</i>	15	15	<i>Total</i>	15	13

¹ See University Core Curriculum

² Two semesters (generally 8 hours) of a foreign language are required for all liberal arts students. Students intending to pursue a graduate education should realize that a foreign language would probably be required for graduate school admission; for these students two years of foreign language is recommended.

³ Sociocultural anthropology is central to major requirements and should be taken as soon as possible. Any two of 300a, b and c may be taken the second year. All four must be taken as a requirement for the major.

⁴ Grade below C in anthropology courses will not be accepted as fulfilling major requirements.

Anthropology Minor

A minor in anthropology consists of at least 15 hours including at least two of the four courses: 300a, 300b, 300c, 300d, and a minimum of three of the remaining nine hours of 310 series or 400-level courses.

A minor in anthropology for students interested in museum studies may be earned by taking a designated series of museum-oriented courses offered by the Departments of Anthropology, Geology, History, Political Science and the School of Art and Design. Required courses for the minor are drawn from the following: Anthropology 450; Art and Design 207, 447; Geology 445; History 497 and/or 498; and Political Science 446.

Courses (ANTH)

104-3 The Human Experience-Anthropology. (University Core Curriculum) [IAI Course: S1 900N] This

course explores different human life ways around the world, past and present. It investigates the question of what is universal to all humans and the myriad ways they differ, through studying modern people, the remains of past cultures through archaeology, and human origins and physical variation.

201-3 Archaeology of Illinois. A survey of prehistoric cultural development, its causes and consequences, as seen through the archaeology of Native American cultural development in the Illinois region, from the earliest foragers to European contact.

202-3 America's Diverse Cultures. (University Core Curriculum) [IAI Course: S1 904D] The United States is a multicultural society in which differences of race, ethnicity, gender, class, region, and religion deeply shape individuals' life chances. This course studies America's diversity of family organization, livelihood and life chances, understanding of illness and health care, religions beliefs and practices, and other topics. It provides tools to understand different cultural codes and forms of power, and to understand key issues that student will face as individuals and citizens in a multicultural world.

204-3 The Anthropology of Latino Cultures. (University Core Curriculum) The central concern of this course is the cultural aspect of the Latino experience in the United States. It focuses on the contemporary population, the political and economic issues that affect Latinos in this society, and the characteristics that Latinos share and yet that make Latinos the most diverse population in the United States. These characteristics include family, religion, socio-economic status, gender ideology, generational relations, and more. The course pivots around the construction of Latino identity: What helps shape it? How do Latinos perceive themselves? How do others perceive (us) them?

205-3 Latin American Civilizations. [IAI Course: S2 910N] Introduction to three civilizations of Latin America: Mexica Aztec; Inka; and Maya. Prehispanic culture history in the lower Amazon River basin and the impact of Spanish contact and conquest on these native Latin American populations will also be discussed.

206-3 Latin American Popular Culture. This course examines the most significant expressions of popular culture in Latin America. It focuses on how people with different class and ethnic backgrounds produce alternative readings of the national culture in their own country and outside it.

208-3 Prehistory of the World. This survey of our past examines the variety of human communities and societies. We focus on the "big developments" during the last three million years: the first use of tools and fire, the first appearance of religion and belief systems, the first art, the switch from foraging to farming (and its consequences), the growth of social inequality, and the first monuments, governments, states and empires.

210-3 Survey of the Primates. Our closest cousins, the primates, display a remarkable diversity of social behavior, reproductive behavior, positional behaviors and diets, and live in a wide variety of environments and ecosystems. This diversity will be reviewed, with an eye to understanding its origin in the past and its anatomical basis.

221-3 The Anthropology of Sexual Behavior. (Same as Woman's Studies 220) Current issues of sexism and gender roles are brought into focus by a study of patterns of primate and human sexuality. Attitudinal and cultural distinctions between men and women are related to need and pressures on a cross-culture basis.

251-3 Anthropology Through Science Fiction. Basic concepts of anthropology are used to interpret the imaginary worlds of science fiction. Fictional alien cultures are examined to see how features of human biology, language, social organization, technology, etc. are patterned after or are different from known human cultures.

261-3 to 6 Issues in Popular Anthropology. Topics in popular anthropology as selected by the instructor. Topics vary and are announced in advance. May be repeated with different instructors.

271-3 Africa in African Cinema. This course is a general introduction to African culture and history through the medium of movies by African filmmakers. Students will watch over a dozen important movies from Africa. These screens are supplemented with appropriate readings, online resources, lectures and discussion. Students will learn aspects of African history and ethnology while also gaining the aesthetic and intellectual tools to appreciate African cinema.

298-1 Multicultural Applied Experience. An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision.

300A-3 Introduction to Biological Anthropology. An overview of human biology, including genetics and evolutionary theory, the fossil record, non-human primate behavior and evolution, and the concept of race and biological differences in modern humans.

300B-3 Introduction to Anthropological Linguistics. Presents language as a facet of cultural anthropology with emphasis on the methods of linguistic analysis, language history, the functions of language in social and cultural behavior, and the variety of ways different languages classify and organize reality. Open to both majors and non-majors.

300C-3 Introduction to Archaeology. Covers basic theories and methods used in archaeology to study life-styles of past cultures through an examination of their tools, house and community remains, and art works. Includes methods of excavation, dating techniques, and other methods of analysis. Open to both majors and non-majors.

300D-3 Introduction to Social-Cultural Anthropology. An exploration of current anthropological theories and methods for understanding human cultures from a comparative perspective; also examines human

institutions such as religion, politics, and family cross-culturally. Although non-Western societies are emphasized, comparisons with our own are treated as well.

300E-1 Bioanthropology Laboratory. Applied exposure to basic concepts and issues addressed in 300a. Includes genetic inheritance, population genetics, evolutionary models, modern human variation, osteology, forensics, primate anatomy and behavior, and human evolution. May use combination of laboratory work, computer modeling and field study. One two-hour laboratory per week. Prerequisite: can be taken concurrently with or after 300a.

301-3 Language in Culture and Society. The problem of the uniqueness of human language and how it fits into culture and society. The origin and development of language. Topics covered include animal and human communication, language and world view, and the meaning of meaning.

302-3 Indians of the Americas. A region by region survey of the native Americans of North, Middle, and South America. Emphasis is on lifeways: ecology and environment, subsistence, economy, social organization, religion, art, music, and other aspects of culture. A brief introduction to pre-history and language is included.

304-3 Origins of Civilization. This course is a survey of development of those ancient complex societies known as civilizations around the world. The emphasis is on the use of archaeological data to understand the interplay of environmental and cultural factors that led to the beginnings of agriculture, population growth, and the origins of cities. Among the early societies that may be analyzed are Mesopotamia, Egypt, China, Europe, Maya, Aztec, and Inca.

310-3 to 27 (3 per topic) Introduction to Peoples and Cultures. (Same as Anthropology 470) An introduction to the prehistory, cultural history, and modern cultures of peoples in the geographic area in question. Area focus differs from course to course and semester to semester. (a) Africa (same as Black America Studies 310c), (c) Caribbean, (d) Europe, (e) South America, (f) Middle East & North Africa, (g) North America, (i) Mesoamerica, (j) Andes, (k) Native Peoples-Southwest.

330-3 Biological Foundations of Human Behavior. Discussion of human sexual behavior, the opposition of violence and aggression with cooperative behavior, and the anthropological background of facts concerning whether these behaviors are driven by biological (instinctual) or purely cultural factors.

331-3 Forensic Anthropology CSI. Introduction to the anthropologist's role in assisting law enforcers, coroners, etc. in assessing crime scenes. Bone estimators of age, sex, stature, ethnicity; congenital and pathological identifiers; modern technological approaches including computer imagery and DNA sequencing; much laboratory training with bones and casts.

370-3 Anthropology and Contemporary Human Problems. The contribution of anthropology to an understanding of contemporary human problems of environmental crisis, world hunger and overpopulation, social stratification and internal order, war and international order. The approach is cross-cultural drawing on knowledge of all societies and cultures in space and time. Anthropological fundamentals are introduced at the beginning.

376-2 to 8 Independent Study in Classics Program.

404-3 Art and Technology in Anthropology. An introduction to the basic ways in which people utilize the natural resources of their habitat to meet various needs, such as food, shelter, transportation, and artistic expression. The nature of art, its locus in culture, and its integration into technical society will be considered.

405-3 How to Do Anthropological Research. This course is designed to teach students the skills needed to consume the professional literature of anthropology intelligently. The subjects covered include: the importance of research questions or hypotheses, the logic of deducing test implications, literature search, sampling, measurement issues, data reduction and graphing, and simple inferential statistics.

406-3 Introduction to Historical Linguistics. (Same as Linguistics 406) An introductory survey of historical and comparative linguistics, including terminology, assumptions and methods of investigation. Satisfies the CoLA Writing-Across-the Curriculum requirement. Prerequisite: Linguistics 405 or consent of instructor.

410A-3 Practicing Anthropology. This course is designed to get students acquainted with the notion of development and the challenges that the practice of anthropology faces when directed towards development and social change in both developing and developed countries. Prerequisite: 300d recommended for undergraduates.

410C-3 Economic Anthropology. The study of non-Western economic systems. Prerequisite: 300d recommended for undergraduates.

410E-3 Anthropology of Law. Anthropological thought on imperative norms, morality, social control, conflict resolution and justice in the context of particular societies, preliterate and civilized. Law of selected societies is compared to illustrate important varieties. Prerequisite: 300d recommended for undergraduates.

410F-3 Anthropology of Religion. A comparative study of (religious) belief systems, with emphasis upon those of non-literate societies. Examination of basic premises and elements of these belief systems, normally excluded from discussions of Great Religions. Prerequisite: 300d recommended for undergraduates.

410H-3 African Expressive Culture. (Same as Black American Studies 410h) This course examines aspects of African expressive culture including the visual arts, music, dance, orature, cinema, drama and ceremony from an anthropological perspective. Particular attention is given to analysis of African expressive culture in social context and the role of the arts in the practice of politics, religion, medicine and other aspects of African life. Many of the expressive genres examined deal with historical representation and political resistance. Therefore, this course provides insights into African history and politics through the creative representations of African artists.

- 410J-3 Kinship and Social Organization.** Universal features of non-Western systems of kinship terminology and social organization. Topics include the structure and functioning of kinship systems, lineages, clans, sibs, phratries, moieties, and tribal units. Prerequisite: 300d recommended for undergraduates.
- 410K-3 Ecological Anthropology.** An examination of the relationship of past and present human populations in the context of their natural and social environments. Prerequisite: 300c and 300d or equivalent.
- 410L-3 Transcending Gender.** How do humans become male and female in different societies? Can men become women and women become men? What other gender possibilities exist? Is male dominance universal? What are the sources of male and female power and resistance? Do women have a separate culture? What is the relationships between gender, militarism and war? These and other questions will be examined in cross-cultural perspective. Prerequisite: 300d recommended for undergraduates.
- 410M-3 Healing and Culture.** This course examines systems of healing and medicine from an anthropological perspective. The theory and practice of medicine in different cultures, including Western biomedicine, are considered. Particular attention is given to the ways in which medical knowledge gains legitimacy in different social contexts and the problems which arise in culturally heterogeneous arenas when different medical paradigms contend for legitimization. Prerequisite: 300d or consent of instructor.
- 410N-3 Anthropology of Popular Culture.** An examination of recent approaches to popular culture, material culture and consumption in anthropology. Special topical focus will include sports, television and movies, food and shopping. The course will be organized around several fieldwork projects in the Carbondale community. Prerequisite: 300d recommended for undergraduates.
- 410O-3 Colonialism and Post-Colonialism.** This course is designed to familiarize students with the experience of colonialism and the political, social, cultural implications of it. The analysis will not be limited to the study of the colonial period, but it will examine the complexities of contemporary post-colonial societies and cultures.
- 410P-3 Ethics and Research.** This course examines the risks that any anthropological research poses, both in fieldwork and writing, as well as questions and dilemmas that any social scientist should be aware of before getting involved in any research practice. Prerequisite: 300d recommended for undergraduates.
- 412-3 Visual Anthropology as a Research Methodology.** The new digital technologies provide exciting new ways to conduct anthropological research and present research findings. They also raise technical, methodological, and ethical questions for researchers. This course examines these issues through readings and analysis of examples of use of these media – digital video, still photography, and web authoring – in the field and in presentation to a scholarly and larger public.
- 415-3 Sociolinguistics.** (Same as Linguistics 415) History, methodology and future prospects in the study of social dialectology, linguistic geography, multilingualism, languages in contact, pidgin and creole languages, and language planning. Prerequisite: one previous course in linguistics or consent of instructor.
- 417-3 Language Contact.** This course will introduce students to the social conditions under which language contact occurs and the cultural and linguistic consequences of such contact. Primary topics will be language maintenance and shift, ideologies and attitudes regarding bilingualism, and language development and change, using data from a variety of languages and cultures. Designed to provide a comprehensive background for research on bi- or multilingual settings. Prerequisite: introductory course in linguistics.
- 420-3 Mayan Texts.** Detailed examination of Mayan texts written in Mayan languages in their cultural contexts. Texts may range from pre-Columbian hieroglyphic texts, colonial Mayan texts, to modern texts. Prerequisite: 300b or consent of instructor.
- 421-3 Descriptive Phonetics and Phonology.** The course introduces students to the study of phonetics and phonology from an anthropological and descriptive perspective. The course is interested in; how are sounds produced and how do they then become meaningful in languages? Special attention is paid to metrical phonology.
- 422-3 Grammatical Analysis.** A basic introduction to the analysis of morphology and syntax in languages of the world from a functional perspective. A broad range of grammatical patterns will be introduced and examined, equipping the student to investigate the diversity of language structures. Prerequisite: 300b or consent of instructor.
- 424-3 Native American Verbal Art.** This class examines the oral traditions (story-telling, poetry, song, chant, etc) of Native American Peoples. This class focuses on the way that Native American verbal art has been presented/represented by outsiders as well as on the formal features and forms of Native American verbal art. Attention is paid to the place and structure of verbal art in Native societies. This class focuses on the broad spectrum of verbal art in North America.
- 425-3 Cognitive Anthropology.** The theory of culture as cognitive organization is explored. Among the topics are: Formal analysis of lexical domains, folk classifications and strategies, the problem of psychological validity, linguistic determinism and relativity, biogenetic and psycholinguistic bases of cognition, and the new ethnography.
- 430A-3 Archaeology of North America.** Detailed study of the early cultures of North America. Emphasis on the evolutionary cultural development of North America. Prerequisite: 300c or consent of instructor.
- 430B-3 Archaeology of Meso-America.** Detailed study of the early cultures of Meso-America with emphasis on the evolutionary cultural development of Meso-America. Prerequisite: 300c or consent of instructor.
- 430F-3 Archaeology of South America.** Survey of the prehistory and ethnohistory of South America, including the peopling of the South American continent, the development of early cultures, the rise and fall of Andean empires, and the impact of Spanish contact and conquest. Prerequisite: 300c or consent of instructor.
- 440A-3 The Fossil Evidence for Human Evolution.** An advanced consideration of the fossil evidence for human evolution and evaluation of the various theories regarding the course of human evolution. Prerequisite: 300a or consent of instructor.

- 440B-3 Race and Human Variation.** A consideration of the range, meaning and significance of contemporary human biological variation, including evolutionary and adaptive implications and the utility of the race concept. Prerequisite: 300a or consent of instructor.
- 440C-3 Context of Human Evolution.** This course will provide an ecological, behavioral, geological, geographic, and theoretical context from which to understand the evolutionary history of modern humans. The course is designed to complement 440a. Prerequisite: 300a or consent of instructor.
- 441-3 to 12 (3 per topic) Laboratory Analysis in Archaeology.** (a) Emphasizes methods of analysis in archaeology as part of a larger research design; may be taken independently or as a follow-up to 496. (b) Emphasizes technical methods of the physical and natural sciences in archaeological analysis. (c) Emphasizes technological and functional analysis of stone tools. (d) Emphasizes the analysis of faunal remains from archaeological sites, with regard to their environmental, economic and cultural implications. Prerequisite: 300c or equivalent.
- 442-1 to 12 Working with Anthropological Collections.** Management, curation, and analysis of anthropological collections as part of a research project created by the student. May be taken independently or as a follow-up to 450, 495, 496, or 597.
- 444-3 Human Genetics and Demography.** A course in human genetics with an emphasis on population genetics and demography of modern and ancient human populations. Prerequisite: 300a, 500a or consent of instructor.
- 450A-3 Museum Studies - Learning in Museums.** A detailed study of museum in the context of their use of exhibitions as an educational medium. Covers the evolution of the museum as a learning environment and the application of learning theory and principles in modern museums. Emphasis is placed on practicum experiences involving the design of learning experiences and educational programs in the museum setting.
- 450B-3 Museum Studies - Methodology and Display.** A detailed study of museums in the context of their use of exhibitions as an educational medium. Focus on the history of museum exhibitions and instruction in the fundamentals of educational exhibit design and curatorial research. Emphasis is placed on practicum experiences involving the design of educational exhibits and curatorial research. Laboratory/field trip fee: \$20.
- 455-3 to 27 (3 per topic) Topics in Bioanthropology.** Intensive study of one of the major subfields within biological anthropology. Topical areas include: (a) Dental Anthropology. (b) Laboratory Methods. (c) Primate Behavior and Ecology. (d) Quantitative Methods. (e) Biomedical Anthropology. (f) Human Growth, Development, and Adaptation. (g) Primate Biology and Evolution. (h) Osteology. (i) Comparative and Functional Primate Anatomy.
- 460-1 to 12 Individual Study in Anthropology.** Guided research on anthropological problems. The academic work may be done on campus or in conjunction with approved off-campus (normally field research) activities.
- 465-3 to 9 Internship.** For anthropology majors only. This provides a supervised experience in a professional setting. Not for graduate credit. Prerequisite: written approval from department.
- 470-3 to 27 (3 per topic) People and Cultures.** (Same as Anthropology 310) A survey of the prehistory, cultural history, and modern cultures of peoples in the geographic area in question. Area focus differs from course to course and semester to semester. (a) Africa, (c) Caribbean, (d) Europe, (e) South America, (f) Middle East and North Africa, (g) North America, (i) Mesoamerica. (j) Andes. (Same as Anthropology 310J), (k) Native Peoples-Southwest.
- 480-3 Senior Seminar.** Readings and discussion concerning major issues in the study of humankind, with an emphasis on anthropological writing. Not for graduate students or non-majors. Fulfills the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 300a,b,c,d.
- 482-3 Internship in Editorial Practice.** Provides a supervised experience in a professional editorial setting. The course offers hands on work on an international scholarly journal, preparing advanced undergraduate students for careers in publishing or for academic careers in anthropology, sociology, history, women's studies, communications, cultural studies, geography and political science. Not for graduate credit. Prerequisite: successful completion of 480, senior seminar; students are required to submit a resume, letter of recommendation, and two writing samples prior to registering.
- 484-3 to 9 Internship: Curation of Archaeological Collections.** This internship is intended to give students in anthropology or the museum studies program an introduction to the curation and management of archaeological collections. Students will learn various aspects of collections management through hands-on work at the Center for Archaeological Investigations' (CAI) curation facility. The CAI currently curates collections from the American Midwest, Southwest and Micronesia. Students will also be exposed to a variety of issues that affect local, state and national curation facilities such as conservation/preservation, pest management, storage, collection accessibility, accountability, curation policies and ethical concerns. Internship projects range from collections documentation and research to object digitalization and other special curation projects. Prerequisite: prior approval by the instructor is required in order to register for this internship.
- 485-3 to 9 Special Topics in Anthropology.** Selected advanced topics in anthropology. Topics vary and are announced in advance. May be repeated as the topic varies. Prerequisite: departmental approval.
- 490-3 Field Methods and Analysis in Linguistic Anthropology.** Includes theoretical background and a project in the linguistic aspects of culture. Prerequisite: 300b or consent of instructor.
- 495-3 to 8 Ethnographic Field School.** Apprentice training in the field in ethnographic theory and method. Students will be expected to devote full time to the field school. Prerequisite: consent of the instructor.
- 496-1 to 8 Field School in Archaeology.** Apprentice training in the field in archaeological method and theory. Students will be expected to be in full-time residence at the field school headquarters off campus. Prerequisite: consent of instructor.

499-3 Honors Thesis. Directed reading and field or library research. The student will write a thesis paper based on original research. Not for graduate students. Prerequisite: consent of department.

Anthropology Faculty

Adams, Jane, Professor, Ph.D., University of Illinois, 1987.

Bachman, Dona R., Adjunct Assistant Professor, Ph.D., Northern Illinois University, 1979.

Balkansky, Andrew K., Assistant Professor, Ph.D., University of Wisconsin, Madison, 1997.

Barrios, Roberto E., Assistant Professor, Ph.D., University of Florida, 2004.

Bender, M. Lionel, Professor, *Emeritus*, Ph.D., University of Texas at Austin, 1968.

Butler, Brian M., Adjunct Associate Professor, Ph.D., Southern Illinois University, 1977.

Čiubrinskas, Vytis, Adjunct Assistant Professor, Ph.D., Vilnius University, 1993.

Corruccini, Robert S., Professor, Ph.D., University of California at Berkeley, 1975.

Dark, Philip J. C., Professor, *Emeritus*, Ph.D., Yale University, 1954.

Ford, Susan M., Associate Professor and Chair, Ph.D., University of Pittsburgh, 1980.

Fuller, Janet M., Associate Professor, Ph.D., University of South Carolina, 1997.

Gumerman, George J., Professor, *Emeritus*, Ph.D., University of Arizona, 1969.

Handler, Jerome S., Professor, *Emeritus*, Ph.D., Brandeis University, 1965.

Hill, Jonathan, Professor, Ph.D., Indiana University, 1983.

Hofling, C. Andrew, Professor, Ph.D., Washington University, 1982.

Lapham, Heather A., Adjunct Assistant Professor, Ph.D., University of Virginia, 2002.

Maring, Ester G., Assistant Professor, *Emerita*, Ph.D., Indiana University, 1969.

Maring, Joel M., Associate Professor, *Emeritus*, Ph.D., Indiana University, 1967.

McCall, John C., Associate Professor, Ph.D., Indiana University, 1992.

Muller, Jon D., Professor, *Emeritus*, Ph.D., Harvard University, 1967.

Prowse, Tracy L., Assistant Professor, Ph.D., McMaster University, 2001.

Rands, Robert L., Professor, *Emeritus*, Ph.D., Columbia University, 1952.

Reichard, Ulrich H., Assistant Professor, Ph.D., Georg-August University, Göttingen, Germany, 1995.

Rice, Don S., Professor, Ph.D., Pennsylvania State University, 1976.

Rice, Prudence M., Professor, Ph.D., Pennsylvania State University, 1976.

Riley, Carroll L., Distinguished Professor, *Emeritus*, Ph.D., University of New Mexico, 1952.

Shimada, Izumi, Professor, Ph.D., University of Arizona, 1976.

Sutton, David, Associate Professor, Ph.D., University of Chicago, 1995.

Webster, Anthony K., Assistant Professor, Ph.D., University of Texas at Austin, 2004.

Welch, Paul D., Associate Professor, Ph.D., University of Michigan, 1986.

Applied Economics

(SEE AGRIBUSINESS ECONOMICS)

Applied Sciences and Arts (College, Courses)

Courses (ASA)

The College of Applied Sciences and Arts offers the following technically related courses. These courses serve as common requirements for various majors. Select courses are available to students enrolled in other academic units.

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor, program supervisor, and division chair.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor, program supervisor, and division chair is required.

Applied Sciences and Arts Faculty

Beauchamp, Clarence, Assistant Professor, *Emeritus*, M.S., University of Wisconsin, 1949.

Bleyer, Dorothy R., Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1977.

Davis, L. Noel, Assistant Professor, *Emeritus*, B.S., University of Illinois, 1948.

Ellner, Jack R., Assistant Professor, *Emeritus*, Ph.D., New York University, 1969.

Hampton, Robbye Joanna, Assistant Professor, *Emerita*, M.S., Southern Illinois University Carbondale, 1965.

Harbison, James L., Instructor, *Emeritus*, M.S., University of Illinois, 1940.

Lampman, Duncan, Associate Professor, *Emeritus*, M.S. Ed., Southern Illinois University Carbondale, 1956.

Little, Harold E., Associate Professor, *Emeritus*, B.S., Pennsylvania State University, 1951.

Mailloux, Lawrence O., Assistant Professor, *Emeritus*, B.F.S., Rhode Island School of Design, 1947.

Osborn, Harold W., Assistant Professor, *Emeritus*, M.S.ED., Southern Illinois University Carbondale, 1960.

Richey, Helen E., Assistant Professor, *Emerita*, M.S., Southern Illinois University Carbondale, 1953.

Rutledge, Clifton D., Associate Professor, *Emeritus*, M. Arch., Kansas State University, 1968.

Sanders, Eugene, Assistant Professor, *Emeritus*, B.S., Southern Illinois University Carbondale, 1956.

Soderstrom, Harry R., Professor, *Emeritus*, M.S., Bradley University, 1952.

Stanley, Charles R., Assistant Professor, *Emeritus*, M.S., University of Houston, 1976.

Traylor, George Lelon, Associate Professor, *Emeritus*, M.S. Ed., Southern Illinois University Carbondale, 1965.

Tregoning, Elizabeth A., Lecturer, B.S., Southern Illinois University Carbondale, 1979.

Tregoning, Philip, Assistant Professor, *Emeritus*, M.S. Ed., Southern Illinois University Carbondale, 1973.

White, Robert, Associate Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1962.

Wolfson, Ruth Ann, Lecturer, B.S., Eastern Illinois University, 1976.

Yack, John L., Associate Professor, *Emeritus*, M.F.A., University of Oklahoma, 1959.

Architectural Studies (Major, Courses, Faculty)

The most basic human response to the earth's environment has been the development of methods, which increase the probability of survival. The most obvious of these was the creation of shelters by which the impact of climate and the changing seasons could be controlled. From this simple reaction, architecture has evolved which reflects and promotes the cultural, economic and philosophical trends of our societies.

The four-year curriculum in architectural studies offers the beginning level of education for those who intend to pursue a career in this profession or a related field. A structured sequencing of courses is included which provides for a gradual interactive development of required knowledge and skills. This pre-professional preparation is combined with the University Core Curriculum courses to provide a comprehensive scholarly foundation for advancement.

The Bachelor of Science in Architectural Studies (BSAS) is a four-year pre-professional program that prepares graduates for careers in architecture and related fields or to enter masters-level programs. Graduates with a BSAS degree are prepared for entry-level positions in architecture and related fields at a limited level. Ultimately, most graduates will continue their education in a professional-level Master of Architecture program in order to satisfy education requirements for licensure.

Students also are eligible for participation in the Intern Development Program sponsored by the National Council of Architectural Registration Boards. A wide variety of employment options exist. Some areas include design, planning, preservation, government regulation, construction, building products and facilities management.

The amount of material to be covered, the fast pace of assignments, and the pressure of critical reviews combine to produce a highly charged and energetic atmosphere. Successful students must be able to handle multiple projects simultaneously and demonstrate an ability to manage their time wisely.

To support students in their educational endeavors, sophomores, juniors and seniors are provided dedicated studio space. Program facilities include a resource library, model/furniture shop and a dedicated computer graphics laboratory. The computer graphics laboratory will provide access to input/output devices. Each student is required to purchase or lease a laptop computer and software that meets program specifications prior to the start of the second year for those on the

four-year plan or prior to the start of the first year for those on the three-year plan. Laptop and software specifications will be supplied during the registration process.

While facilities are provided for use, cost for supplies, individual equipment and required field trips necessary to the successful completion of the program are borne by the student. Due to variation in individual materials used, it is impossible to predict the exact costs for each student. A reasonable estimate of additional expenses is in the range of \$1000 to \$2000 per academic year.

The Architectural Studies program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble photographic files of their work for their portfolios.

Students are encouraged to participate in professional related student organizations, which include the American Institute of Architecture Students, Construction Specifications Institute, and Illuminating Engineering Society. Additional activities designed to enhance the overall quality of education include the University Honors Program, travel study programs, workshops and guest lectures.

All applicants must satisfy standard University baccalaureate entrance requirements in order to be admitted into the University and included in the Architectural Studies applicant pool. Enrollment in the Architectural Studies program will be based upon selective admission criteria. High School graduates will be evaluated on ACT results and class rank. Transfer and change of major students will be evaluated on grade point average as calculated by Southern Illinois University Carbondale.

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with the school director or designated representative.

Students must pass all Architectural Studies Prefix courses with a grade of C or better in order to satisfy prerequisites and to graduate. If a student receives a grade of F three times in the same course, the course cannot be taken again. Students cannot repeat Architectural Studies Prefix courses in which they received a grade of C or better.

Bachelor of Science Degree in Architectural Studies, College of Applied Sciences and Arts

<i>University Core Curriculum</i>	41 ¹
As per university requirements for baccalaureate degrees, but must include History 101a,b.	
<i>Requirements for Major in Architectural Studies</i>	(9) + 80
MATH 111	(3) + 1
PHYS 203a,b	(3) + 3
PHYS 253a,b	2
ARC 101, 102, 121, 122, 231, 232, 242, 251, 252, 271, 341, 342, 351, 352, 361, 362, 381, 382, 451, 452, 462, 481, 491, each with a minimum grade of C	(3) + 74
<i>Total</i>	121

¹ARC 231, 232, PHYS 203a and MATH 111 will apply toward nine hours of University Core Curriculum requirements making a total of 41 in that area.

Architectural Studies Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
ARC 101, 102.....	1	1	ARC 231, 232	3	3
ARC 121, 122.....	3	3	ARC 251, 252	4	4
ENGL 101, 102.....	3	3	ARC 271, 242	3	3
HIST 101a,b	3	3	PHYS 203a,b	3	3
MATH 111	-	4	PHYS 253a,b	1	1
Select Core	3	-	SPCM 101	-	3
Select Core	3	2	Select Core	3	-
Total	16	16	Total	17	17
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
ARC 341, 342	4	4	ARC 451, 452	5	6
ARC 351, 352	5	5	ARC 481, 462	3	3
ARC 361, 362	3	3	ARC 491	3	-
ARC 381, 382	2	3	Select Core	3	3
Total	14	15	Total	14	12

Courses (ARC)

101-1 Introduction to Design I. Introduction to architectural concepts and terminology that helps relate architecture to those experiences that have already provided knowledge about the world. See the contexts that constitute a spectral view of architecture and architectural practice. Instruction primarily through lecture, critical class discussion of readings, presentation and critique in a seminar like setting. Prerequisite: major in architectural studies or interior design or consent of school director.

102-1 Introduction to Design II. Introduction to architectural thought and the concepts that relate architecture to the larger world we live in. Development of analytical skills toward understanding more about the relationships between architectural values. Learning terminology that helps clarify and amplify architectural thought. Instruction primarily through lecture, critical class discussion of readings, presentation and critique in a seminar like setting. Prerequisite: 101 and major in architectural studies or interior design or consent.

121-3 Design Communication I. Introduction to basic drawing and graphic modeling skills for architecture, interior design and graphic communication. Instruction in two- and three-dimensional visualization of form and space. Topics include: basic freehand drawing and drafting skills, orthographic projection, shades and shadow, paraline drawing, sketching skills, drawing and projection composition, and perspective geometry and projection. Drafted and freehand drawing of actual and proposed environments are considered including analysis of light, shade, materials, textures and various contextual elements. Prerequisite: major in architectural studies, or interior design or consent of school director.

122-3 Design Communication II. Continuation of Design Communication I. This course is a continuation of sketching and black and white drawing techniques. The introduction of color and color presentation techniques with emphasis on advanced architectural and interior design graphics and presentation composition. Introduction of basic computer graphics tools such as Photoshop. Prerequisite: 121 and major in architectural studies or interior design or consent of school director.

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor and school director.

231-3 Architectural History I. (Advanced University Core Curriculum) The study of the influences and the development of architecture from prehistoric to the 19th Century, in particular, the study of structure, aesthetics, and the language of architecture. With Architectural History 232, satisfies the University Core Curriculum Fine Arts requirement. Prerequisite: History 101a and b.

232-3 Architectural History II. (Advanced University Core Curriculum Course) This course covers the development of modern architecture and urban planning from the nineteenth century to the present. This will include the development of American, British and Continental Architecture and urban planning including the influence of Eastern Architecture and design. With Architectural History 231, satisfies the University Core Curriculum Fine Art requirement. Prerequisite: 231.

242-3 Building Technology I: Wood. Introduction to basic materials and components used in light wood frame construction. A survey of manufacturing methods, available sizes, performance characteristic, quality, finishes and applications. Usage of vendors' brochures and standard reference. Preparation of working drawings in light wood frame construction to practice current procedures, dimensioning, notation, and design correlation, with standard and creative detailing. Prerequisite: 121, 271 and major in architectural studies or interior design or consent of school director.

251-4 Design I: Concept. Introduction to the basic principles and elements of design by means of practical and abstract applications. Development of two- and three-dimensional solutions to conceptual design problems. Emphasis is on three-dimensional thinking and communication. Development of two-and three-dimensional presentation skills. Instruction is through presentation and critique in a design studio setting. Prerequisite: 102, 122 and major in architectural studies or interior design or consent of school director.

252-4 Design II: Order. A series of studio exercises to develop an understanding of the use of a model for structuring design information, fundamentals of programming, research, communication skills and the design process. This course is designed to satisfy the writing portion of the Communication-Across-the-Curriculum requirements. Prerequisite: 231, 251, 271, English 101 and major in architectural studies or interior design or consent of school director.

271-3 Computers in Architecture. This course serves as an introduction to various electronic media employed within the practice of architecture and interior design. Creative and effective skills in the use of computers in architecture and interior design applications are consistently stressed. Prerequisite: major in architectural studies or interior design or consent of school director.

292-2 Architectural Estimating. Study of estimating methods including material lists and quantities, material and labor costs, and factors affecting construction costs. Prerequisite: 242 and major in architectural studies or consent of school director.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor and school director.

314I-3 Expressions in Architecture. (University Core Curriculum.) A study of the interconnected nature of the arts, history, environmental psychology, and architecture using the built environment as the foundation for the study. Students will learn to critically examine the built environment by learning how architecture expresses human cultures, social structures, economic and political status, and spiritual beliefs.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

320-1 to 12 Architectural Cooperative Education. The student will participate in an Architectural Studies approved cooperative education program that includes formal instruction, training and/or career related work experiences. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperative agency student performance evaluations and student reports are required. Cooperative experience may be in one or more of the following broad areas: (a) schematic design, (b) design development, (c) construction documents, (d) bidding or negotiations, (e) construction administration. Hours and credit to be individually arranged.

341-4 Building Technology II: Masonry and Concrete. Continuing study of materials and practices in document preparation for buildings using masonry and reinforced concrete construction. Investigation and use of local, state and federal codes regulating health and safety. Investigation of construction techniques relating to criteria of permanence, low maintenance and budget requirements. Produce a set of working drawings for a two-level, light commercial/industrial building. Prerequisite: 242 and major in architectural studies or consent of school director.

342-4 Building Technology III: Steel. Correlation of the design development and construction documents phases of a building project. Development of the project from design development through construction drawing phases with appropriate drawings required for each phase. Prerequisite: 341 and major in architectural studies or consent of school director.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Prerequisite: consent of instructor and school director.

351-5 Design III: Context. Continuing study of architectural design. Projects of increased scope and complexity. Continue design process study (synthesis) and appropriate design presentation (communication). Working with impingement introduced by external agencies such as social, government and community, as part of a larger context of planning. Study of the impact of site development for on-site as well as external contextual issues. Prerequisite: 232, 252 and major in architectural studies or consent of school director.

352-5 Design IV: Complexity. Completion of complex design projects in varied environmental settings. Rapidly paced projects designed to provide the maximum exposure to complex architectural typologies. Analysis of facility program toward management of complex patterns. Prerequisite: 351, 381 and major in architectural studies or consent of school director.

361-3 Structures I: Statics and Steel. Elementary study of forces and force systems using graphic and analytic methods. Basic structural concepts: reactions, shear and moment diagrams, axial, eccentric and combined loading on beams and columns. Review of principles used in the design of floor and roof structural systems: load analysis, acting and resisting stresses. Analytic and graphic truss stress analysis. Introduction to steel design. Prerequisite: 242, Mathematics 111, Physics 203a and b, and major in architectural studies or consent of school director.

362-3 Structures II: Wood and Concrete. Study of wood and concrete structural framing systems: Investigation of wood and concrete materials and their limitations, and the use of appropriate structural design procedures for wood and concrete structures through selection of appropriate, common and economical shapes to satisfy building structural requirements and applicable building code requirements. Prerequisite: 361 and major in architectural studies or consent of school director.

381-2 Environmental Design I: Site Planning. The fundamentals of site planning with reference to the historical, environmental, climatic, technologic, and legal aspects in site design. Introduction to use of surveying equipment and the preparation of a site design with emphasis on the principles of sustainable design. Prerequisite: 242, Mathematics 111, and major in architectural studies or consent of school director.

382-3 Environmental Design II: Lighting and Acoustics. (Same as Interior Design 382) A comprehensive overview of the luminous and sonic environment with consideration to energy-conscious design. Content includes human physiological and psychological perceptions of light in the built environment, natural and electric light sources, daylighting design techniques, lighting measurements and controls, light and form,

computations for quantity and quality of light, and the use of illuminated models for daylighting and electric lighting design, the basic principles of acoustics impacting room acoustics, mechanical system noise, sound absorption and isolation, and the basic principles of electrical systems. Prerequisite: 351, Mathematics 111, Physic 203a and b, and major in architectural studies or consent of school director.

444-1 to 6 Architectural Field Studies. (Advanced University Core Curriculum course) In site study of specified world area(s) concerning the influence of the region's particular culture on architecture, landscape, urban and interior design. The course reviews both historic and current; ethnicity, social, philosophical, religious, economic and political values of the region being visited to gain insights on the symbiotic relationship between culture and design. Three credit hours satisfies the University Core Curriculum Interdisciplinary requirement in lieu of ARC 314i. Not for graduate credit. Prerequisite: consent of instructor and school director. Fees: cost of transportation, lodging, access fees and general cost related to delivery of the curriculum items that are in addition to on-site courses.

451-5 Design V: Urban Design and Community. Study of urban design and community as cultural and spatial development of human settlement patterns. All previous design course experiences will be brought to bear on the architectural projects within the context of urban and community criteria. Not for graduate credit. Prerequisite: 352 and major in architectural studies or consent of the school director.

452-6 Design VI: Integration. A comprehensive design studio that focuses the skills developed in the previous design sequence and the architectural drawing courses on a single project of moderate complexity. The course schedule requires a concise analysis of a building program and site analysis to be completed at the onset of the project. The design is brought to a comprehensive whole, building systems are established for the project, and the design is presented in model and drawing form for review. The design development of a central component is then finalized. The course emphasizes the design integration of the building's structural, environmental and design systems into an overall design statement. Documentation in model and drawing form is required to fully convey the design intent. Not for graduate credit. Prerequisite: 342, 362, 382, 451, 481 and major in architectural studies or consent of school director.

462-3 Structures III: Analysis and Lateral Forces. Continuing study of framing materials and systems for buildings using advanced concepts of structural analysis. Included are earthquake resistant structures, wind resistant design, composite beams, plastic theory, statically indeterminate structures, long spans, moment distribution, multi-story structures, and other related topics. Not for graduate credit. Prerequisite: 362 and major in architectural studies or consent of school director.

473-3 Computer-Aided Design and Animation. Skill development in the computer-aided design system for the schematic and design development phases of all architectural disciplines. The use of the computer-aided design system as a tool for three dimensional creative problem solving. Not for graduate credit. Prerequisite: 271 and consent of school director.

481-3 Environmental Design III: Energy and Systems. (Same as Interior Design 481) The study of the influence of energy, human comfort, climate, context, heating, cooling and water on the design of buildings and sites. The design of passive and active environmental systems with continued emphasis on daylighting, acoustics and design strategies for sustainability. Not for graduate credit. Prerequisite: 342, Mathematics 111, Physics 203a and b, and major in architectural studies or consent of school director.

491-3 Professional Practice I: Office Practice. (Same as Interior Design 471) Introduction to the organization, management, and practice of architecture and interior design as a business and profession. Emphasis is placed on the range of services provided, professional ethics, business management, marketing, contracts and negotiations, design cost analysis/control and other aspects of professional practice. Not for graduate credit. Prerequisite: 352 and major in architectural studies or consent of school director.

492-2 Professional Practice II: Specifications. Understand the function of a *Project Manual* with technical specifications as a contract document and the relationship of technical specifications to architectural drawings. Research, organization, format and content of various sections of the Project Manual-Technical Specifications document. Not for graduate credit. Prerequisite: 342 and major in architectural studies or consent of school director.

Architectural Studies and Interior Design Faculty

Anz, Craig K., Assistant Professor, M. Arch, University of Texas at Arlington, 1991.

Bramlet, James E., Assistant Professor, *Emeritus*, M.A., Western Illinois University, 1970.

Brazley, Michael D., Assistant Professor, Ph.D., University of Louisville, 2002, BARCH, Howard University, 1978.

Davey, Jon, Associate Professor, M.S., Southern Illinois University Carbondale, 1987.

Dobbins, John, Associate Professor, M. Arch., University of Illinois, 1986.

Gimenez, Atilio M., Assistant Professor, *Emeritus*, M. Arch., University of Buenos Aires, 1961.

Hays, Denny M., Associate Professor, *Emeritus*, M. Arch., University of Utah, 1971.

Kremers, Jack, Professor, M. Arch., Univer-

sity of Michigan, 1966.

Lach, Norman, Assistant Professor, M.Arch., University of Illinois Champaign, 1974.

Ladner, Joel Brooks, Associate Professor, *Emeritus*, M.Arch., University of Houston, 1984.

LaGarce, Melinda, Associate Professor, M.F.A., Texas Technology University, 1972.

Owens, Terry A., Associate Professor and *Chair*, M.S., Southern Illinois University Carbondale, 1984.

Poggas, Christy, Assistant Professor, M.S. Ed., Southern Illinois University Carbondale, 1990. B.Arch., University of Arizona, 1975.

Sharabi, Shai Y., Assistant Professor, M. Arch. The Ohio State University, 1996.

Smith, Peter B., Assistant Professor, M. Arch., University of Illinois, 1980.

Swenson, Robert, Assistant Professor, M. Arch., Yale University, 1969.

Tully, Timothy R., Assistant Professor, M.S., Southern Illinois University Carbondale, 1990.
B.S., Architectural Studies, University of Illinois Champaign, 1974.

Wessel, Stewart P., Associate Professor,

M.F.A., University of North Texas, 1992.

White, David J., Associate Professor, M.S. Ed., Southern Illinois University Carbondale, 1991.

Wright, James K., Assistant Professor, Emeritus, M. Arch., University of Pennsylvania, 1966.

Army Military Science (Department, Minor, Courses, Faculty)

Army Military Science is a voluntary course sequence, which may lead to a commission as an officer in the United States Army (Active Army, Army Reserves, or Army National Guard). The basic course, consisting of four 100 and 200 level courses, is open to all students and carries no military obligation. Students may take one or all of the basic courses offered, receiving credit hours for each course without incurring a commitment to further study in Army Military Science or any branch of the armed forces. If a student continues into the advanced course, the student will then incur a military obligation. The obligation may be served in the Active Army, Army Reserves, or Army National Guard after the student is commissioned as an officer upon completion of the Army Military Science program. Students who wish to complete the program and receive a commission must earn a bachelor's degree. The field of study is unrestricted. Courses in communication skills, computer literacy, and military history are required.

The Army Military Science program offers a progressive adventure-filled two-year and four-year program, designed to teach students the leadership and management skills needed to pursue an exciting career in the United States Army. The student who successfully completes the program will receive a commission either in the Regular Army, the Army Reserves, or the Army National Guard. Students may request and be guaranteed reserve forces duty, which allows the student to pursue parallel dual careers in the reserve components of the Army and civilian economy. The four-year program is divided into the basic course, covering freshman and sophomore years, and the advanced course covering the junior and senior years.

The basic course prepares students for the advanced course and provides them with an education in national defense, basic leadership, and management skills. The advanced course is designed to provide training and instruction encompassing a wide range of subjects from organizational and managerial leadership, ethics and professionalism, and military justice, to the United States military history. The understandings and experiences derived from these courses and adventure-training exercises are required to enable a student to grow into an effective junior officer in the U.S. Army.

Veterans of any service, students who are currently members of the armed forces (Reserve or National Guard), and students who have successfully completed three or four years of Junior Reserve Officer Training Corps instruction, may be eligible to enroll into the advanced course once they have obtained junior academic status at the University. Students who have no prior military service may attend a 28-day Leadership Training camp at Fort Knox, Kentucky, which will qualify them for entrance into the advanced course of Army Military Science. This camp incurs no obligation on the part of the student.

All students enrolled in the advanced course will attend a 32-day advanced training camp at Fort Lewis, Washington between the first and second years of the advance course (normally the summer between the students junior and senior school year). Both the Leadership Training and Advanced Camp pay the student for travel and attendance at camp, plus provide free room, board, and uniforms.

The student additionally learns about the wide range of Army career specialties available and has the opportunity to request duty in those fields where qualified. Those students currently in the Guard or Army Reserves may continue to

participate in their Guard/Reserve unit and pursue a commission through the Army's Simultaneous Membership Program (SMP). Participants in the (SMP) allow soldiers currently serving in the National Guard or Army Reserve to receive Sergeants (E5) pay while performing unit drills.

Freshman and sophomore students enrolled in the four-year program are eligible to compete for Army Military Science scholarships for up to three and one half years. These scholarships pay full tuition, fees, books and up to \$500 per month subsistence allowance. Illinois residents who are enrolled in ROTC can compete for state Army ROTC tuition waivers, which pay tuition and other selected fees.

In addition to courses offered for academic credit, the Department of Army Military Science sponsors extracurricular activities. The Ranger Challenge Team, Batson Memorial Death March Team, Marksmanship Team, Drill and Color Guard Teams, and AUSA Company are open to all ROTC students. Adventure training takes place in the form of rappelling clinics, field training exercises, survival training, canoe trips and Civil War Battlefield terrain walks. The department also sponsors several formal social functions throughout the year.

Further information may be obtained from the Department of Army Military Science, telephone (618) 453-7563 or 453-5786.

Army Military Science Minor

A minor in Military Science consists of at least 25 semester hours, including completing the advanced course plus designated courses in communications, military history and computer literacy. Courses in national security affairs and management are also highly encouraged. With its emphasis on leadership and small unit tactics, this minor is structured to develop the attributes required of successful officers in today's United States Army. This minor also recognizes sustained course work in a discipline other than the student's major area of study. Students must discuss their minor program with the director, Army Military Science, to design a coherent program to meet their individual needs.

Courses (AMS)

101-1 to 2 Introduction to Military Science I. Introduction to basic military science focusing on leadership skills and individual tasks. This introductory course will provide the student with realistic experience in leadership and hands-on experience with a variety of army equipment. This course offers a leadership laboratory.

102-1 to 2 Introduction to Military Science II. Expanded introduction to basic military skills focusing on squad level tactics, written orders, security, first aid, and drill and ceremony. Realistic experiences that challenges the student's ability to apply their leadership with doctrinal guidelines. This course offers a leadership laboratory.

201-3 Basic Leadership Skills. Applied leadership in a small group context. Exercises in self-confidence, group communications, and leadership evolved from situations where the group is required to function and survive on a self-sufficient basis. Principles of survival and cooperative effort will be explored in depth, with maximum involvement of the student in leadership and problem-solving roles. Includes leadership lab.

202-3 Leadership Studies and Teamwork. A study of the Military Management System, including the functional aspect of leadership within the military structure. Includes the presentation of military leadership traits, styles, approaches, managerial techniques, and communications. Includes a leadership laboratory.

203-6 Leader's Training Course. A special six-week training program designed to prepare students for the advanced course of ARMY ROTC. The course is conducted at Ft. Knox, Kentucky during the summer. Students are evaluated on their potential to become an Army Officer. Not for graduate credit. Prerequisite: consent of the director of Army Military Science.

301-4 A Study of Organizational Leadership. A multi-faceted approach to the study of leadership in both a military and civilian setting. Emphasis is placed upon human behavior, communication, the individual as a leader, group dynamics, and the military's interface with society. An extensive block on ethics, morality and the Code of Conduct is also presented. Physical training techniques are taught with practical application. Includes Leadership Laboratory. Prerequisite: consent of the director of Army Military Science.

302-4 Small Unit Tactics. The student is introduced to small unit tactical operations at the platoon and company level. Offensive, defensive, and retrograde operations are covered in detail. Unit organization and patrolling are also stressed. Practical exercises are conducted in the classroom and in field environments. Physical training is also conducted. Includes a leadership laboratory. Prerequisite: consent of the director of Army Military Science.

358-6 Advanced Camp. A special 35 day field study training program designed to further prepare Army ROTC advanced course students for the basic tasks that will be required of them as junior officers and leaders in the Army. The course is normally conducted at Ft. Lewis, Washington during the summer. Prerequisite: consent of the director of Army Military Science.

401-4 Leadership and Management. An analysis of selected leadership and management problems in the following military subjects: unit administration at company level emphasizing correspondence; fundamental concepts of military justice in the armed forces of the United States, including the procedures by which judicial and nonjudicial disciplinary measures are conducted; U.S. Army readiness program as it deals with unit maintenance; the position of the United States in the contemporary world scene discussed in light of its impact on leadership and management problems of the military service; and a fundamental knowledge of the logistical support available to the unit. Leadership development is continued by the application of leadership principles, stressing responsibilities of the leader, and increasing experience through practical exercises. Includes a leadership laboratory. Not for graduate credit.

402-4 Officership. This course is designed as a Capstone of training presented prior to commissioning of cadets. Generally this includes advanced studies in ethics, professionalism, planning and coordination between the elements of the military team. Emphasis is placed on understanding of command and staff organization of the battalion level. Coursework includes a study in complying with environmental laws and regulations. Several hours of instruction are presented near the end of the school year including obligations and responsibilities of an Army Officer. Includes a leadership laboratory. Not for graduate credit.

403-1 to 3 Independent Study in Military Science. Directed independent study in selected areas. Students may register for one hour per semester or may register for one hour for the first semester and two hours for the second. They may not register for three hours during one semester. Not for graduate credit. Prerequisite: consent of the director of Army Military Science.

Army Military Science Faculty

Moncrief, Diane N., Captain, Assistant Instructor, A.B., University of Illinois Urbana Champaign, 2001.

Odom, Brent A., Captain, Adjunct Assistant, Professor, B.S., Gonzaga University, 2001.

Willoughby, Monty L., Lieutenant Colonel, Professor and *Director* of Army Military Sciences, M.S., Kansas State University, 2001.

Art and Design (School, Majors [Art, Design], Courses, Faculty)

The School of Art and Design offers two undergraduate degrees, the Bachelor of Fine Arts and the Bachelor of Arts. The B.F.A., a professional degree, includes eleven specializations: art education, ceramics, communication design, drawing, glass, industrial design, metalsmithing, painting, printmaking, and sculpture. Under the B.A. degree there are two majors: art and design. The B.A. degree in art includes three specializations: art education, art history, and general studio; and the B.A. in design includes the specialization of general design.

With a B.F.A. degree in ceramics, drawing, glass, metalsmithing, painting, printmaking or sculpture, students are prepared to practice as studio artists, go on to advanced study, or enter careers related to their studio specializations. The B.F.A. specializations in industrial design and communication design prepare students with the intellectual, technological, and practical knowledge required in the professional world of design. With a specialization in industrial design students are prepared to practice in the industrial field of contemporary product development.

Communication Design is the specialization that creates, informs, and modifies the world around us. Its curriculum provides students with a thorough understanding of and competence in communication in a digital-based society. It includes broad-based technical instruction along with instruction in typography, digital graphic technology, design concepts, information design, and industry standards required by the communication field.

Communication design students learn to combine and develop concepts and employ visualization techniques that instruct, interpret, and/or persuade. This curriculum focuses on message content and theory in print, web, and interactive/multimedia design.

Job titles in the fields of design include Multimedia Design, Web Designer, Web Communication Designer, Graphic Communication, Digital Imaging, Multimedia,

Interactive Graphic Design, Internet Communication, Motion Graphics, Art Director, or Creative Director.

The specialization of art education is offered within a liberal arts (B.A.) as well as a professional (B.F.A.) curriculum format. Upon completion of either program, students in art education are prepared and certified to teach in the public schools. However, the Bachelor of Fine Arts degree program offers the student more studio electives in art and design. With the B.F.A. degree in art education, students are better prepared to teach studio arts in American schools or go on for advanced study either in art or art education.

Art History is a study of visual culture in its historical contexts. The B.A. specialization in art history provides rigorous liberal arts training in analytical and critical viewing, reading, thinking, speaking, and writing. It prepares students for graduate study, professional school, and careers in museums, auction houses, publishing, and other fields. Majors take courses in art history, studio art, and the University's core curriculum and enjoy a wide choice of electives.

The general studio specialization is the most flexible program. By means of both requirements and elective options, students may plan interdisciplinary programs in art or develop programs leading toward a specific career objective.

The B.A. specialization in general design is an interdisciplinary approach to studying and applying design principles and methodologies. The curriculum exposes students to the broad applications of design and designing as a process of change. Emphasis is placed on creative and critical thinking skills suitable for application in a wide range of employment possibilities as well as preparation for many graduate programs. Developing skills that help individuals think independently and excel as effective team members is a goal of the general design specialization.

The education of teachers, scholars, artists, and designers requires both a comprehensive program in the specializations and a university core program outside of the major. In meeting these objectives the School emphasizes both theory and practice in its specializations. Studies are sequentially planned to facilitate orderly matriculation through the baccalaureate curricula.

Prior to entry into selected specializations, all majors are required to complete foundation studies: beginning coursework in art history, drawing, and two- and three-dimensional design. In addition, for entrance into the art B.F.A. specializations, students must have successfully completed a portfolio review of work from previous art studies (at SIUC or elsewhere). The review will be conducted upon completion of the foundation studio courses and one or two courses specific to the specialization. Students admitted to communication design must own a McIntosh laptop computer for subsequent courses.

Transfer students seeking admission from another program at Southern Illinois University Carbondale must meet the same requirements as those seeking admission from another institution (See Chapter 2). Evaluation of a studio course for transfer credit from another institution will be made on the basis of a presentation of the work (or professional quality slides of the work) executed in the course to determine whether the course will be considered equivalent to a specific course or accepted as studio elective credit.

Most prerequisite courses must be completed with a grade of *C* or better before a student may advance into the next course. Students should refer to individual course descriptions for specific information.

Courses in art and design have limited enrollment, and enrollment may be cancelled for students who do not attend the initial class session of the semester. Courses in some programs must be taken in a certain sequence, and not all classes are offered every semester. Admission to certain courses is restricted, and permission must be obtained prior to registration. For some courses permission to register is based upon submission of a portfolio.

Technology Fee

The School of Art and Design assesses all undergraduate art and design majors a technology fee of \$6.00 per credit hour; a maximum of 12 credit hours will be charged each for fall and spring semesters and 6 for summer.

ART MAJOR

Bachelor of Fine Arts Degree, College of Liberal Arts

A student majoring in art should select one of the following fields of interest by the end of the sophomore year: art education, ceramics, communication design, drawing, glass, industrial design, metalsmithing, painting, printmaking, or sculpture.

ART MAJOR—ART EDUCATION SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
The following must be taken in order to satisfy state teacher certification requirements: English 205 ¹ ; Psychology 102.	
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Art Education</i>	(9) + 60
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Studio requirements: Art and Design 201, 202, 203, 204, 205	15
Art education requirements: 308, 318, 328, 338.....	12
Art and Design history electives (300- or 400-level)	6
Art and Design studio electives	14
<i>Professional Education Requirements</i>	25
See Teacher Education Program.	
<i>Total</i>	125

¹AD 448, 458, 468 also satisfy the certification requirement.

ART MAJOR—CERAMICS SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Ceramics</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major requirements: Art and Design 200, 201 or 202; 203; 204; 205; 214; 304a; 304b; 389; 404a; 404b; 404c; and 404d	42
Art and Design history electives (300- or 400-level)	6
Craft or sculpture electives	9
Studio art electives	15
<i>Total</i>	125

ART MAJOR—COMMUNICATION DESIGN SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Communication Design</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12

Major requirements: Art and Design 122; 200; 222; 249; one from 302a, 302b, 302c or 302d; 322; 339; 352; 15 credits from 372, 452, 472, and 489d (courses numbered 322 and above require ownership of McIntosh laptop computer)	39
Art and Design electives	15
Art and Design history elective (300- or 400- level)	3
Electives.....	15
Total	125

ART MAJOR—DRAWING SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Drawing</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major Requirements: Art and Design 200; 201; 202; 203; 204, 205, or 214; 300-9; 301a; 301b; one from 302a, 302b, 302c, or 302d; 389; 400a; 400b; 400c	51
Art and Design history electives (300- or 400-level)	6
Studio art electives	15
Total	125

ART MAJOR—GLASS SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Glass</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c.....	(9) + 12
Major requirements: Art and Design 200, 201 or 202; 203; 204; 205; 214; 314a; 314b; 389; 414a; 414b; 414c; 414d-6	42
Art and Design history electives (300- or 400-level)	6
Craft or sculpture electives	9
Studio art electives	15
Total	125

ART MAJOR—INDUSTRIAL DESIGN SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Industrial Design</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major requirements: Art and Design 200; 12 hours from 203, 204, 205, 300, 303, 304, or 305; 213; 223; 242; 263; 313; 323; 337; 353; 363; 383; 413; 423; 443; 489a	57
Art and Design history elective (300- or 400-level).....	3
Art and Design or cognate electives	12
Total	125

ART MAJOR—METALSMITHING SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
--	----

Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.

<i>Requirements for Specialization in Metalsmithing</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major requirements: Art and Design 203; 204; 205; 214; 242; 305a; 305b; 389; 405a; 405b; 405c; 405d	42
Art and Design history electives (300- or 400-level)	6
Craft or sculpture electives	9
Studio art electives	15
<i>Total</i>	125

ART MAJOR—PAINTING SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Painting</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major requirements: Art and Design 200; 201; 202; 203; 204, 205, or 214; 300-6; 301a; 301b; 301c; one from 302a, 302b, 302c, or 302d; 389; 401a; 401b; 401c	51
Art and Design history electives (300- or 400-level)	6
Studio art electives	15
<i>Total</i>	125

ART MAJOR—PRINTMAKING SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Printmaking</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major requirements: Art and Design 200; 201; 202; 203; 204, 205, or 214; 300-6; 301a; nine hours from 302a, 302b, 302c, or 302d; 389; 402a; 402b; 402c	51
Art and Design history electives (300- or 400-level)	6
Studio art electives	15
<i>Total</i>	125

ART MAJOR—SCULPTURE SPECIALIZATION (BFA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>Requirements for Specialization in Sculpture</i>	(9) + 84
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major requirements: Art and Design 200; 201; 203; 204, 205, or 214; 300-3; 303-9; 389; 403a; 403b; 403c	42
Art and Design history electives (300- or 400-level)	6
Craft electives	6
Studio art electives	18

Total 125

Art Education Curricular Guide (BFA)

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
AD 100a, b	3	3	AD 200-level studio	6	6
AD 110, 120	3	3	AD 207	3	3
ENGL 101, 102	3	3	ENGL 205	-	3
Core Health	-	2	EDUC 314	-	2
Core Math	3	-	Core Social Science	3	-
PSYC 102, SPCM 101	3	3	Core Science	3	-
Core Science	-	3	EDUC 311	-	2
Total	15	17	Total	15	16
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
AD 200-level studio	3	-	AD Studio elective	5	-
AD Studio elective.....	3	6	AD Art History elective	3	-
AD 308, 318	3	3	EDUC 308	3	-
AD 328, 338	3	3	EDUC 316	3	-
AD 207, EDUC 310	3	3	AD 328	3	-
Art History elective	-	3	EDUC 401	-	12
Core Interdisc	3	-			
Total	18	18	Total	17	12

Ceramics, Glass, Metal Suggested Curricular Guide (BFA)

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
AD 100a,b, AD 110	6	3	AD 120, AD Studio	3	6
AD 2XX ¹	-	3	AD 207.....	3	3
ENGL 101, 102	3	3	AD 3XXa,b.....	3	3
Core Mathematics.....	3	-	Core Health	2	-
SPCM 101.....	-	3	Core Science.....	3	3
Core Social Science	3	3	Core Integrative Studies	3	3
Total	15	15	Total	17	18
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
AD 4XXa,b	3	6	AD 4XXd	6	-
AD Studio	9	6	AD 4XXc	-	3
AD 207, 389	3	3	AD Art History elective.....	3	3
			AD Studio	6	9
Total	15	15	Total	15	15

¹XX=04 for ceramics; 05 for metalsmithing; 14 for glass

Communication Design Curricular Guide (GFA)

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
AD 100a,b	3	3	AD 122, 200.....	3	3
AD 110, 120	3	3	AD 249, 222	3	3
AD 207, Core Math	3	3	AD 207	3	3
ENGL 101, 102	3	3	Core Integrative Studies	3	3
SPCM 101	-	3	Core Health, Social Science	2	3
Core Social Sci	3	-	Core Science	3	3
Total	15	15	Total	17	18
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
AD 322, 302a,b,c, or d	3	3	AD 452, 472	3	3
AD 339, Art History elective ...	3	3	AD 489d	3	-
AD 372, 352	3	3	AD 472 or 489d	-	3
Approved electives	6	6	Electives	9	9
Total	15	15	Total	15	15

Drawing, Painting, Printmaking Suggested Curricular Guide (BFA)

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
AD 100a,b	3	3	AD 20X, 30X ¹	3	3
AD 110,120	3	3	AD 207	3	3
ENGL 101, 102.....	3	3	AD Studio.....	3	3
Core Mathematics, Science.....	3	3	Core Health.....	2	-
SPCM 101	-	3	Core Science	3	3
Core Social Science.....	3	-	Core Soc Science	-	3
			Core Integrative Studies	3	3
Total	15	15	Total	17	18

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AD 30X ¹	3	3	AD 40X ¹	3	-
AD Studio	9	9	AD 40Xa,b ¹	6	6
AD 207, AD 389	3	3	AD 40Xc ¹	-	3
			AD Art History elective	3	3
			AD Studio	3	3
<i>Total</i>	15	15	<i>Total</i>	15	15

¹ X=0 for drawing; 1 for painting; 2 for printmaking

Industrial Design Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
AD 100a, b	3	3	AD 200, 313	3	3
AD 110, 120	3	3	AD 207	3	3
ENGL 101, 102	3	3	AD 213a,b, AD 263	3	3
Core Math, SPCM 101	3	3	AD 242, 223	3	3
Core Social Science	3	3	Core Health, Integrative		
Core Science	-	3	Studies	2	3
			Core Science	3	-
<i>Total</i>	15	15	<i>Total</i>	17	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AD 353, 363	3	3	AD 413	3	-
AD 323, 383	3	3	AD 423	3	-
AD 337	-	3	AD 443	-	3
AD Craft/Sculpture/Draw	3	3	AD 489a	-	3
AD 207	3	-	AD Craft/Sculpture/Drawing... ..	3	3
Core Integrative Studies	3	-	Art History Elective	3	-
Electives	-	6	Electives	3	6
<i>Total</i>	15	18	<i>Total</i>	15	15

Sculpture Suggested Curricular Guide (BFA)

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
AD 100a,b	6	-	AD 303	3	3
AD 110	-	3	AD 207	3	3
AD 203	-	3	AD Studio	3	6
ENGL 101, 102	3	3	Core Health	2	-
Core Mathematics	3	-	Core Science	3	3
SPCM 101	-	3	Core Integrative Studies	3	3
Core Social Science	3	3			
<i>Total</i>	15	15	<i>Total</i>	17	18
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AD 303, 403a	3	6	AD 403b	6	6
AD 389	-	3	AD 403c	-	3
AD Studio	9	6	AD Art History elective	3	3
AD 207	3	-	AD Studio	6	3
<i>Total</i>	15	15	<i>Total</i>	15	15

Bachelor of Arts Degree, College of Liberal Arts

A student majoring in art with a specialization in art history, art education, or general studio should select the specialization by the end of the sophomore year.

ART MAJOR—ART HISTORY SPECIALIZATION (BA)

<i>University Core Curriculum Requirements</i>	41
Two from Art and Design 207a, b, or c should be taken as the University Core Curriculum humanities courses.	
Art and Design 100a or b should be taken as the fine arts course.	
<i>Requirements for Specialization in Art History</i>	(9) + 79
Foundation requirements	(9) + 9
Studio courses	(3) + 6
AD 207a, b, c	(6) + 3
Major requirements: Art and Design 327 or 498; one from 407, 417, 427, 437, or other approved pre-modern course; one from 448, 458, 468, or other approved non-Western course; 438, 489b	15
Art History electives ¹	12
Foreign language (French or German recommended)	8
Humanities electives (classics, east Asian, English, French, German, history, linguistics, or philosophy)	9
Approved electives (studio arts, design, museum studies, humanities, social sciences, foreign language, architecture, and other approved areas) ¹	26
<i>Total</i>	120

¹At least 25 hours of art history electives and approved electives must be 300- or 400-level.

Art History Suggested Curricular Guide (BA)

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
AD 100a or b	3	-	AD 207	3	-
AD 207	3	3	AD 438, Art History	3	6
ENGL 101, 102	3	3	Foreign Language	4	4
Core Mathematics	3	-	Core Health	2-3	-
SPCM 101	-	3	AD Studio	3	3
Core Science	-	3	Core Integrative Studies	3	3
Core Social Science	3	3			
<i>Total</i>	15	15	<i>Total</i>	15-16	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Science	3	-	Art History	9	3
AD 438, Art History	3	9	AD 489b	-	3
Core Integrative Studies	3	-	Approved Electives	6	8-9
Approved Electives	6	6			
<i>Total</i>	15	15	<i>Total</i>	14	14-15

ART MAJOR—GENERAL STUDIO SPECIALIZATION (BA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the humanities courses.	
<i>College of Liberal Arts Requirement</i>	8
Foreign language	8
<i>Requirements for Specialization in General Studio</i>	(9) + 71
Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c	(9) + 12
Major requirements: Five courses from Art and Design 200, 201, 202, 203, 204, 205, 213, 214, or 249	15
Art and Design 242	3
300- and 400-level studio courses in at least three disciplines	27
AD 400c, 401c, 402c, 403c, 404c, 405c, or 414c	3

Art and Design History elective (300- or 400- level)	3
Liberal Arts electives (at least 4 credits must be 300- or 400-level)	8

Total 120

General Studio Suggested Curricular Guide (BA)

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
AD 100 a,b	3	3	AD Studio	6	6
AD 110, 120	3	3	AD 207	3	3
ENGL 101, 102	3	3	Core Health, Soc Science	2	3
Core Mathematics, SPCM 101	3	3	Foreign Language	4	4
Core Science	3	3			
Total	15	15	Total	15	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AD Studio	6	9	AD Studio	9	12
AD 207, Art History elective ...	3	3	Liberal Arts Electives	6	2
Core Integrative Studies	3	3			
Core Social Science	3	-			
Total	15	15	Total	15	14

Bachelor of Arts Degree, College of Liberal Arts or Bachelor of Science Degree, College of Education and Human Services

ART MAJOR—ART EDUCATION SPECIALIZATION (BA OR BS)

University Core Curriculum Requirements 41
To include PSYC 102; ENGL 205¹.

Requirements for Specialization in Art Education (9) + 54

Foundation requirements: Art and Design (100a), 100b, 110, 120, (207a), (207b), 207c (9) + 12

Studio requirements: Art and Design 201, 202, 203, 204, 205 15

Art education requirements: Art and Design 308, 318, 328, 338..... 12

Art and Design history elective (300- or 400-level) 3

Studio Art and Design electives 12

Professional Education Requirements 25

See Teacher Education Program, College of Education and Human Services.

Total 120

¹AD 448, 458, 468 also satisfy this certification requirement.

Art Education Suggested Curricular Guide (BA or BS)

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
AD 100a,b	3	3	AD 200-level studio	6	6
AD 110, 120	3	3	AD 207.....	3	3
ENGL 101, 102	3	3	EDUC 314	-	2
Core Mathematics, Science.....	3	3	Core Social Science.....	3	3
PSYC 102, SPCM 101	3	3	Core Science, EDUC 311.....	3	2
Total	15	15	Total	15	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AD 200-level studio	3	-	AD Studio elective	3	-
AD Studio elective.....	3	6	Art History elective	3	-
AD 308, 318	3	3	EDUC 316	3	-
AD 207, AD 338	3	3	EDUC 401	-	12
Core Interdisc	-	3	AD 328	3	-
EDUC 310	-	3	ENGL 205	3	-
EDUC 308	3	-			
Total	15	18	Total	15	12

Art Minor

A total of 21 hours is required for the minor. The student must complete Art and Design 100a, 100b, and two from 207a, b, or c for 12 hours and may then elect studio or art history courses for the remaining nine hours.

Art History Minor

A minor consists of 18 credit hours of art history coursework. Students are strongly encouraged to take 207a, b, and c, which serve as prerequisites for many 300- and 400-level art history courses. Transfer students must have taken at least nine credit hours of art history coursework at SIUC in order to obtain a minor.

DESIGN MAJOR

Bachelor of Arts Degree, College of Liberal Arts (BA)

DESIGN MAJOR-GENERAL DESIGN SPECIALIZATION (BA)

<i>University Core Curriculum Requirements</i>	41
Art and Design 100a or b should be taken as the University Core Curriculum fine arts course. Two from Art and Design 207a, b, or c should be taken as the University Core Curriculum humanities courses.	
<i>College of Liberal Arts Requirement</i>	8
Foreign language	8
<i>Requirements for Specialization in General Design</i>	(9) + 71
Foundation requirements: Art and Design (100a), 100b, 110, 120, six hours from (207a), (207b), 207c.....	(9) + 15
Major requirements: Art and Design 209, 213, 222, 242, 249, 263, 309, 332, 333, 337, 339, 353, 363, 429, 463, 489a.....	42
Art and Design elective (300- or 400-level), including industrial design or communication design course	3
Electives (300- or 400-level)	11
<i>Total</i>	120

General Design Curricular Guide (BA)

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
AD 100a, b	3	3	3	AD 207a, b or c	3	3	3
AD 110, 120	3	3	3	AD 213 or 222, 209	3	3	3
ENGL 101, 102	3	3	3	AD 253 or 242	3	-	-
Core Mathematics, Science	3	3	3	AD 242 or 249	-	3	3
Core Humanities	3	-	-	Core Health, Humanities	2	3	3
SPCM 101	-	3	3	Foreign Language	4	4	4
<i>Total</i>	15	15	15	<i>Total</i>	15	16	16
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
AD 222 or 213, AD 249 or 332 ...	3	3	3	AD 332 or 333	3	-	-
AD 333 or 253	3	-	-	AD 339 or 337	3	-	-
AD 337 or 339	3	-	-	AD 463, AD 429	3	3	3
AD 3XX or Elective	-	6	6	AD 489c	3	3	3
Core Science	3	-	-	Elective or 3XX	3	-	-
Core Social Science	3	3	3	Core Integrative Studies	-	3	3
Core Integrative Studies	-	3	3	Electives	-	5	5
<i>Total</i>	15	15	15	<i>Total</i>	15	14	14

Courses (AD)

100A-3 Foundation Studio A. (University Core Curriculum) A fundamental class with emphasis on contemporary and traditional two-dimensional processes, concepts and materials. Students will also experiment with digital and time-based work. Projects are designed to introduce and fuse content, skill and composition. Emphasis will be placed on solving visual problems and thinking critically and creatively. Studio fee \$30. Incidental expenses will be incurred.

100B-3 Foundation Studio B. (University Core Curriculum) A fundamental class with emphasis on contemporary and traditional three-dimensional processes, concepts and materials. Project are designed to introduce and fuse content, skill and the principles of design and composition. Emphasis will be placed on solving visual problems and thinking critically, analytically and creatively. Studio fee \$30. Incidental expenses will be incurred.

101-3 Introduction to Art, Design and Visual Culture. (University Core Curriculum) [IAI Course: F2 900] This course aims to equip students with a critical awareness of contemporary visual culture – from art to advertising, from the built environment to cyberspace. Students will be encouraged to interrogate all varieties of visual forms and to consider the different viewing contexts, historical antecedents and cultural differences that condition their experience of the visual world. Weekly section meetings with a graduate assistant will provide an opportunity to discuss concepts presented in lectures and readings and to carry out assignments in the form of written reports and creative art and design projects. A field trip is required (a small fee will be required of those unable to provide their own transportation).

110-3 Introduction to Drawing I. Designed to help the student experience the concepts and processes that constitute the language of graphic expression. The goal is a working understanding of the still life. Studio fee \$20. Incidental expenses required.

120-3 Introduction to Drawing II. Designed to help the student experience the concepts and processes that constitute the language of graphic expression. The goal is a working understanding of inanimate and animate forms in space. Studio fee \$20. Incidental expenses required. Prerequisite: *C* or better in 110.

122-3 Communication Drawing. Drawing for communication: theoretical and applied concepts in drawing line, shape, form, perspective and color of images in a representational format. Prerequisite: *C* or better in 110. Studio fee: \$30.

200-3 Introduction to Drawing III. Concerned with the introduction to various media, compositional devices, spatial investigation, and the human figure. Studio fee \$60. Incidental expenses not to exceed \$75. Prerequisite: *C* or better in 120.

201-3 Introduction to Painting. Emphasizing material, techniques, processes, and ideas fundamental to the discipline of painting. Studio fee \$25. Incidental expenses not to exceed \$100. Prerequisite: *C* or better in 100a, b, 110, 120.

202-3 Introduction to Printmaking. Lectures and films on the basic printmaking processes: relief, intaglio, plano graphic, stencil, and cast paper. Emphasis on studio lab work in relief and intaglio, printmaking processes. Studio fee \$60. Incidental expenses not to exceed \$35. Prerequisite for art majors: *C* or better in 100a, b, 110, 120.

203-3 Beginning Sculpture. Emphasis experience in materials, techniques, processes, and ideas fundamental to the discipline of sculpture. Studio fee \$50. Incidental expenses will be incurred. Prerequisite: *C* or better in 100a, b.

204-3 Beginning Ceramics. Introduction to ceramic forming techniques of hand building and throwing on the potter's wheel. Students will explore traditional methods of ceramic form construction and will develop fundamental building skills through dialogue, projects, and problem-solving experiences. Studio fee \$60. Incidental expenses not to exceed \$15. Prerequisite: *C* or better in 100a, b.

205-3 Beginning Jewelry and Metalsmithing. An introduction to the fundamental skills and technology of jewelry and metalsmithing through practical experience. The properties of the medium will be explored and a survey of the field will be made. Studio fee \$75. Incidental expenses not to exceed \$10. Prerequisite: *C* or better in 100a, b.

207A-3 Introduction to Art History I. (University Core Curriculum course) Studies the origins and nature of art in a variety of ancient civilizations from around the world, such as Ancient Egypt, Greece, China and the Americas. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

207B-3 Introduction to Art History II. (University Core Curriculum course) Studies art from Ancient Rome to the Early Renaissance in Europe, Africa and Asia. Sculptures, paintings, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

207C-3 Introduction to Art History III. (University Core Curriculum course) This class studies art from the Renaissance to the present from around the world. Sculptures, painting, architecture, metalwork, ceramics, textiles and other art works are studied in their social and historical contexts, with consideration of issues of style, subject matter, meaning, technique and aesthetics.

209-3 Innovation for the Contemporary Environment. A variety of factors affecting creative individual and small group problem solving and its relevance to the contemporary environment are explored in theory and in practice. Purchase of book \$4.50.

213-1 to 3 (2,1) Basic Materials and Processes. (a) An introduction to theory and practice of industrial design. Lectures on the fundamental techniques, tools and skills used to manipulate a wide range of materi-

als in the fabrication of industrial design models. Must be taken concurrently with 213b. Prerequisite: *C* or better in 100a and 100b. **(b)** A laboratory for learning through demonstration and exercise in basic hand and power tool operation. Emphasis on developing safe work habits and crafting high quality objects. Mechanical drawing and model-making techniques are demonstrated and practiced. Must be taken concurrently with 213a. Lab fee: \$65. Prerequisite: *C* or better in 100a and 100b.

214-3 Glass Survey. Practical application of basic techniques of stained glass design and construction to include cartoon making, leading, foiling, pattern cutting, and soldering. Studio fee: \$60. Prerequisite: 100a, 100b, 110, and 120 or consent of instructor.

222-3 Typography I. Introduction to digital typography through letterforms, spacing, layout and communication. Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation and balance. Simple typographical applications, basic history of typography, and portfolio preparation. Studio fee \$30. Prerequisite: *C* or better in 100a and 100b.

223-3 Rendering and Graphics. An introduction to the techniques and materials used by industrial designers to two-dimensionally represent three-dimensional conceptual ideas. Students develop skills in drawing and rendering with pencils, markers, pastels, and airbrush. Emphasis is placed on understanding the significance of color and graphic applications for industrial design. Studio fee: \$50.

227-3 History of African American Art. (University Core Curriculum) [IAI Course: F2 906D] A history of African American visual arts, with a brief examination of the arts of various nations of Africa and how they affected art in America. Craft arts, architecture, painting and sculpture will be considered from the slave trade era to the Civil War era; the Harlem Renaissance and other 20th Century movements to the present day.

237-3 Meaning in the Visual Arts. [IAI Course: F2 900] Designed to provide students with a broad understanding of the history and meaning of art and its relevance to contemporary culture. Emphasis is placed upon interdisciplinary concerns, the environment and contemporary social issues. More detailed in historical content than 227.

242-3 Introduction to Computer Graphics. [IAI Course: ART 919] Introduction to the use of the computer in the production of graphic images. Topics include the definition of two-and three-dimensional data, the generation of engineering and perspective images and animation. Software fee \$75.

249-3 Design Process and Presentation. Emphasis on basic design principles, design process, terminology, methods and presentation. Transition from theoretical to applied problems. Portfolio preparation. Overview of professional realities (social, ethical and legal) in communication design. Studio fee: \$30. Prerequisite: 100a, b.

257-1 to 30 Work Experience. Credit for concurrent or non-structured work performed which is related to the student's educational objective. Credit to be granted by department evaluation. Mandatory Pass/Fail.

258-1 to 30 Work Experience. Credit for past work performed which is related to the student's educational objective. Credit to be granted by departmental evaluation. No grade for past work experience.

263-3 Materials and Methods. Course builds on skills and theory developed in 213a and b and further explores methods, tools, and materials for developing models and prototypes to communicate 3-dimensional design concepts. Material fee: \$50. Prerequisite: Pass portfolio review of fall 200-level ID courses plus *C* or better in 213a and b.

267-3 Picturing Difference: Native, African and European Americans in American Art. (University Core Curriculum) This course examines paintings, sculpture, photographs and films representing Native, European, and African Americans. All have represented themselves and been represented by others, in works of visual art from the 18th century to the present. These will be examined within their own historical periods, within the history of art and within the historical development of multicultural American identities.

300-9 (3,3,3) Intermediate Drawing. Intermediate figure drawing, a studio orientation to drawing the figure. Included in the course are: materials and methods pertinent to drawing the figure; an historical perspective regarding the figure in art; and problems relative to human figuration in drawing. Studio fee: \$60. Incidental expenses not to exceed \$50 for each section. Prerequisite: *C* or better in 200.

301-9 (3,3,3) Intermediate Painting. (a) Oil painting emphasizing the figure. Studio fee: \$80. Prerequisite: *C* or better in 201. **(b)** aqueous medium emphasized. Studio fee: \$80. Prerequisite: *C* or better in 201. **(c)** beginning individual problem solving. Studio fee: \$80. Prerequisite: *C* or better in 301a,b. Incidental expenses not to exceed \$100 for each section.

302A-3 Beginning Etching. Introduction to the basic processes of intaglio printmaking, including etching, aquatint, engraving, and drypoint. Emphasis will be placed on black and white printing. Studio fee \$75. Incidental expenses not to exceed \$50.

302B-3 Beginning Lithography. Introduction to the history and basic processes of lithography, including use of stone and plate. Emphasis will be on black and white printing. Studio fee \$85. Incidental expenses not to exceed \$45.

302C-3 Beginning Silkscreen. Introduction to the basic processes and history of silkscreen; including construction of screen and hand and photographic stencil-making techniques. Studio fee \$95. Incidental expenses not to exceed \$45.

302D-3 Beginning Woodcut. Introduction to the basic processes and history of woodcut printmaking; including single color (block) printing, reduction printing, multiple block printing and intaglio/relief printing. Studio fee \$75.

303-9 (3,3,3) Intermediate Sculpture. A studio orientation to tools, techniques, materials, and problems involved in historical and contemporary sculpture. Metal fabrication, figure, wood and stone carving, and plaster fabrication will be emphasized. Studio fee: \$60. Incidental expenses will be incurred. Prerequisite: *C* or better in 203.

304-6 (3,3) Intermediate Ceramics. (a) Focuses on structured problems designed to encourage the student to apply basic forming skills experienced at the introductory level. Pottery shapes requiring singular and multiple form components will be investigated and simple glazing techniques will be introduced. Studio fee: \$65. (b) Stresses studio problems of a group nature and introduces glaze calculation as both theory and a practical tool. Personal and creative interpretation of assignments; some problems requiring group effort. Must be taken in a, b sequence. Studio fee: \$65. Incidental expenses not to exceed \$10 for each section. Prerequisite: C or better in 204.

305-6 (3,3) Intermediate Metalsmithing. (a) Exploration of various processes emphasizing the diversity of the technical possibilities within the discipline of metalsmithing. Studio fee: \$80. (b) Emphasis placed on the use of these processes to develop individual styles. Studio fee \$80. Incidental expenses not to exceed \$25 for each section. Prerequisite: C or better in 205.

307I-3 Women in Visual Arts. (Same as Women's Studies 307i) (University Core Curriculum) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

308-3 Theories and Philosophies of Art Education. Students develop an understanding of the major theoretical and philosophical issues in art education through an examination of historical, current, cross-cultural, aesthetic and personal perspectives. The development of a personal philosophy of art education is the capstone experience along with the development of research and presentation skills. Requirements include extensive reading and preparation of a major paper. Partially satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for art majors.

309-1 to 12 Independent Study. To be used by majors in the School of Art and Design to pursue independent research activities. Prerequisite: completion of all foundation courses, 3.0 grade point average, major in the School of Art and Design, and consent of instructor.

313-3 Computer-Aided Industrial Design. A computer laboratory course focused on learning and utilizing two- and three-dimensional data, drawing and modeling software and applications in the industrial design process. Includes: programming theory, 3-D modeling, design for manufacturing assembly and disassembly, product planning, graphics, detailing, assembly drawings, and bill of materials. Studio fee \$60. Prerequisite: C or better in 263. To be taken concurrently with 333.

314-6 (3, 3) Glass Fusing and Slumping. (a) Introduction to alternative forming techniques using glass sheet, exploring the joining of glass and glass components through the application of heat. Studio fee: \$100. (b) Extension of experiences in (a) with a special emphasis on glass casting. Includes various mold-making materials, configurations and techniques and annealing processes and cycles. Studio fee: \$100. Prerequisite: C or better in 214 or consent of instructor.

317I-3 Contemporary Native American Art: Anthropological Perspective. (University Core Curriculum) This interdisciplinary course considers contemporary Native American art and the social forces that have shaped it. Native American artistic traditions and the centrality of art to Native American life and culture will be addressed with an emphasis on 20th-century artists who have shaped the contemporary Native American art movement.

318-3 Curriculum and Assessment in Art Education. Prepares students to organize art resources, materials, and concepts into effective art learning experiences. The focus is on integrating art concepts from art history, aesthetics, criticism, etc., with studio methods and techniques along with technological approaches. Effective assessment strategies to complement the curricular structures will be developed. Requirements include extensive reading, the investigation of a research problem, the development of a curriculum document, and the presentation of the research findings. Partially satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirements for art majors.

322-3 Print Technology. Emphasis on preparing design concepts to digital format for production or digital output for a variety of different purposes. Includes pre-press methods, file formatting, trapping, color separations and current reproduction methods. Studio/software fee \$30. Prerequisite: C or better in 222, 249; admission to communication design program.

323-3 Industrial Design Analysis. An introduction to the full industrial design process including concept ideation, human engineering, consumer safety, environmental impact, consumer research, etc. Students learn to implement the process through a series of specific design projects. Material fee: \$50. Prerequisite: junior standing, pass portfolio review of 200-level classes.

327-3 Esthetics. General survey of historical and contemporary philosophies of the beautiful with particular emphasis upon their relation to visual works of art and individual student research leading to the organization and presentation of a personal esthetic concept. Prerequisite: 207b or consent of instructor.

328-3 Art Education Methods – Elementary. Lecture and Studio. Prepares students to teach children the fundamentals of art production, criticism, and aesthetics. Areas of focus include teaching strategies and methods, art processes and techniques, the appropriate use of tools and materials, and the incorporation of aesthetics, criticism, and art history in their lessons. The use of technology and adaptive teaching will be emphasized. Studio fee \$45. Observation, assistance and pre-teaching in our Saturday Young Artists Workshops (8 weeks).

332-3 Computer Graphics. Advanced-level computer graphics in two-dimensional design and an introduction to three-dimensional design and animation. Oriented toward solving practical design problems using computers and graphical software. Prerequisite: 242 or consent of instructor. Software fee \$75.

337-3 History of Industrial Design. Introduction to the history of industrial design, surveying significant trends and examining the variety of forces, social, economic and political, that have shaped its forms and characterized its human role. Prerequisite: 207a, b.

338-3 Art Education Methods – Secondary. Lecture and studio. Prepares students to teach adolescents the fundamentals of art production, criticism and aesthetics. Areas of focus include teaching strategies and methods, art processes and techniques, the appropriate use of tools and materials and the incorporation of aesthetics, criticism, and art history in their lessons. The use of technology and adaptive teaching will be emphasized. Studio fee \$45. Observation, assistance and pre-teaching in our Saturday Young Artists Workshops (8 weeks).

339-3 History, Theory and Criticism of Graphic Design. An introduction to critical theory and to the history and criticism of graphic design with emphasis on 20th century and contemporary design. Screening fee: \$10. Prerequisite: 207c.

347-3 Survey of 20th Century Art. A survey of the major developments in painting, sculpture, architecture, and other selected areas of the visual arts from the late 19th century to the end of the 20th. These developments are studied in relation to other significant cultural, political, scientific and philosophical events and ideas. **(a)** Covers late 19th to mid-20th century art and culture **(b)** Covers the middle to the end of the 20th century.

348-3 Studio Art for Classroom Teachers. Lecture and studio for non-art majors. Especially applicable to early childhood, elementary, inclusive, and special education programs. Introduction to uses and applications of art media, approaches to teaching and artistic awareness, concept development, creative expression, appreciation, art judgment, adaptation, and knowledge of artistic heritage. Studio fee \$45.

352-3 Typography II. Problems in composition; combining of typefaces, formats and their applications to a variety of design projects. Emphasis on grid development, multi-page documents. Basic introduction and hands-on experience with interaction/web graphics using creative processes and solutions. Portfolio preparation. Skill and content based. Studio fee \$30. Prerequisite: 322, 339, and successful portfolio presentation.

353-3 Human Factors. An introduction to basic human-machine concepts specifically oriented to design students. Subjects include sensory and motor processes, space and arrangement, and environmental factors in design. Studio fee: \$50. Prerequisite: 213, 223, and 263.

357-3 19th Century European Art. The course will investigate the evolving discourse of modernity in the context of the 19th century European art. It will trace the origins and development of such key modernist ideas as originality, uniqueness, non-conformity, avant-garde and abstraction. The discussion of specific artistic trends, from Neo-Classicism and Romanticism in the first half of the century to Realism, Impressionism, Post-Impressionism, and Symbolism in the second half, will be framed by examination of the social milieu and the changing conditions of art-making and art-selling. In particular, the course will examine development of privately owned art galleries, shift from academic to studio based art education, as well as growing importance of the city and the urban experience. Prerequisite: 207c or consent.

363-3 Product Development. Investigation into project management techniques plus a variety of materials and processes related to product cost estimating and selection for efficient production. Course parallels specific design work in 383 and must be taken concurrently. Studio fee: \$45. Prerequisite: C or better in 323.

372-3 to 6 Graphic Design I. Problems in promotional design applications including campaigns, packaging and advertising graphics. Emphasis on professional realities, self promotion, resumes and portfolio preparation. Studio fee: \$30. Prerequisite: concurrent enrollment in 339.

383-3 Practicum in Industrial Design. Advanced comprehensive product design projects developed into production prototypes. Prerequisite: C or better in 323 and to be taken concurrently with 363.

388-1 to 36 Study Abroad. Provides credit toward the undergraduate degree for study at an accredited foreign institution or approved overseas program. Final determination of credit is made on the student's completion of work. Prerequisite: one year of residence at this university, good academic standing, and prior approval of the department.

389-3 BFA Seminar. Class helps prepare BFA majors for life after school in the art world. Portfolio enhancement covered; work on resume, autobiographical, aesthetic and educational statements. Slide quality and gallery discussions also covered. Partially satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for art majors.

400-3 to 33 (3 to 6, 3 to 6, 3, 3 to 15) Advanced Drawing I. (a) Figure drawing. Not for graduate credit. Prerequisite: 9 hours of 300 with a grade of C or better. **(b)** Individual research. Not for graduate credit. Prerequisite: 6 hours of C or better in 400a. **(c)** Senior thesis. Partially satisfies College of Liberal Arts Writing-across-the-curriculum requirement. Not for graduate credit. Prerequisite: consent of instructor. **(d)** Independent study in drawing. Prerequisite: for undergraduates, 6 hours of C or better in 400b; for graduates, consent of major adviser. Studio fee: for a and b, \$70; for c, \$80; for d, \$8 per credit hour. Incidental expenses may exceed \$100 each section.

401-3 to 33 (3 to 6, 3 to 6, 3, 3 to 15) Advanced Painting I. (a) and **(b)** Individual problem solving with emphasis on technical and conceptual synthesis. Not for graduate credit. Prerequisite: for a, 301a, b, c with a grade of C or better; for b, 6 hours 401a with a grade of C or better. **(c)** Senior thesis. Partially satisfies College of Liberal Arts Writing-across-the-Curriculum requirement. Not for graduate credit. Prerequisite: consent of instructor. Studio fee: \$80. **(d)** Independent study in painting. Prerequisite: for undergraduates, 6 hours of C or better in 401b; for graduates, consent of major adviser. Studio fee for a, b and d, \$4. Incidental expenses may exceed \$100 for each section.

402-3 to 33 (3 to 6, 3 to 6, 3, 3 to 15) Advanced Printmaking I. (a) Advanced techniques in printmaking to include intense work in color printing. Not for graduate credit. Prerequisite: C or better in 302-6 hours. Studio fee: \$60. **(b)** Individual research with emphasis on history, processes, and ideas which lead to the formation of personal content. Not for graduate credit. Prerequisite: 6 hours of C or better in 402a. Studio

fee: \$60. (c) Senior thesis. Partially satisfies College of Liberal Arts Writing-across-the-Curriculum requirement. Not for graduate credit. Studio fee: \$30 per credit hour enrolled. Prerequisite: consent of instructor. Studio fee \$80. (d) Independent study in printmaking. Prerequisite: for undergraduates, 6 hours of C or better in 402b; for graduates, consent of major adviser. Studio fee: \$20 per credit hour enrolled. Incidental expenses may exceed \$50 for each section.

403-3 to 33 (3 to 6, 3 to 6, 3, 3 to 15) Advanced Sculpture I. (a) Foundry techniques and direct metal fabrication. Not for graduate credit. Studio fee: \$20 per credit hour. Prerequisite: C or better in 303-6 hours. (b) Individual research with emphasis on history, materials, processes, and ideas that form personal content. Not for graduate credit. Studio fee: \$20 per credit hour. Prerequisite: 6 hours of C or better in 403a. (c) Senior thesis. Partially satisfies College of Liberal Arts Writing-across-the-Curriculum requirement. Not for graduate credit. Studio fee: \$30 per credit hour. Prerequisite: consent of instructor. (d) Independent study in sculpture. Studio fee: \$20 per credit hour. Prerequisite: for undergraduates, 6 hours of C or better in 403b; for graduates, consent of major adviser. Incidental expenses will be incurred.

404-3 to 30 (3, 3 to 6, 3, 3 to 15) Advanced Ceramics I. (a) Assigned individual problems with emphasis on ceramic form and glazing. Not for graduate credit. Studio fee: \$50 per credit hour enrolled. Prerequisite: C or better in 304-6 hours. (b) Individual research with emphasis on kiln theory and design. Not for graduate credit. Prerequisite: C or better in 404a. (c) Senior thesis. Partially satisfies College of Liberal Arts Writing-across-the-Curriculum. Not for graduate credit. Studio fee: \$55 per credit hour enrolled. Prerequisite: consent of instructor. (d) Independent study in ceramics. Prerequisite: undergraduates, 6 hours of C or better in 404b; graduates, consent of major adviser.

405-3 to 30 (3, 3 to 6, 3, 3 to 15) Advanced Metalsmithing. (a) Emphasis will be placed on advanced processes to develop individual expression. Not for graduate credit. Studio fee: \$120. Prerequisite: C or better in 305a, b. (b) Media exploration to develop individual styles. Not for graduate credit. Studio fee: \$90. Prerequisite: C or better in 405a. (c) Senior thesis. Partially satisfies College of Liberal Arts Writing-across-the-Curriculum requirement. Not for graduate credit. Studio fee: \$40 per credit hour enrolled. Prerequisite: consent of instructor. (d) Advanced metalsmithing I. Studio fee: \$20 per credit hour enrolled. Prerequisite: for undergraduates, 6 hours of C or better in 405b; for graduates, consent of major adviser. Incidental expenses may exceed \$75 for each section and may be slightly higher for blacksmithing.

407-3 Ancient Art. Ancient art of the Mediterranean area from the Egyptians to the end of the Roman Empire. A survey of the major cultures, with emphasis upon visual analysis, media and techniques, function, and iconography. Field trip required. Documented research paper on an aspect of ancient art required for graduate credit. Prerequisite: 207a or consent of instructor.

413-3 Professional Practice in Industrial Design. The study of designer/client relationships, business practices, design office procedures, and professional ethics. Not for graduate credit. Prerequisite: C or better in 363, 383 and senior standing or consent of instructor. Partially satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for design majors.

414-3 to 30 (3, 3 to 6, 3, 3 to 15) Advanced Glass I. (a) Introduction to basic fundamentals and techniques of glassblowing and hot glass working. Not for graduate credit. Studio fee: \$60 per credit hour enrolled. Prerequisite: C or better in 314a and b or consent of instructor. (b) Advanced glassblowing and hot glass working, including surface decoration, extension of technical expertise and basic equipment design. Not for graduate credit. Studio fee: \$80 per credit hour enrolled. Prerequisite: C or better in 414a. (c) Senior thesis. Partially satisfies College of Liberal Arts Writing-across-the-Curriculum requirement. Not for graduate credit. Studio fee: \$65 per credit hour. Prerequisite: consent of instructor. (d) Independent study in glass. Studio fee: \$80 per credit hour enrolled. Prerequisite: for undergraduates, C or better in 404b; for graduates, consent of major adviser.

415-4 A Creative Look at Reclamation Possibilities for Massively Disturbed Land. Presents the possibility that massively disturbed areas can be aesthetic resources if potential inherent in these sites can be recognized and addressed. Seminar/lecture/studio format with selected lectures given by invited speakers. Discussions include recognition of massive land disturbance; reclamation as a concept; environmental art and design; the questions a potential developer or designer of disturbed land should ask and where they might look for expert advice; and group critiques on student studio projects. Studio projects will involve the visualization in two- and three-dimension formats of plans for the reclamation of the students' chosen site with accompanying documentation.

417-3 Medieval Art. Medieval art from the Fourth to the Fifteenth Century in Western Europe. Examination of selected art objects in terms of media and techniques, iconography, function, and cultural milieu. Field trip required. Documented research paper on an aspect of medieval art required for graduate credit. Prerequisite: 207a or consent of the instructor.

423-3 Research in Industrial Design. The objective of this studio course is to develop the student's ability to conduct in-depth product design research and to explore new needs and trends relating design to society. Focus is placed on raising the student's level of design skill and knowledge to the professional level. This senior studio places increasing responsibility on the student to think through their preparation and career direction. Studio fee \$50. Prerequisite: C or better in 363 and 383.

427-3 Renaissance Art. An examination of various topics appropriate to a study of Renaissance art, both Northern and Italian, during the Fifteenth and Sixteenth Centuries in Europe. The emphasis is on a range of art history problems and methods of approach. Field trip required. Prerequisite: 207a or consent.

428-3 Native North American Art. Arts and material culture of traditional Native North American cultures, including the Northeast, Woodland and Mississippian areas, Plains, Southwest, West, Northwest Coast, Arctic and sub-Arctic. Fiber arts, sculpture, architecture, ceramics, metals, beads, role of the arts. St Louis Art Museum and Cahokia Mounds required field trips.

429-3 Portfolio. An introduction to all of the tricks, traps and topics an interviewer will pursue during the interview process. Prepares graduating seniors for the cold, hard facts of what is going to happen during the job search, after they get hired and when they get fired. Subjects to include: cover letters, resume, preparing a portfolio, interviewing, corporate structure, dress, money, politics, changing jobs, legal rights, sexual harassment, job leads and how to survive when-and-if you do get hired. Not for graduate credit. Prerequisite: senior standing.

437-3 Baroque and Rococo Art. An examination of various topics appropriate to a study of Baroque and Rococo art in Western Europe. Emphasis upon a range of art historical problems and methods of approach. Field trip required. Prerequisite: Art 207a or b or consent of instructor.

438-3 Writing About Art and Design. This course seeks to provide undergraduate and graduate students with the skills they need for writing both short critical essays and substantial research papers on the visual arts. It introduces students to basic research methods and to theoretical approaches that inform writing about the arts. The course is required for art history majors and is strongly recommended for incoming graduate students in art. Partially satisfies College of Liberal Arts Writing-Across-the-Curriculum requirement. Prerequisite: 207a, b, c or consent of the instructor.

443-3 Professional Practice II. This course is a continuation of 413, Professional Practice I. Focus is placed on portfolio preparation, job search, interviewing techniques and preparation of all documentation required for senior degree project. Not for graduate credit. Prerequisite: C or better in 413. Partially satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for design majors.

447-3 Introduction to Museology. A survey of museum and gallery techniques (emphasis upon practical exhibit development) which will involve answering questions concerning contractual agreements, taxes, insurance, packing, shipping, exhibit design and installation, record systems, general handling, public relations, and sale of art works directed toward problems encountered by the artist outside the privacy of the studio. Prerequisite: art major or consent of instructor.

448-3 Art of Tribal Cultures. Covers a broad range of arts of Africa, Native North America, Pre-Columbian America and Oceania, primarily sculpture, textiles, masking and performance, body decoration and textiles, architecture, and ceramics of small-scale village societies.

452-3 to 6 Graphic Design II. Multifaceted problems with emphasis on continuity of design in more than one medium or format. Client-based projects, environmental graphics and identity issues in design. Professional proposals and portfolio preparation. Not for graduate credit. Partially satisfies the College of Liberal Arts Writing-across-the-Curriculum requirement. Studio fee: \$30. Prerequisite: 322, 339, 352 or concurrent enrollment, 372, and successful portfolio presentation.

458-3 African Arts. Covers a broad range of the arts primarily of west and central Africa, as well as north, south, and east Africa. Includes sculpture, masking and performance, body decoration and textiles, and architecture. Shows how arts are used in the daily life of traditional village societies in these areas.

459-1 to 6 Internship. Supervised work experience related to student's academic program and career objectives. Not repeatable for credit. Not for graduate credit. Prerequisite: consent of design area head. Mandatory Pass/Fail.

463-4 Products for Special Populations. Products for special subset groups within greater population norms. May be of cross-cultural and interdisciplinary implementation. Not for graduate credit.

467-3 Critical Issues in Contemporary Art. An examination of the style and meaning of contemporary art in relation to the current political, social, and cultural issues. Will include visual arts, architecture, and communications media. Prerequisite: 207a and b or consent of instructor.

468-3 Pre-Columbian Art. Covers architecture, textiles, pottery, metal, and 2-D arts of Meso-, Central, and South America during the Pre-Columbian era. Also includes hieroglyphic and calendrical systems and some Post-Columbian era arts as well.

472-3 to 6 Graphic Design III. Special study in current communication design topics. Selected topics will vary with emphasis on studio problems and concept development. Applied problems in advanced digital technologies may include interaction/motion and/or web design. Portfolio preparation. Studio fee: \$30. Not for graduate credit. Prerequisite: C or better in 322, 339, 352 or concurrent enrollment, 372, and successful portfolio presentation.

477-3 United States Art of the Thirties. This course situates U.S. art of the 1930s within the society that produced it, addressing such issues as the Great Depression, gender and race relations, immigration, the farm crisis, social realism, regionalism, labor relations, and urbanism. The role that government agencies played in this era will be a particular focus of attention. Media discussed include painting, sculpture, architecture, design, crafts, photography, and film. Fieldtrips may be required. Prerequisite: 207c or consent of the instructor.

478-3 Topics In American Art. This course deals with selected topics in the history of both elite and popular art of the Americas, with a focus on the art of the United States. Topics vary, but generally will include the study of architecture, design, crafts, photography and film as well as, or instead of, painting and sculpture. Field trips may be required. Prerequisite: 207c or consent of the instructor.

489-3 (3, 3, 3-6, 3-6) Senior Thesis. The culminating experience for majors. (a) Thesis for industrial design. Creative project development individualized by the student with faculty sponsor. Studio fee: \$40. Prerequisite: C or better in 423 (b) Thesis for art history. Substantial research paper written in consultation with a faculty member. Not for graduate credit. Prerequisite: 438 and senior standing. Partially satisfies the College of Liberal Arts Writing-Across-the Curriculum requirement. (c) Thesis for general design. In-depth design project chosen by student in consultation with a faculty member. (d) Design capstone for visual communication. Development of senior thesis project with formal promotion and documentation. Exhibition. Not for graduate credit. Prerequisite: Completion of senior portfolio, senior standing. Consent of instructor. Partially satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement.

497-3 to 6 (3 per topic) Problems in Art History. A close examination of selected categories of works of art from various periods, media, and cultures as illustrative of particular art historical problems. Topics will vary and include (a) portraiture, (b) landscape and still life, (c) narrative, (d) other selected topics. Sections a through c may be taken only once each, section d may be repeated as topics vary. Art historical perspectives to include formal analysis, iconography, art theory, social history, connoisseurship. Prerequisite: 300-level art history course or consent of instructor.

498-3 Art Criticism. The course will familiarize students with history, methodology and contemporary practice of art criticism through close reading and comparative analysis of key texts. It will also provide students with writing, and critical and analytic skills necessary for writing effective art criticism. Field trip required. Prerequisite: 207 or consent of instructor.

499-1 to 21 Individual Problems. Art studio course directed toward individual research in the student's major field. Emphasis is placed upon the history, materials, processes, and ideas that form the content and experience of the student's major field. Designed to adapt to students' individual needs in problem research. Prerequisite: senior standing in the School of Art and Design, a 3.0 average, and consent of instructor.

Art and Design Faculty

Abdul-Musawwir, Najjar, Assistant Professor, M.F.A., Southern Illinois University Carbondale, 1997.

Abrahamson, Roy E., Associate Professor, *Emeritus*, Ed.D., Columbia University, 1965.

Addington, Aldon M., Associate Professor, *Emeritus*, M.F.A., Cranbrook Academy of Art, 1966.

Archer, Richard E., Assistant Professor, *Emeritus*, M.S., Governors State University, 1979.

Belletire, Steven P., Associate Professor, BFA, University of Illinois, 1971.

Bernstein, Lawrence A., Associate Professor, *Emeritus*, M.F.A., Cranbrook Academy of Art, 1953.

Boysen, Bill H., Professor, *Emeritus*, M.F.A., University of Wisconsin, 1966.

Briggs, Larry S., Associate Professor, B.F.A., University of Oklahoma, 1956.

Busch, W. Larry, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1970.

Chalmers, Patricia, Assistant Professor, M.F.A., University of Minnesota, 2001.

Chametzky, Peter, Associate Professor, Ph.D., City University of New York, 1991.

Deller, Harris, Professor and *Director*, M.F.A., Cranbrook Academy of Art, 1973.

Feldman, Joel B., Professor, *Emeritus*, M.F.A., Indiana University, 1967.

Fink, Herbert L., Distinguished Professor, *Emeritus*, M.F.A., Yale University, 1958.

Gertsman, Elina, Assistant Professor, Ph.D., Boston University, 2004.

Gorman, Carma R., Associate Professor, Ph.D., University of California, Berkeley, 1998.

Gradle, Sally A., Assistant Professor, Ed.D., University of Illinois, Urbana-Champaign, 2004.

Greenfield, Sylvia R., Professor, *Emerita*, M.F.A., University of Colorado, 1967.

Howell, Jason W. Assistant Professor, MFA, University of Oklahoma, 2001.

Kington, L. Brent, Professor, *Emeritus*, M.F.A., Cranbrook Academy of Art, 1961.

Lee, Jiyong, Assistant Professor, M.F.A., Rochester Institute of Technology, 2001.

Lintault, M. Joan, Professor, *Emerita*, M.F.A., Southern Illinois University, 1962.

Lopez, Alex, Assistant Professor, M.F.A., Alfred University, 1998.

Ludwig, Colleen, Assistant Professor, M.F.A., University of Minnesota, 2005.

Mavigliano, George J., Associate Professor, *Emeritus*, M.A., Northern Illinois University, 1967.

Mawdsley, Richard, Professor, *Emeritus*, M.F.A., University of Kansas, 1969.

Monteith, Jerry Carlis, Associate Professor, M.F.A., Cranbrook Academy of Art, 1978.

Onken, Michael O., Associate Professor, *Emeritus*, M.A., Northern Illinois University, 1966.

Palmer, Erin, Associate Professor, M.F.A., Yale University, 1993.

Paulson, Robert L., Professor, *Emeritus*, M.F.A., University of Wisconsin, 1967.

Shang, Xuhong, Associate Professor, M.F.A., Temple University, 1992.

Shay, Edward Holden, Professor, M.F.A., University of Illinois, 1971.

Sloboda, Stacey, Assistant Professor, Ph.D., University of Southern California, 2004.

Smith, Richard E., Associate Professor, M.F.A., Southern Illinois University Carbondale, 1992.

Storkerson, Peter, Assistant Professor, Ph.D., Illinois Institute of Technology, Institute of Design, 2001.

Sullivan, James E., Associate Professor, *Emeritus*, M.A., University of California at Los Angeles, 1965.

Sullivan, Milton F., Professor, *Emeritus*, M.A., Columbia University, 1951.

Urban, Jason, Assistant Professor, M.F.A., University of Iowa, 2002.

Walsh, Thomas J., Professor, *Emeritus*, M.F.A., University of Michigan, 1962.

Wildrick, Christopher A., Assistant Professor, M.F.A. University of Wisconsin Madison, 1999.

Youngblood, Michael S., Associate Professor, *Emeritus*, Ph.D., University of Oregon, 1975.

Zivkovich, Kay M., Associate Professor, M.F.A., Southern Illinois University Carbondale, 1973.

Asian Studies (Minor)

Asian Studies is a minor offered in the College of Liberal Arts. The Asian studies program includes a variety of courses of the languages, civilizations, and contemporary issues of Asia. The program is intended to prepare a student for a number of career options with Asia interests. Through this program, a student may prepare for more advanced work on another campus, may develop a teaching specialty, or may broaden skills and knowledge which would be useful for professional and occupational interests in Asia.

A minor in Asian studies requires a minimum of 20 hours selected from a list of approved courses. Not more than eight hours may be taken in any one department for credit toward the 20 hours.

Automotive Technology (Division, Major, Courses, Faculty)

The Automotive Technology program in the College of Applied Sciences and Arts provides students with an opportunity to obtain a solid foundation of knowledge, experience and skills that will assist in job entry and career advancement in the automotive industry.

Current automotive trends indicate that the automobile will continue to experience changes that include expanded use of electronics and computerized controls for improving engine performance, fuel efficiency, on board diagnostics, exhaust emissions, and passenger comfort and safety. These changes will require persons knowledgeable and highly skilled in specialized areas of automotive technology. This program offers the student an opportunity to specialize in chosen automotive subject areas and offers the opportunity to develop technical, communication and supervisory skills. The student should expect to spend about \$700 for a required basic tool kit consisting of both standard and metric tools and a digital multimeter.

The Automotive Technology program has achieved master certification by the National Institute for Automotive Service Excellence. Instruction is offered in all eight areas of ASE certification—engine repair, automatic transmissions/trans-axles, manual drive trains and axles, front end, brakes, electrical systems, heating and air conditioning, and engine performance. Graduates are encouraged to complete the certification process by taking the ASE certification tests.

An advisory committee composed of leaders in the automotive field provides additional guidance to the program. Current members include representatives from General Motors and GM divisions, Ford Motor Company, DaimlerChrysler Corporation, Toyota Motor Sales, Nissan Motor Corporation, Mitsubishi Motor Sales, Electronic Data Systems, NAPA, automotive dealerships, and wholesale/retail outlets.

Bachelor of Science Degree

The Bachelor of Science Degree in Automotive Technology is designed to provide a combination of automotive technical education, computing skills and communication skills along with theoretical and practical knowledge concerning supervision and management to students interested in careers in the automotive service industry. The program can strengthen previous automotive training received from technical institutes, community colleges, proprietary institutions, industry-related training programs, and the military. The Capstone option is available to qualified A.A.S. graduates entering the Automotive Technology bachelor's degree program as explained in this catalog. Major automotive manufacturers, dealerships and the automotive aftermarket industry are seeking four-year automotive technology graduates. The number of job titles in the area of automotive technology reflects the nature of a diverse and expanding field. Job titles include district

manager in training-service, district manager-service, customer assistance specialist, customer service coordinator, service advisor, dealership service manager, technical training specialist, district manager-sales, zone service manager, field executive, technical writer, field service engineer, and district parts manager. These positions require a four-year degree with skills in communications, management and consumer relations as well as technical knowledge.

All applicants must satisfy standard University baccalaureate entrance requirements in order to be admitted to the University and included in the Automotive Technology (AUT) applicant pool. Enrollment in the Automotive Technology program will be based upon established enrollment criteria. High school graduates will be evaluated on ACT scores, class rank and date of admission to the applicant pool. Students transferring from outside the University or from other SIUC programs into the Automotive Technology program will be evaluated on date of admission to the applicant pool and grade point average as calculated by SIUC.

The Automotive Technology program has signed an Articulation Agreement with the College of DuPage, Parkland College, Kennedy-King College, and Richland Community College. These agreements take full advantage of the Capstone Option discussed in Chapter 3. If you have questions about this agreement, contact the community college advisor or Automotive Technology at (618) 453-4024.

Internship Programs

Automotive Technology majors can participate in the General Motors Global Internship Program. This program allows selected students to serve a paid internship with General Motors during their summer semester. Internship sites are in various locations throughout the United States.

Internship opportunities are also available with DaimlerChrysler Corporation, Toyota Motors Sales, U.S.A., Ford Motor Company, Cummins Engines, and various automotive dealerships.

Students selected for internship programs may earn credit toward graduation for their internship experience.

Bachelor of Science Degree in Automotive Technology, College of Applied Sciences and Arts

AUTOMOTIVE TECHNOLOGY MAJOR

<i>University Core Curriculum</i>	41
<i>Requirements for Major in Automotive Technology</i>	84
AUT 100 and 200 level courses: (or Approved Equivalents)	39
AUT 100, 120, 150, 170, 180, 215, 216, 240, 250 and 280	
AUT 300 and 400 technical courses	15 ¹
Select from: AUT 330, 340, 355, 360, 390, 480, and 490	
Support Courses (or Approved Equivalents)	18
Select one course from the following: MGMT 304, 350, TRM	
364, AUT 325	3
Select one course from the following: ENGL 291, WED 302,	
TRM 316	3
Select two courses from the following: TRM 383, MGMT	
208, ACCT 210, FIN 270, MKTG 304, 350, AUT 435	6
Select one course from the following: AUT 235, CS 200b	3
Select one course from the following: AUT 485, TRM 332,	
MKTG 305, PSYC 323	3
Electives: (discipline related and approved by division)	12
<i>Total</i>	125

¹ Consent of division.

Bachelor of Science Automotive Technology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
AUT 150	6	-	AUT 235 or CS 200b	-	3
AUT 100, AUT 180	3	3	Physics	3	-
ENGL 101,102	3	3	SPCM 101	-	3
AUT 120, 170	3	6	AUT 215, 216, 280	9	-
MATH	-	3	AUT 240, AUT 250	3	9
Total	15	15	Core Social Science	3	3
			Total	18	18
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Science Group II	3	-	TRM 364, MGMT 304, 350 or		
TRM 316, ENGL 291	3	-	AUT 325	3	-
Fine Arts	3	-	Human Health	2	-
AUT 355	6	-	Interdisciplinary	3	-
Humanities	3	3	AUT 435, 330	3	3
AUT 355	-	6	ACCT 201, AUT 490	3	6
AUT 485 or TRM 332	-	3	Multicultural	-	3
Total	15	15	TRM 421 or other selected		
			support course	-	3
			Total	14	15

Courses (AUT)

100-3 Automotive Laboratory Practices. Course covers universal automotive shop practices including, safety, tool usage, fasteners, sealants and measurement devices. Lecture topics cover safety and environmental concerns, service information retrieval and correct application of sealants and fasteners. Laboratory activities include thread repair, automotive measurements, electrical repair, and cutting/grinding equipment usage.

120-3 Automotive Electrical Principles. A course of study in the design and theory of automotive electrical circuits. Particular emphasis placed on the study of how electricity behaves in series and parallel DC circuits, general application of these theories to automotive electrical systems, and the proper use of typical electronic and electrical circuit diagnostic equipment. Also emphasizes the understanding of automotive wiring diagrams, and relay and solenoid operation.

150-6 Internal Combustion Engine Principles. Course combines the study of engine operational theory with practical technical skills. A detailed emphasizes the 720 degree power cycle and the dynamics of engine operation, design and efficiency (thermal, mechanical and volumetric). Laboratory experience consists of engine disassembly, component design study, inspection and measurement of components and engine assembly techniques. Prerequisite: 100 or concurrent enrollment.

170-6 Automotive Powertrain Electronics. Course includes design and operation of solid state devices, wiring, batteries, starting and charging systems, and basic powertrain control systems. Lectures emphasize the operation of these systems and their individual components. Emphasis placed on system diagnosis. Laboratories allow the study of digital multimeters, battery/starting/charging system test equipment and scan tools. Prerequisite: 120 or concurrent enrollment.

180-3 Manual Drivetrains. A detailed study of automotive manual transmission and transaxle assemblies, clutch assemblies, drive axles, and four-wheel drive transfer cases, including an introduction to noise, vibration, and harshness (NVH) diagnostics. Lectures focus on the basic theory of operation and diagnostics of the automotive drivetrain. Laboratory experience provides the opportunity to study approved inspection, maintenance, and diagnostic procedures.

215-3 Automotive Braking Systems. Course covers brake system design, operation and diagnosis. Lectures describe brake system component interrelationships and an introduction to ABS. Special emphasis placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use specialized tools, such as on-the-car lathes, brake bleeding equipment and brake system diagnostic equipment. Prerequisite: 170.

216-3 Automotive Suspension and Steering Systems. Course covers suspension and steering system design, operation, maintenance and diagnosis. Emphasis is placed on component diagnosis and maintenance procedures. Laboratory experience provides students the opportunity to use computerized alignment, wheel balance and vibration correction equipment. Prerequisite: 170.

220-1 to 24 Automotive Cooperative Education. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in prearranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency students performance evaluations and student reports are required. Hours and credits to be individually arranged. Prerequisite: automotive technology major and consent of program.

235-3 Computing for Automotive Applications. Course covers the use of computers and computer systems in the automotive industry. Course uses software and hardware packages in practical automotive industry applications. Course emphasis is on the use of computer based software packages used as management and communication tools.

240-6 Engine Management I. A study of automotive engine electronics. Lectures focus on engine control circuits, fuel injection and ignition systems with emphasis on operation, application and diagnosis. Discussion topics include operational strategies, fuel delivery, sensor inputs and actuator outputs. Laboratory includes the use of electronic diagnostic tools for engine performance diagnosis. Prerequisite: 150, 170.

250-3 Engine Management II. The specialized study of automotive fuels, electronic fuel injection systems, and related emission control systems. Lectures focus on the operational and diagnosis of electronic fuel injection systems and emission control systems. Laboratory experience provides the opportunity to study the use of electronic diagnostic tools, specialized equipment, and diagnostic systems. Prerequisite: 240.

259-1 to 60 Automotive Occupational Training. A designation for credit granted for past documented automotive educational experiences related to the student's educational objectives. Credit will be established by divisional evaluation. This credit may be applied only to 100 and 200 level automotive technical courses as determined by the division coordinator. Prerequisite: automotive technology major.

280-3 Automotive Air Conditioning Systems. A study of refrigeration systems, temperature controls, and automotive HVAC vacuum/electrical circuits. Emphasis placed on environmental impact of refrigerants, environmentally safe refrigerant technology and applicable legislation. Laboratory experiences provide the opportunity to study the use of air conditioning system diagnostic tools, refrigerant recovery/recycling equipment, and diagnostic and repair services. Prerequisite: 170.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of study to fit a particular need not met by other offerings. Each student will work under the supervision of a sponsoring faculty. Prerequisite: approval of the sponsor and division coordinator.

320-1 to 12 Automotive Internship. Students will participate in a program approved automotive related internship that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in prearranged assignments related to their academic program and career objectives. Program faculty evaluations, supervisor performance evaluations, and student reports are required. Internship experiences may be in one of the following areas: automotive service technical, engineering, parts, business, management, training, or government agencies. Hours and credits to be individually arranged. Prerequisite: consent of division coordinator.

325-3 Automotive Fixed Operations Management. An introduction to management of automotive retail fixed operations. A study of the automotive retail industry and environment, developing concepts and methods to improve customer satisfaction along with an increase in market penetration, profits and efficiency are emphasized. Planning of workflow control and human resource management will be included. To enhance the development of students' writing skills, this course has been designated as a Writing Intensive Course. Therefore, this course includes a variety and quantity of writing assignments that meet or exceed a minimum standard set by the college. This course is writing intensive and reflects the Colleges' Communication-Across-the-Curriculum initiative. Prerequisite: English 101 and 102 or consent of division coordinator.

330-3 Vehicle Stability and NVH. Suspension and braking control systems that provide additional safety to vehicle operation. Topics covered include antilock brakes, traction control, electronic stability assist, electronic power steering, variable power steering, active suspensions, and tire pressure monitoring. Course includes techniques in diagnosing noise, vibration and harshness (NVH) concerns. Prerequisite: 215 and 216 or consent of division.

340-6 Drivability and Emission Diagnostics. An in-depth study of electronic engine controls and emission systems. Lectures focus on fuel analysis, advanced diagnostics, legislative regulations and new technologies related to engine controls and emission systems. Laboratory activities include the use of advanced diagnostic tools such as oscilloscopes, scan tools, exhaust gas analyzers, and chassis dynamometer. Prerequisite: 250 or consent of division.

345-3 Automotive Data Management and Analysis. The course covers theory of automotive industry spreadsheet and database management system application and implementation, application of automotive industry proprietary software, and analysis of data for use in decision-making processes. Laboratory provides the opportunity to apply theory in problem based case studies. Prerequisite: 235 or Computer Science 200b.

355-6 Lighting, Convenience, and Safety Systems. Course covers theory of operation and diagnosis of standard body electrical systems. Topics include power windows, power door locks, power seats, lighting, instrumentation, cruise control, and supplemental restraints. Emphasis is placed on analysis of electrical diagrams and development of diagnostic techniques. Laboratory provides the opportunity to practice troubleshooting skills. Prerequisite: consent of division.

360-6 Automotive Transmissions and Transaxles. Course covers the theory of operation, diagnosis and repair of modern transmission. The course will break down the transmission into basic components and provide the depth required for complete understanding of the specific transmission. The laboratory will allow students to understand correct service procedures, and test the transmission on a dynamometer. Prerequisite: junior standing or consent of division.

390-3 to 5 Network Systems and Vehicle Electronics. A study of specialized body electrical systems. Topics include advanced air bag systems, data communication networks, theft deterrent systems, automatic temperature controls, and audio systems. Emphasis is placed on current and developing technologies. Laboratory experiences provide the opportunity to use scan tools, oscilloscopes, and on-board self-diagnostic systems. Prerequisite: junior standing or consent of division.

420-1 to 12 Automotive Service Operations Internship. Each student will be assigned to a University approved work site to engage in work experience related to the Automotive Technology curriculum and the student's career objectives. The student will perform duties and services as assigned by the work site supervisor and internship coordinator. A written assignment is also required as determined by the program. One

hundred hours of successfully completed work is required for each semester hour of credit. Not for graduate credit. Prerequisite: senior standing, consent of program, and employment at an approved work site.

430-1 to 8 Technical Investigations in Automotive Technology. Provides opportunities for students to conduct research in such areas as: federally mandated emission and clean air testing; federally mandated vehicle inspection and maintenance procedures; research in conjunction with industry in the area of computer-based diagnostic software debugging; development of computer data related to computer-based diagnostic systems and computer-based technical information databases; development of training information on federally mandated on-board diagnostic systems, phase II (OBDII); investigation of alternative fuel systems. Not for graduate credit. Prerequisite: junior standing, faculty sponsor and consent of division coordinator.

435-3 Automotive Financial Management and Operations. This course will provide insight into automotive dealership business management with emphasis on application to daily work. Studies will focus on interpretations of financial statements and on business management techniques essential to successful dealership operations. Not for graduate credit. Prerequisite: English 102.

475-1-8 Special Projects in Automotive Technology. Investigation of contemporary problems and issues within the automotive service field. Example subjects include state and federally mandated vehicle emission laws; safety; required inspection and maintenance procedures; consumer protection legislation – lemon laws; on-board diagnostic systems; hazardous automotive waste materials regulations; automotive retail management systems and procedures. Independent study. Not for graduate credit. Prerequisite: junior standing, faculty sponsor and consent of division coordinator.

480-3 Alternative Fueled Vehicles. Study of alternative fuel and energy systems, fuel delivery systems, alternative propulsion systems, hybrid and alternative fueled propulsion. Study of energy conversion, battery design, fuel cells, renewable and fossil fuel included. Environmental concerns with current legislative actions will be discussed. Laboratory includes demonstrations with alternative fueled propulsion. Not for graduate credit. Prerequisite: 250 or consent of division.

485-3 Automotive Warranty Administration and Customer Relations. This course investigates the various federal and state laws and regulations impacting the operations of the automotive wholesale and retail business. There will be specific concentration on the warranty policies of automotive manufacturers, warranty decisions, law covering warranties, and the legal aspects of product campaigns. Emphasis will be placed on the use of the warranty and goodwill process to increase customer satisfaction. Not for graduate credit. Prerequisite: junior standing.

490-6 Comprehensive Vehicle Diagnostics. Course encompasses all technical areas of the vehicle with emphasis on diagnostic strategies and routines. Student engage in systematic diagnosis following the Symptom to System to Component to Cause (SSCC) strategy to determine the root cause of failure. Course utilizes problem-based learning through the use of lab vehicles, experiments and exploratory research. Not for graduate credit. Prerequisite: 235, 340, 360, or consent of division.

Automotive Technology Faculty

Behrmann, Michael, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1995.

Bencini, William, Assistant Professor, M. A. Northern Arizona University, 1986.

Boyle, Sean M., Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1996.

Cash, Joe R., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1996.

Collard, Rodney, Associate Professor, M.S.Ed., Southern Illinois University Carbondale, 1990.

Engelhardt, Steve, Assistant Instructor, B.S., Minnesota State University Mankato, 2003.

Gilbert, David W., Associate Professor, M.S., Oklahoma State University, 1981.

Greer, Jack, Assistant Professor and *Chair*, M.S.Ed., Southern Illinois University Carbondale, 1997.

Janello, Tim, Assistant Professor, B.A. Western Illinois University, Macomb, 2003.

Jeraldus, Lawrence E., Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1988.

Kazda, Joseph G., Assistant Professor, *Emeritus*, M.S.Ed., Southern Illinois University Carbondale, 1965.

Komnick, Benjamin, Assistant Professor, B.S., Southern Illinois University Carbondale, 1993.

Morris, Michael D., Assistant Professor, *Emeritus*, M.S.Ed., Southern Illinois University Carbondale, 1997.

Simpson, Jerry, Assistant Professor, *Emeritus*, M.S., Colorado State University, 1966.

White, James E., Assistant Professor, *Emeritus*, B.S.Ed., Southern Illinois University Carbondale, 1961.

Aviation Flight (Major, Courses, Faculty)

The Aviation Flight program is designed to prepare beginning students for the Federal Aviation Administration Commercial Pilot Certificate including the multi-engine and instrument ratings. Instruction is conducted at Southern Illinois Airport, Carbondale, Illinois. Flight theory courses will supplement and complement each flight course. In order to maintain the highest possible standards for flight and theory courses, each lesson of every course is submitted to

and approved by the Federal Aviation Administration. FAA designated check pilots will examine the student's performance and effectiveness periodically during each flight course. University Core Curriculum Requirements and basic science courses will be supplemented with a required core of flight courses and other related technical courses to enhance the student's professional value to the aviation industry. In addition to the University tuition and fees, substantial lab fees are assessed for each flight course. For current charges, contact the Aviation Flight program.

The Associate of Applied Science degree can be completed in two academic years plus one summer semester at Southern Illinois University Carbondale or in combination with community college or other acceptable extra-instructional educational experience; however, the twenty-one semester hours of aviation flight courses must be taken at SIUC. If a Private Pilot certificate is earned prior to enrollment at SIUC, students will be required to take AF199. Upon successful completion of AF199, credit will be given for AF201a and 201b. Contact the Aviation Flight program at (618) 453-1147 for further information.

The aviation flight degree program requires the submission of a program application in addition to the University admission application. You cannot be fully admitted to the SIUC Aviation Flight Program until the response to the second application is received. It is recommended that the program application be completed and returned to the Aviation Flight Program by December 1 of the year prior to desired Fall enrollment in the program or four months prior to desired spring or summer term entry.

After completing the Aviation Flight program the majority of graduates proceed on to a Bachelor of Science in Aviation Management (AVM) degree program on a "Two-Plus-Two" basis. In conjunction with enrollment in the Aviation Management program, Aviation Flight graduates are eligible for a wide range of flight operations internships at such airlines as American Trans Air, United, Delta, United Parcel Service, Northwest, Chicago Express/ATA Connection, American, and Midwest Airlines. Also available is a flight internship experience via the SIUC Aviation Flight program as a flight instructor. Finally, Aviation Flight 304 "Practicum in Air Carrier Operations" offers post-associate course work and flight experience as a pilot in command of the university's twin-engine aircraft.

Associate In Applied Science Degree in Aviation Flight, College of Applied Sciences and Arts

AVIATION FLIGHT MAJOR

University Core Curriculum Requirements

English 101, 102, Speech Communication 101, University Core Group I science and University Core Curriculum mathematics or equivalent	15
--	----

Requirements for the Major in Aviation Flight

Geography and Environmental Resources 330	4
Approved elective course	3
Core Requirements	38
Aviation Flight Courses: 201a,b, 203, 204, 206, 207a, b	21
Aviation Flight Technical Courses: 200, 202, 205, 210, 260	17

Total 60

Aviation Flight Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
AF 200, 202.....	3	3	Elective, AF 260	2	4
AF 201a,b, 203.....	5	5	AF 204, 205	5	3
ENGL 101, 102	3	3	AF 210, 206	4	2
GEOG 330, MATH	4	3	SPCM 101, ASA 126	3	4
			AF 207a,b	2	2
Total	15	14	Total	16	15

Courses (AF)

199-2 Intermediate Flight/Program Transition. This course is for the first time entry level student certificated as a Private Pilot who was certified and trained outside SIUC. It provides orientation training in the areas of SIUC flight procedures and standards, SIUC flight training aircraft, local airspace and airport environments. The course as delivered will consist of twenty hours (20) of ground instruction, fourteen (14) hours of flight instruction, and will be restricted to Aviation Flight Majors only. Upon successful completion with a grade of C or better, credit will be posted for AF 201a and 201b and the student will be able to enroll in AF203. Credit in AF 199 does not count in the Aviation Flight major. Fee: \$1,800.

200-3 Primary Flight Theory. Prepares the beginning aviation student for the FAA Private Pilot Written Examination. Consists of instruction in aerodynamics, FAA regulations, primary navigation, use of computer, weather, and radio navigation.

201A-3 Primary Flight I. Provides flight instruction in preparation for solo flight. Consists of dual flight instruction, limited solo flight and ground instruction in conjunction with each training flight and other flight-related topics. Prerequisite: admission to the SIUC aviation flight program.

201B-2 Primary Flight II. Provides flight instruction in preparation for the acquisition of the private pilot certificate, as well as serves as a prerequisite for 203 for those entering the aviation flight program who already possess a private pilot certificate. Consists of dual flight instruction, solo flight, and ground instruction in conjunction with each training flight and other flight-related topics. Fee: \$3,860. Prerequisite: 201a or FAA private pilot certificate.

202-3 Flight — Basic and Intermediate Theory. Instruction in Federal Aviation Administration regulations pertaining to commercial flight operations. Includes advanced instruction in aerodynamics, weather and safe operation of aircraft. Prerequisite: 200.

203-5 Flight — Basic. Beginning course in preparation for the Commercial Certificate. Major emphasis is upon solo and solo cross-country flight, with ground instruction in conjunction with each training flight and other flight related topics. Prerequisite: 201 and a valid Private Pilot Certificate.

204-5 Flight — Intermediate. Continuing preparation for the Commercial Certificate. Including dual, solo and night flight instruction and advanced maneuvers. Ground instruction is provided in conjunction with each training flight. Prerequisite: 203.

205-3 Flight — Instrument Theory. Course is directed to the theory of flight by instrument. Includes classroom instruction in Federal Aviation Administration regulations pertaining to instrument flight, navigation by radio aids, aviation weather, and function, use, and limitations of instruments required for instrument flight. Prerequisite: 202.

206-2 Flight — Instrument. This course continues preparation for the Commercial Certificate. Includes instrument flight instruction. Fee: \$5,602. Prerequisite: 203, 204.

207A-2 Flight Advanced. This course completes the requirements for the Commercial Certificate. Includes dual and solo flight maneuvers. Prerequisite: 206.

207B-2 Flight Multi-Engine Operations. Prepares the student for the FAA Multi-Engine rating (airplane). Includes multi-engine flight instruction and individual ground instruction. Prerequisite: 207a.

210-4 Human Factors for Aviators. Provide the student specialized instruction in the areas of: physiological aspects of aviation, psychological aspects of aviation, aeronautical decision making and crew resource management. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: 202, English 101 or consent of program.

211-3 Aviation Weather. The course will provide both understanding and application of weather theory in relation to commercial flight operations. This course includes regulations issued by the Federal Aviation Administration relating to weather and safe flight. Problem based learning situations and presentations in the classroom on the adverse effects of weather are presented to increase hazardous weather awareness for pilots.

260-4 Reciprocation and Jet Airplane Systems. Students will have knowledge of construction, operation, and components of reciprocating and jet powerplants. They will understand the operation and components of cabin pressurization and air conditioning systems, flight control systems, landing gear systems, fuel systems, electrical systems, anti-icing systems, and fire detection systems.

300-2 Flight-Instructor (Airplane). Prepares the commercial pilot for an FAA Flight Instructor Certificate. Includes 20 hours of dual flight training and 40 hours of specialized ground instruction. Prerequisite: 206.

301-1 Flight-Instructor (Airplane-Multi-Engine). This course consists of five hours of dual flight instruction and 10 hours of classroom instruction. Prepares the holder of flight instructor certificate for the addition of the multi-engine flight instructor rating. Prerequisite: 300.

302-1 Flight-Instructor (Airplane Instrument). Designed to prepare the flight instructor to teach instrument flying, and to acquire the Instrumental Flight Rating. Course consists of ten hours of dual flight instruction and 15 hours of classroom instruction. Prerequisite: 300.

303-3 Flight Instructor Ground School. This course is designed to aid the student who is obtaining a flight instructor's rating. It will cover principles to teaching as well as practical aspects of teaching flight maneuvers necessary for instruction. Prerequisite: 205.

304-2 Practicum in Air Carrier Operations. Students gain practical experience and training by participating as flight officers on passenger aircraft flights. Enables students to practice, under close supervision, the role of first officer within a passenger carrier format. Course includes 20 hours of flight time and a minimum of 40 hours pre- and post-flight activities and instruction. Mandatory Pass/Fail. Prerequisite: 206, 207 and consent.

305-3 Airline and Turbine Aircraft Operations. This course uses a combination of class lectures and computer based flight training to develop an understanding of airline operational requirement and turbine aircraft operations. Topics include: turbine aircraft systems, Federal Aviation Regulation part 121 regulations, airline operational specifications, advanced aircraft avionics, advanced weather avoidance, crew resource management and airline career professional development. The course format includes a two hour lecture period and a two hour computer based flight training device session per week. Prerequisite: 207b, or consent of the department.

Aviation Management and Flight Faculty

Armstrong, Connie, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 1989.

Biggs, V. Eugene, Assistant Professor, Emeritus, M.S., Southern Illinois University Carbondale, 1971.

Bowman, Terry S., Associate Professor, Emeritus, Ph.D., Southern Illinois University Carbondale, 1993.

Carter, Kim, Visiting Assistant Instructor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1996.

Geighes, Christopher, Assistant Instructor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1998.

Irwin, William, Visiting Assistant Instructor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1996.

Kampe, David, Visiting Assistant Instructor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1997.

Kaps, Robert W., Associate Professor, Ph.D., Southern Illinois University Carbondale, 1996.

Martinez, Richard, Visiting Assistant Instructor, M.S., Central Missouri State University, 1998.

Mortag, Keith, Assistant Instructor/Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1995.

NewMyer, David, Professor and Chair, Aviation Management and Flight, Ph.D., Southern Illinois University Carbondale, 1987.

Phillips, Edwin, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 2000.

Ruiz, Jose, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2003.

Ruiz, Lorelei, Assistant Professor/Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1997.

Thiesse, James, Assistant Professor, Emeritus, Ed.D., Auburn University, 1980.

Voges, John K., Assistant Professor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1999.

Widick, Leland, Assistant Professor, Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1994.

Wilson, Keith, Visiting Assistant Instructor, Assistant Chief Flight Instructor, M.S., Southern Illinois University Carbondale, 1997.

Worrells, David, Associate Professor, M.A.M. Embry-Riddle Aeronautical University, 1985.

Aviation Maintenance Technology (Courses)

(SEE AVIATION TECHNOLOGIES MAJOR)

Courses (AMT)

110-4 Aircraft Structure-Fabrication and Repair. Students will be able to identify and select materials employed in aircraft construction. Using appropriate FAR's, they will demonstrate competence in repair of honeycomb, fiberglass, welded, wood, or fabric aircraft members. The student will inspect aircraft members for defects and, if necessary, inspect completed repairs for airworthy condition. Course fee: \$55.

111-4 Materials Processing. Students will be able to identify, select, and inspect aircraft hardware and materials. They will be able to select and apply appropriate cleaning materials and to implement corrosion controls. They will become proficient in the use of precision measurement equipment and related inspection tools. Course fee: \$35.

112-4 Aircraft Electricity. Students will have basic knowledge of electricity generation, AC and DC circuits, and controls. They will be able to solve problems associated with electrical measurement (AC and DC), circuit interpretations and inspection, aircraft electrical load analysis, circuit malfunctions, circuit or component servicing, and basic aircraft electronics. Course fee: \$25. Prerequisite: 201; approved math course; or consent of school.

113-2 Federal Aviation Regulations. Students will be able to select and use FAA technical and legal publications in order to perform the duties of an aircraft technician. Course fee: \$65.

114-2 Aircraft Weight and Balance. Students will fully understand and solve problems of aircraft weight and balance. They will be able to perform weighing, computation of Center of Gravity (C.G.), and establishing of equipment list. Course fee: \$30. Prerequisite: 113, 201; approved math course; or consent of school.

116-3 Aircraft Instruments. Students will have a knowledge of operation, installation, marking, and interpretation of synchro and servo systems, aircraft and powerplant instruments. They will be able to install, adjust, and calibrate these instruments in accordance with FAA and manufacturers' recommendations. Course fee: \$30. Prerequisite: 201, or consent of school.

201-2 Applied Science. Students will be able to understand and demonstrate the application of physical laws including pressure, force, motion, mechanical advantage, heat and sound. The student will interpret blueprints and schematic diagrams and be able to perform basic mechanical drawing using drawing instruments to accomplish orthographic projections, sections and dimensioning of working drawings. Hydraulic

tubes, hoses and fittings will be studied. Course material is directed toward aviation oriented subject matter.

Course fee: \$40.

203-2 Aircraft Aerodynamics. Students will have a knowledge of flight theory and factors affecting aircraft in flight. They will explain and compare aircraft design features in subsonic, transonic, and supersonic aircraft. They will be able to assemble and rig various aircraft control systems, analyzing and correcting faulty flight characteristics. Course fee: \$25.

204-4 Hydraulics (Aircraft). Students will have a knowledge of fluid theory and applied physics which relates to aircraft hydraulics. They will know the theory of operation, maintenance requirements, and adjustments of various hydraulic components and systems. They will be able to test, inspect, troubleshoot, and service hydraulic systems in accordance with technical specifications. Course fee: \$35. Prerequisite: 201; approved math course; or consent of school.

206-3 Cabin Environment and Jet Transport Systems. Students will understand the operation of and be able to identify the components of flight controls, landing gear, fuel, anti-icing, fire detection, and environmental systems of current jet transport aircraft. They will have knowledge of procedures for aircraft ground handling, APU operation, and system servicing. Course fee: \$50. Prerequisite: 203, 210, 212, 213; or consent of school.

206-3 Metals Processing. Students will be able to make appropriate sheet metal repairs using correct repair procedures, tools, and materials. They will be required to demonstrate correct use of and interpretation of structural repair diagrams and correct interpretation of charts and tables from AC 43.13-1B pertaining to materials and methods. Course fee: \$50. Prerequisite: 111, 113, 201; approved math course; or consent of school.

210-2 Aircraft Electrical Systems. The successful student should have a knowledge of the operation, repair, inspection, and service of small and large aircraft electrical systems, using schematic diagrams and training panels. Course fee: \$20. Prerequisite: 112, approved math course; or consent of school.

211-5 Reciprocating Powerplant. Students will have a knowledge of construction, operation, and timing mechanisms associated with aircraft reciprocating powerplants. They will be able to disassemble, clean, measure, inspect, and reassemble a powerplant to airworthy condition in accordance with appropriate FAA and manufacturers' regulations and practices. Course fee: \$60. Prerequisite: 111, 113, 201; approved math course; or consent of school.

212-5 Carburetion, Lubrication, and Fuel. Students will be able to demonstrate their competence in identifying fuels, oils, and related system components including carburetors, understanding the operating principles of each. They will be able to inspect, adjust, troubleshoot, and overhaul these components according to manufacturers' and federal regulations. Course fee: \$40. Prerequisite: 111, 113, 201; approved math course; or consent of school.

213-5 Ignition Systems. Successful students should have a knowledge of the operation, repair, inspection, and service of reciprocating and jet powerplant ignition systems and reciprocating starting systems. They will be able to time, overhaul, and troubleshoot the various components of each system. Course fee: \$40. Prerequisite: 111, 112; or consent of school.

214-3 Propellers. Students will have a knowledge of the physical laws and design characteristics governing propeller operation. They will be able to identify components, troubleshoot, and adjust fixed and variable pitch propellers. They will maintain fixed pitch propellers, and governor systems for variable pitch propellers in accordance with FAA and manufacturers' standards. Course fee: \$35. Prerequisite: 111, 201, 203; or consent of school.

215-5 Powerplant Testing. Students will have an understanding of the correct procedures and precautions to be observed during engine installation, ground operation, and fuel and oil servicing. They will be required to inspect and troubleshoot reciprocating and jet engines for airworthy condition and interpret engine instrument readings to diagnose engine malfunctions. Course fee: \$60. Prerequisite: 210, 211, 212, 213; or consent of school.

216-6 Jet Propulsion Powerplant. Students will be able to apply and understand physics laws related to jet engines. They will be able to identify and understand the operation of jet engines and their components. They will be able to inspect, check, repair, troubleshoot, and adjust jet engines and accessories. They will be able to analyze engine performance and interpret operational charts, graphs, and tables. Course fee: \$55. Prerequisite: 111, 203, 212; or consent of school.

225-6 Aircraft Inspection. Students will be able to perform an annual inspection of an aircraft. They will demonstrate knowledge of FARs, ADs classifying repairs, and specific service problems. They will also complete the required maintenance forms, records, and reports. Students also will learn the effects of human factors in aircraft maintenance. Course fee: \$50. Prerequisite: 110, 112, 114, 116, 203; or consent of school.

230-6 Powerplant Inspection. Students will be able to perform periodic inspection of powerplants. They will demonstrate their knowledge of FAR and application of FAA AD's, Service Bulletins, and proper use of inspection equipment. They will use knowledge learned in the powerplant curriculum to perform malfunction analysis of powerplant and related systems. Live equipment is used on a return-to-service basis. Course fee: \$50. Prerequisite: 214, 215, 216; or consent of school.

Aviation Management (Major, Courses, Faculty)

The aviation management major is designed to build upon technical training in aviation maintenance, flight, avionics technology, air traffic control, aircraft operations support or other aviation-related fields. The technical training may be

gained through Southern Illinois University Carbondale, other post-secondary institutions, proprietary schools, and military, government agencies (international or domestic) or through government certified flight or maintenance training schools. Students entering the Aviation Management major are encouraged to complete the requirements of an aviation-related associate degree under the provision of the Capstone option as explained in Chapter 3. As an alternative to an associate degree in aviation, students in aviation management should have aviation-related work experience, internship experience or technical training. Finally, concurrent enrollment in aviation-related degree programs, internships or technical training is required for those students not having prior aviation training, experience or education. The aviation management degree program requires the submission of a program application in addition to the University admission process.

The Aviation Management program has signed a number of “Program Articulation Agreements” with aviation-related community college degree programs in order to facilitate the transfer of community college aviation students to SIUC. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Aviation Management. This option is available to either on- or off-campus students. The community colleges with which SIUC has signed such an agreement include: Gateway Technical College (WI), Southwestern Illinois College (IL), Indian Hills Community College (IA), Iowa Lakes Community College (IA), Lincoln Land Community College (IL), Mt. San Antonio College (CA), Mercer County Community College (NJ), Miramar College (CA), Mountain View College (TX), Palomar College (CA), Rock Valley College (IL) and City Colleges of Chicago - Wilbur Wright College (IL). If you have questions about how these agreements apply to your personal situation, contact your community college aviation program representative or the academic advisor in the Aviation Management program.

Students who major in aviation management have the opportunity to participate in the following aviation management-related internship programs:

- 1. The American Airlines Flight Operations Internship.
- 2. American Trans Air in Flight Operations, Aviation Management and Aviation Technologies.
- 3. Midwest Airlines, Flight Operation, Internship.
- 4. The Delta Airlines Internship in Flight Operations and Management.
- 5. The Northwest Airlines Flight Operation Internship.
- 6. The United Airlines/SIUC Cooperative Education Program in Aviation Flight and Aviation Management.
- 7. The United Parcel Service Airlines Flight Operations Intern Program.
- 8. Boeing (St. Louis) cooperative education and internship programs.
- 9. The Illinois Aviation Trades Association Intern Program.
- 10. The Midwest Airlines Flight Operations Internship.
- 11. Internships at various Midwest airports.

These internship programs enrich an undergraduate student’s academic experience by “extending the SIU campus” to aviation headquarters or business locations around the nation.

Graduates of the Aviation Management program obtain professional, technical and management positions in aviation manufacturing, the airlines, general aviation, military aviation and government agencies related to aviation.

Bachelor of Science Degree in Aviation Management, College of Applied Sciences and Arts

AVIATION MANAGEMENT MAJOR

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Aviation Management</i>	48

Core Requirements: Twelve hours selected from the following as approved by the adviser: Aviation Management 301, 302, 303, 385, 386	12
Fifteen hours selected from Aviation Management 360, 370, 371, 372, 373, 374, 375, 376, 377, 378, 402, 460, 461	15
Twelve hours selected from the following as approved by the adviser: Aviation Management 300, 319, 320, 349, 350, 401, 450; or approved equivalent	12
Nine hours of additional advisor approved, 300- or 400-level Aviation Management courses or adviser approved specialization electives	9
Approved Career Electives	31
Total	120

Aviation Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
AVM Core	6	6	AVM 372, 373	3	3
AVM 370, 371	3	3	AVM 374, 375	3	3
University Core	3	3	AVM 376, 377	3	3
Independent Study, Internship or approved equivalent.....	3	3	University Core	3	3
			Independent Study, Internship or approved equivalent	3	3
Total	15	15	Total	15	15

Airport Management and Planning Minor

The purpose of this minor is to provide preparation for students who wish to enter the airport-related segment of the aviation industry. This minor requires a total of 15 semester hours of coursework: Aviation Management 370, 372, 374, Political Science 340 and one additional Aviation Management course at the 300- or 400-level. All course prerequisites must be completed prior to enrolling in each course. Students wishing to enter this minor must do so by contacting the Aviation Management advisor

Aircraft Product Support Minor

The minor in Aircraft Product Support is a multi-disciplinary minor offered by The Aviation Management and Aviation Technologies Program. The purpose of this minor is to provide additional preparation for student’s who wish to enter the field of aircraft product support with aerospace manufacturers, suppliers, airlines, the military and related aviation/aerospace industry segments. The courses required to complete this minor include: Aviation Management 301 or 376, 461, Aviation Technologies 370, 380, 390 and one additional approved course from either Aviation Management or Aviation Technologies degree program. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All students who wish to enroll in this minor must do so through either the Aviation Management advisor or the Aviation Technologies advisor. Aviation Management students must complete Aviation Management 301 in their major. Aviation Technologies students must complete Aviation Management 376 in their major.

Courses (AVM)

- 258-1 to 30 Aviation Work Experience.** Credit granted for prior job skills, management-worker relations and supervisory experience while employed in the aviation industry. Credit will be established by program evaluation. This credit may be applied only to the approved career electives requirement of the aviation management degree, unless otherwise determined by the program chair. Prerequisite: aviation management major.
- 259-1 to 60 Aviation Occupational Education Credit.** A designation for credit granted for past occupational education experiences related to the student’s educational objectives in the aviation field. Credit will be established by program evaluation. This credit may be applied only to the approved career electives requirement of the aviation management degree, unless otherwise determined by the program chair. Prerequisite: aviation management major.
- 298-1 Multicultural Applied Experience.** (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affilia-

tion, race, or class. The student can sign up for the one credit experience in the same semester he or she fulfills the multicultural requirement for the University Core Curriculum, or the credit can be coordinated with a particular Core Course on American diversity, although neither is a requirement. Students should consult the respective program for course specifications regarding grading, work requirements and supervision. Prerequisite: Approval of the site representative, faculty supervisor and program.

300-3 Introduction to Aviation Management Research. An introduction to library resources, electronic media resources and formal academic writing styles common to aviation management research. Introduction to basic theories, concepts and practices pertinent to aviation management. May be independent study. Prerequisite: aviation management major or consent of program.

301-3 Aviation Management Writing and Communication. This course is a study of the writing and communication skills used by managers in the aviation industry. Foundations of technical writing style and documentation are followed by descriptions of specific aviation-related technical writing applications such as correspondence, grants, manuals, progress reports and promotional materials. Specialized skills such as conflict resolution, technical presentations and electronic communication complete the course.

302-3 Current Aviation Management Practices and Processes. This course is a study of the structures, processes and skills involved in aviation management. Specific issues such as job design, decentralization, planning, decision-making and leadership will be discussed and related to aviation industry.

303-3 Introduction to Aviation Management. Provides an overview of the aviation industry, available career paths, major challenges, key private and governmental agencies, and the skills and knowledge necessary to succeed within the industry.

319-1 to 15 Aviation Occupational Internship. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid, internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Internships may be performed in any of the following broad areas: (a) Airline; (b) Airport; (c) Corporate aviation; (d) Fixed base operation; (e) Flight instruction; (f) Air traffic control; (g) Government; (h) Consulting firm; (i) Other, as arranged. Hours and credits to be individually arranged. Mandatory Pass/Fail.

320-1 to 12 Aviation Cooperative Education. Students will participate in a program approved cooperative education program that includes formal instruction, training and/or career related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations and student report are required. Cooperative experiences may be in any of the following broad areas: (a) Airlines; (b) Airport; (c) Corporate aviation; (d) Fixed base operations; (e) Flight instruction; (f) Air traffic control; (g) Government; (h) Consulting firm; (i) Other, as arranged. Hours and credits to be individually arranged.

349-3 Readings in Aviation Management. The use of written and electronic media resources relevant to aviation management and the development of an aviation management research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: 300 and aviation management major or consent of program.

350-1 to 32 Aviation Career Subjects. In-depth competency, skill development and exploration of innovative techniques and procedures used in aviation businesses, government operations related to aviation and other aviation related organizations. Subjects and topics may include present or planned future operations as well as domestic or international enterprises. Study of program approved topics or projects may include workshops, special short courses, seminars, research or independent study. Prerequisite: consent of instructor.

360-3 The Air Traffic Control System, Procedures and Rules. This course introduces student pilots and prospective career air traffic controllers to the history, evolution and operation of the United States Air Traffic Control System. Air traffic control procedures and rules are emphasized with student pilots treated as users of the system and prospective career air traffic controllers treated as future air traffic service providers. Students will be able to apply air traffic control procedures and rules when operating aircraft or as air traffic specialists. Prerequisite: Instrument Flight Certificate or consent of program.

370-3 Airport Planning. To acquaint the student with the basic concepts of airport planning and construction, as well as an investigation of various community characteristics and resources.

371-3 Aviation Industry Regulation. Students will study the various regulatory agencies of the industry and their functions. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: English 101 or consent of program.

372-3 Airport Management. A study of the operation of an airport devoted to the phases of lighting, fuel systems, field marking, field buildings, hangars, and surrounding community.

373-3 Airline Management. A study of the administrative aspects of airline operation and management including a detailed study of airline organizational structure.

374-3 General Aviation Operations. A study of general aviation operations including fixed base operations (fuel, sales, flight training, charter, etc.), corporate aviation (business aviation, corporate flight departments, executive air fleets, etc.) and the general aviation aircraft manufacturing industry.

375-3 Legal Aspects of Aviation. The student will develop an awareness of air transportation. The course will emphasize basic law as it relates to contracts, personnel, liabilities, and legal authority of governmental units and agencies. Lecture three hours.

376-3 Aviation Maintenance Management. To familiarize the student with the functions and responsibilities of the aviation maintenance manager. Maintenance management at the fixed base operator,

commuter/regional airline, and national air carrier levels will be studied. Aviation maintenance management problems areas will be reviewed using the case study method.

377-3 Aviation Safety Management. This course will survey the various aspects of aviation flight and ground safety management. Weather, air traffic control, mechanical and human factors in aviation safety management will be reviewed. Case studies of individual aviation accidents and incidents will be analyzed.

378-3 Aviation Security Regulations and Management. Provides a thorough review of the aviation security environment including the key regulations governing aviation security, the key agencies involved in regulating aviation security, and impacts of aviation security regulations on airlines, airports and general aviation companies. Pre and Post 9/11 attack comparisons will be identified in the class and case studies of aviation security problems will be used to illustrate solutions to the problem.

385-3 Air Transport Labor Relations. The body of legislation of governing labor relations in the private sector of the United States economy consists of two separate and distinct pieces of legislation, the Railway Labor Act, which governs labor relations in the railroad and airline industries; and the National Labor Relations Act governing labor relations in all other industrial sectors. This course focuses on the examinations of air transport labor relations in the context of these key laws. As the student and practitioner of aviation management comes in contact with both Acts through this course, the student learns similarities and differences of each and their resultant impact. Such a review will provide an understanding of underlying public policy goals, while acquiring an appreciation and understanding of the collective bargaining process, administration and procedures of the labor arena. The student will actively apply this knowledge in a mock labor negotiation. Prerequisite: Aviation Management major or consent.

386-3 Fiscal Aspects of Aviation Management. An introduction to the fiscal problems encountered in the administration of aviation facilities.

401-3 Analysis of Issues in the Aviation Industry. The identification and study of current economic, regulatory or operational issues impacting the aviation industry. The use of both written and oral reports to present a critical analysis of selected topics. May be independent study. Not for graduate credit. Prerequisite: 349 and aviation management major or consent of program.

402-3 Aviation Industry Career Development. Provides an overall description and forecast of the employment possibilities in the aviation industry, as well as specific information regarding how to apply for such employment. Also covered is the preparation of the future aviation professional for the search for employment including such items as personal assessment, resume construction, interviewing skills, writing letters of appreciation, the use of references, networking, employment referral agencies/services and continuing education. Not for graduate credit. Prerequisite: Aviation Management major or consent.

450-3 Management Problems in the Aviation Industry. The identification and study of problems related to management within the aviation industry. The application of aviation management theories, concepts and practices to the identified management problems. The use of written and electronic media research resources to produce a written problem solving report. May be independent study. Not for graduate credit. Prerequisite: 401 and aviation management major or consent of program.

460-3 National Airspace System. The evolution, current state, and future of the National Airspace System with emphasis on its current and future impact on the domestic and international aviation industry. Defines the Federal Aviation Administration's role in the operation, maintenance, and planned modernization of Air Traffic Control facilities, airways and navigational aids, landing aids, and airports. The users of the system, their needs, and issues with the system's operation and planned modernization are examined. Not for graduate credit. Prerequisite: 360 or consent of program.

461-3 Aviation Product Support Management. This course will acquaint students with concepts and techniques used in analysis and development of an aviation product support program. Concepts discussed in this course will provide a basic understanding of complexities and issues associated with design of a fully integrated aviation product support program. Design considerations, integration of product support into the total product design, support planning and post-delivery support will be covered. Not for graduate credit. Prerequisite: 376 or consent of program.

Aviation Management and Flight Faculty

Armstrong, Connie, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 1989.

Biggs, V. Eugene, Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1971.

Bowman, Terry S., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1993.

Carter, Kim, Visiting Assistant Instructor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1996.

Geighes, Christopher, Assistant Instructor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1998.

Irwin, William, Visiting Assistant Instructor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1996.

Kampe, David, Visiting Assistant Instructor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Kaps, Robert W., Associate Professor, Ph.D., Southern Illinois University Carbondale, 1996.

Martinez, Richard, Visiting Assistant Instructor, M.S., Central Missouri State University, 1998.

Mortag, Keith, Assistant Instructor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1995.

NewMyer, David, Professor and *Chair*, Aviation Management and Flight, Ph.D., Southern Illinois University Carbondale, 1987.

Phillips, Edwin, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 2000.

Ruiz, Jose, Associate Professor, Ph.D., Southern Illinois University, Carbondale, 2003.

Ruiz, Lorelei, Assistant Professor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Thiesse, James, Assistant Professor, *Emeritus*, Ed.D., Auburn University, 1980.

Voges, John K., Assistant Instructor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1999.

Widick, Leland, Assistant Professor, *Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1994.

Wilson, Keith, Visiting Assistant Instructor, *Assistant Chief Flight Instructor*, M.S., Southern Illinois University Carbondale, 1997.

Worrells, David, Associate Professor, M.A.M. Embry-Riddle Aeronautical University, 1985.

Aviation Technologies (Major, Courses, Faculty)

Whether general aviation aircraft or transport, modern aircraft require highly trained technicians to manage hardware, troubleshoot systems and maintain airframe structures and powerplants. The Aviation Technologies program is ranked among the best in the country and was developed with input from industry representatives and the Federal Aviation Administration (FAA) to provide the requisite skills and broad educational experience necessary in today's competitive environment. Optional paths within the major provide a great deal of flexibility in preparing for a career in the aviation industry. Students may pursue the FAA approved airframe and powerplant certificate in a five or seven semester sequence of coursework or they may include the airframe and powerplant certificate, with additional coursework, as part of their four-year bachelor's degree in Aviation Technologies.

The Bachelor of Science degree program in Aviation Technologies is designed to enhance technical training students have received in aviation maintenance or electronics. This technical training may be acquired through SIUC (FAA, airframe and powerplant certificate), at other post-secondary institutions, in the military, or in the case of aviation maintenance, at other FAA approved maintenance schools certified under F.A.R. Part 147.

Additionally, the program of Aviation Technologies has signed a number of "Program Articulation Agreements" with aviation-related community college degree programs to facilitate the transfer of these particular community college aviation students to SIUC. The community colleges with which SIUC has signed such an agreement include: Southwestern Illinois College (IL), Rock Valley College (IL), Gateway Technical College (WI), and Indian Hills Community College (IA).

Unless the student is a freshman interested in the Aviation Electronics specialization or the FAA airframe and powerplant certificate, all students entering the Aviation Technologies program are encouraged to have completed an appropriate associate degree or its equivalent under the provisions of the Capstone Option as explained in Chapter 3. The Capstone Option allows qualified students to fulfill their degree requirements by completing no more than 60 semester hours of coursework beyond their associate degree. Students may choose from three specializations: Aircraft Maintenance, Helicopter Maintenance and Aviation Electronics.

Courses in each of these areas have been selected and designed to provide the student with optimum exposure to theory in the classroom and develop practical, hands-on skills both in the hangar and in specially-designed, task-dedicated laboratories. The Aviation Technologies facilities, located at Southern Illinois Airport between Carbondale and Murphysboro, Illinois, provides students with more than 14 million dollars of the best available equipment including fixed and rotary wing aircraft, airline-type cockpit procedure trainers (CPT's), an advanced composite structures laboratory and computer laboratory. Students should expect to spend \$500 to \$1000 for a tool kit. In addition to university tuition and fees, lab fees are assessed for the lab portions of appropriate courses.

Executives in the aviation industry constitute an advisory committee, which serves the Aviation Technologies program. Current members are: Rudy Bates and

Ty Cross, Bell Helicopter Textron, Inc., Fort Worth, TX.; Raoul Castro, Aerospace International Management, Upland, CA.; Joe Cooley, United Parcel Service Airlines, Louisville, KY.; Joseph A. DePaola, SimuFlite Training International, Dallas/Fort Worth, TX.; Harry B. Fanning, The Boeing Company, Saint Louis, MO.; Robert Harms, Archer Daniels Midland Co., Decatur, IL; Kenneth Hetge, Aviation Capital Group, Newport Beach, Ca.; Terry Washow, U.S. Airways, Chicago, IL.; Jim Fisher, Rockwell Collins Avionics, Cedar Rapids, IA.; David Gallagher, G. E. Aircraft Engines, Cincinnati, OH.; Bryan Oestrich, Midcoast Aviation, Cahokia, IL.

FAA Approved Airframe and Powerplant Certificates Only

First Semester: MATH, AMT 110, 111, 113, 201	17 ¹
Second Semester: AMT 112, 114, 116, 203, 204, 206	18 ¹
Third Semester: AMT 210, 211, 212, 213, 214	20 ¹
Fourth Semester: AMT 205, 215, 216	17 ¹
Summer Session: AMT 225, 230	12 ¹
Total	84

¹A minimum grade of C is required for all AMT courses

Bachelor of Science Degree in Aviation Technologies, College of Applied Sciences and Arts

AVIATION TECHNOLOGIES MAJOR - AIRCRAFT MAINTENANCE SPECIALIZATION

The aircraft maintenance specialization provides students who have completed a FAA approved airframe and powerplant program with the opportunity to advance their technical knowledge and skills in flight management systems, advance composites, advance propulsion systems, and flight line maintenance. Additional elective courses compliment this specialization.

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Aircraft Maintenance Specialization</i>	39
Core Requirements	6 ¹
AVT 317	3
AVT 318	3
Specialization Requirements	15 ¹
AVT 405	3
AVT 410	3
AVT 416	3
AVT 324	3
AVT 325	3
Specialization Electives	18 ¹
AVT 301 AND 302, 303, 304 AND 306, 322, 327, 370, 380, 390, AVM 376, 385, TRM 364 ; or advisor approved electives.	
<i>Technical or Career Electives</i>	40
An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and Powerplant) from an ac- credited college, community college, or technical institute meets this requirement.	
Total	120

¹All aviation technologies and aviation maintenance technology courses require a minimum grade of C.

Aircraft Maintenance Suggested Curricular Guide

FIRST YEAR	FALL	SPRING
ENGL 101, 102	3	3
MATH 108, SPCM 101	3	3
Core Humanities	3	3
Technical Electives	6	6
Total	15	15

SECOND YEAR	FALL	SPRING	Core Multicultural	-	3
Core Science	3	3	Technical Electives	6	6
Core Social Science ¹	3	3	<i>Total</i>	15	15
Core Fine Arts	3	-			
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Interdisciplinary	3	-	Core Human Health	-	2
Specialization Electives	6	-	Specialization Electives	12	-
AVT 324, 325	-	6	Technical Electives	3	7
AVT 317, 318	3	3	AVT 416	-	3
AVT 410	3	-	AVT 405	-	3
Technical Electives	-	6	<i>Total</i>	15	15
<i>Total</i>	15	15			

¹Students may take only one history course to satisfy this requirement.

Bachelor of Science Degree in Aviation Technologies, College of Applied Sciences and Arts

AVIATION TECHNOLOGIES MAJOR - AVIATION ELECTRONICS SPECIALIZATION

The aviation electronics specialization is designed to accommodate freshman or transfer students. Freshmen can pursue a combined electronics and aviation electronics curriculum or a combined FAA Airframe and Powerplant Certificate and aviation electronics curriculum. Transfer maintenance students (airframe and powerplant) will develop flight line maintenance and troubleshooting skills in aviation electronics. Additional elective courses compliment this specialization.

University Core Curriculum Requirements	41
Requirements for Aviation Electronics Specialization	40
Core Requirements	6 ¹
AVT 317	3
AVT 318	3
Specialization Requirements	28 ¹
AVT 322	3
AVT 324	3
AVT 325	3
AVT 327	4
AVT 330	3
AVT 360	3
AVT 365	3
AVT 321	3
AVT 405	3
Specialization Electives	6 ¹
AVT 301 and 302, 303, 304 and 306, 370, 380, 390, 410, 416,	
AVM 376, 385, TRM 364; or advisor approved electives.	
Technical or Career Electives	39
An Associate in Applied Science degree or equivalent certification	
in Aviation Maintenance (Airframe and Powerplant) or Electronics	
from an accredited college, community college, or technical	
institute meets this requirement.	
Total	120

¹All Aviation Technologies and Aviation Maintenance Technology courses require a minimum grade of C.

Aviation Electronics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Core Science	3	3
MATH 108, SPCM 101	3	3	Core Social Science ¹	3	3
Core Humanities	3	3	Core Fine Arts	3	-
Approved Technical Electives	6	6	Core Multicultural	-	3
Total	15	15	Approved Technical Electives	6	6
			Total	15	15

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Interdisciplinary	3	-	Core Human Health	2	-
AVT 321	3	-	AVT 327, 322	4	3
AVT 405	3	-	AVT 330	-	3
AVT 324, 325	-	6	AVT 360	-	3
AVT 317, 318	3	3	AVT 365	-	3
Specialization Elective	3	-	Specialization Elective	-	3
Technical Electives	-	6	Technical Electives	9	-
Total	15	15	Total	15	15

¹Students may take only one history course to satisfy this requirement.

Bachelor of Science Degree in Aviation Technologies, College of Applied Sciences and Arts

AVIATION TECHNOLOGIES MAJOR - HELICOPTER SPECIALIZATION

The helicopter specialization provides students who have completed an FAA approved airframe and powerplant program with the opportunity to advance technical skills in helicopter theory, maintenance and overhaul, and inspection. Additional elective courses complement this specialization.

University Core Curriculum Requirements	41
Requirements for Helicopter Specialization	42
Core Requirements	6 ¹
AVT 317	3
AVT 318	3
Specialization Requirements	18 ¹
AVT 301	3
AVT 302	6
AVT 304	3
AVT 306	6
Specialization Electives	18 ¹
AVT 303, 324 and 325, 370, 380, 390, 405, 410, 416, AVM 376, 385, TRM 364; or advisor approved electives.	
Technical or Career Electives	37
An Associate in Applied Science degree or equivalent certification in Aviation Maintenance (Airframe and Powerplant) from an accredited college, community college, or technical institute meets this requirement.	
Total	120

¹All Aviation Technologies and Aviation Maintenance Technology courses require a minimum grade of C.

Helicopter Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Core Science	3	3
MATH 108, SPCM 101	3	3	Core Social Science ¹	3	3
Core Humanities	3	3	Core Fine Arts	3	-
Technical Electives	6	6	Core Multicultural	-	3
Total	15	15	Technical Electives	6	6
			Total	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Interdisciplinary	3	-	AVT 301, 302	9	-
Core Human Health	-	2	AVT 304, 306	-	9
AVT 317, 318	3	3	Specialization Electives	6	6
Specialization Electives	3	3	Total	15	15
Technical Electives	6	7			
Total	15	15			

¹ Students may take only one history course to satisfy this requirement.

Aircraft Product Support Minor

The minor in Aircraft Product Support is a multi-disciplinary minor offered by the Aviation Management and the Aviation Technologies programs. The purpose

of this minor is to provide additional preparation for students who wish to enter the field of aircraft product support with aerospace manufacturers, suppliers, airlines, the military and related aviation/aerospace industry segments. The courses required to complete this minor include: Aviation Management 301 or 376, 461, Aviation Technologies 370, 380, 390 and one additional approved course from either Aviation Management or Aviation Technologies degree programs. All prerequisites for these courses must be fulfilled prior to enrollment in each course. All students who wish to enroll in this minor must do so through either the Aviation Management advisor or the Aviation Technologies advisor. Aviation Management students must complete Aviation Management 301 in their major. Aviation Technologies students may complete Aviation Management 376 in their major.

Courses (AVT)

199-1 to 10 Individual Study. Provides students with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: instructor and program consent.

258-1 to 30 Aviation-Technology Work Experience. Credit granted for prior aviation technologies related job skills, work experience, management-worker relations and supervisory experience while employed in the aviation industry. Credit will be established by program evaluation. This credit may be applied only to the technical or career electives requirement of the aviation technologies degree, unless otherwise determined by the program.

259-1 to 60 Aviation-Technology Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives in aviation technologies. Credit will be established by program evaluation. This credit may be applied only to the technical or career electives requirement of the aviation technologies degree, unless otherwise determined by the program chair of Aviation Technologies.

301-3 Helicopter Theory and General Maintenance Practice. The student will have an in-depth knowledge of rotary wing aerodynamics, main and tail rotor systems, rotor blades, primary and secondary controls, and general maintenance practices to include inspection and nondestructive testing. Lecture three hours. Prerequisite: FAA certificate with airframe and powerplant ratings; or consent of school.

302-6 Helicopter General Maintenance Laboratory. The student will perform general maintenance on rotary wing main rotor systems, tail rotor systems, flight and powerplant control systems to include malfunction analysis, tracking, static and dynamic balancing, rigging, and repair. Course fee: \$40. Prerequisite: concurrent enrollment in 301; or consent of school.

303-3 Technical Evolution of Aviation. This course will introduce the student to aviation's rich heritage. The coursework will include numerous reading and research assignments to provide the student opportunity to become well acquainted with events, persons and technological developments that have permitted aviation to become what it is today. Emphasis will be placed on the "cause and effect" of selected aviation-related events.

304-3 Helicopter Power Train and Inspection. The student will have in-depth knowledge of the operation, function, and inspection of all rotational components of a rotary wing aircraft to include transmission, gear boxes, drive trains, and drive shafts. Prerequisite: 301; or consent of school.

306-6 Helicopter Power Train Laboratory. The student will perform all functions of overhaul concerned with rotary wing transmissions, gear boxes, and drive trains. The student will demonstrate skill in disassembly, inspection, discrepancy analysis, reassembly, and non-destructive testing. Course fee: \$40. Prerequisite: concurrent enrollment in 304.

317-3 Introduction to Aviation Electronics. This course provides an introduction to electron devices used in analog and digital electronics equipment. Device operation will be analyzed from a theoretical perspective and applied to circuits for power supplies, amplifiers, control devices, and communication data bussing. Practical application will be emphasized in the laboratory. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. An emphasis will be placed on written assignments that simulate documents technicians may be expected to generate on the job. This class will meet two hours per week for lecture and two hours per week for lab. Course fee: \$40. Prerequisite: AMT 112 and English 101; or consent of program.

318-3 Aviation Electronics Control Systems. Coursework is based upon theory and application of analog and digital control systems. Topics include transducers, control input devices, instrument panel displays and feedback sensor circuits. Data recording and monitoring systems will also be presented. Lecture two hours, laboratory two hours. Course fee: \$30. Prerequisite: 317; or program consent.

319-1 to 15 Aviation Technologies Internship. Each student will be assigned to a program approved work site engaged in activities related to the student's academic program and career objectives. The student will be assigned to an unpaid internship position and will perform duties and services in an instructional setting as previously arranged with the sponsoring work site supervisor. Prior program approval, supervisor evaluations and student reports are required. Hours and credits to be individually arranged. Mandatory Pass/Fail. Prerequisite: program consent.

320-1 to 12 Aviation Technologies Cooperative Education. Students will participate in a program approved cooperative education program that includes formal instruction, training, and/or career related work experience. Students may receive a salary or wages and will engage in pre-arranged work assignments related to their academic program and career objectives. Program faculty evaluations, cooperating agency student performance evaluations, and student reports are required. Hours and credit to be individually arranged. Prerequisite: program consent.

321-3 Radio Theory and Practice. Students will have knowledge of Advanced Radio Theory and Practice including Federal Communications Commission requirements for aircraft station licenses, aeronautical ground stations, and radio telephone operator's privileges and limitations. Prerequisite: 317, 318; or consent of school.

322-3 Aviation Radar Systems. Introduces the student to applications of airborne radar equipment, including weather detection and tracking. The student will gain an understanding of installation techniques, system performance specifications, operational analysis and troubleshooting. Lecture two hours, laboratory two hours. Course fee: \$35. Prerequisite: 317 and 318.

324-3 Aviation Electronics Flight Line Maintenance. Students will learn flight line preventive maintenance techniques and will troubleshoot the systems to the faulty line-replaceable-unit (LRU). The student will evaluate system performance as directed by the Federal Aviation Regulations (FARs), as well as equipment manufacturers' specifications. Prerequisite: AMT 112, 210; approved math course; concurrent enrollment in 325, or consent of school.

325-3 Flight Line Maintenance Laboratory. Students will perform selected operational tasks on aircraft systems or simulators, and will perform flight line preventive maintenance tasks and troubleshoot selected aircraft electronic systems. The student will demonstrate the ability to apply ramp-test criteria to selected systems to determine if tested systems meet prescribed standards. Course fee: \$35. Prerequisite: concurrent enrollment in 324; or consent of school.

327-4 Aircraft Communication, Navigation and Pulse Systems. This course will introduce the student to the theory of operation of communication transceivers, navigation receivers, the Air Traffic Control Radar Beacon System (ATCRBS) and Distance Measuring Equipment (DME). Student will be introduced to performance testing and trouble analysis techniques using test equipment. Lecture three hours, laboratory two hours. Course fee: \$25. Prerequisite: 317 and 318; or program consent.

330-3 Advanced Aviation Electronics. This course will enable the student to develop advanced technical skills in aircraft communication, navigation, and pulse systems. Applications will include diagnosing and analyzing state-of-the-art equipment and systems from an operational and fault isolation perspective. Coursework will include applications of emerging technologies in aviation electronics. Lecture two hours, laboratory two hours. Course fee: \$25. Prerequisite: 327; or consent of instructor.

330-1 to 32 Technical Subjects in Aviation Technologies. In-depth competency, skill development and exploration of innovative techniques and procedures used in Aviation Technologies. Study of program approved topics or projects may include workshops, short courses, seminars, research or independent study. Prerequisite: consent of instructor.

360-3 Digital Data Bussing and Electronic Flight Instrument System (EFIS) Theory. This course will introduce the student to digital microprocessor concepts and circuits. The student will be introduced to various digital information data bus systems and electronically generated displays. Data bus protocols, controllers, exchange formats and software used in typical aircraft electronic systems will be explored. Cathode-ray tube display formats used in EFIS indicators will be studied. Lecture three hours. Prerequisite: 318, concurrent enrollment in 365.

365-3 Digital Data Bussing and Electronic Flight Instrument System Laboratory. This course has been designed to enable the student to develop technical skills with the topics studied in 360. The student will construct fundamental digital and microprocessor circuits for analysis and will demonstrate the ability to encode and decode information on standard aircraft data busses. The student will evaluate, test, and troubleshoot brief software routines for digital information transfer. Laboratory six hours. Course fee: \$30. Prerequisite: concurrent enrollment in 360.

370-3 Reliability, Maintainability, and Fault Prediction and Analysis. Students will develop an understanding of the concepts of reliability, maintainability and failure modes to a level which facilitates fault prediction and the analysis of logistical systems. The topics of logic symbols, fault tree analysis, statistical analysis, fault criticality and engineering for reliability and maintainability will be presented as these relate to the maintenance and logistical management of aerospace hardware. Prerequisite: Math 108; or approved substitute and program consent.

380-3 Aerospace Supply Chain Logistics. This course is a study of the logistics of efficiently scheduling, producing, transporting, storing, and supplying components and hardware in the context of the aerospace industry. Students will learn to improve efficiencies in supply chain logistics as correlated with advancements in management information system technology in order to facilitate the delivery of the desired goods and services to the correct location at the proper time. Prerequisite: program consent.

390-3 Management Information Systems for Aerospace Applications. Provides an understanding of various types of Management Information Systems (MIS) currently used in Aerospace Support, focusing on the planning, implementation, and evaluation of these. Through this course, the student will become familiar with MIS applications relevant to aerospace product support activities, learn to evaluate the strengths and weaknesses of various systems designs, develop problem solving and critical thinking skills as apposite to logistics applications, and acquire knowledge of basic database management, design, and security. Course fee: \$20. Prerequisite: 370, 380 or concurrent enrollment, and Information Management Systems 229 or equivalent computer literacy.

405-3 Flight Management Systems. Using industry type computer instruction and flight simulation trainers, students will develop knowledge of the operation and management of autopilots, auto throttles, inertial reference systems, electronic instrument systems, and flight management computers on advanced technology aircraft. Not for graduate credit. Course Fee: \$35. Prerequisite: AMT 205; or Aviation Flight 207a,b; or consent of school.

410-3 Advanced Composites. Topics include the theory and application of advanced composite materials used in modern aircraft structures and engine components. Students will evaluate structures and implement various methods of repair and maintenance using both cold and heated application methods. Not for graduate credit. Course fee: \$60. Prerequisite: AMT 110 or program consent.

416-3 Advanced Propulsion Systems. A study of advanced turbine powerplants and their control systems. Students will demonstrate an understanding of the operation and construction of integrated composite engines and analyze digital control systems. Topics include the interfacing of powerplant controls and monitoring systems, aircraft electronic data bussing and indicating displays. Not for graduate credit. Course fee: \$25. Prerequisite: 317, 318, AMT 216; or program consent.

Aviation Technologies Faculty

Berentsen, Lowell W., Assistant Professor, M.Ed., University of Idaho, 2003.

Birkhead, Larry M., Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1986.

Burgener, Michael A., Assistant Professor, M.B.A., The Citadel, Charleston, SC. 2001.

Cannon, Richard H., Assistant Professor, *Emeritus*, B.S., Southern Illinois University Carbondale, 1982.

Cheek, Billy C., Assistant Professor, M.S., Aviation Safety, Central Missouri State University, 2004.

Cotter, John D., Assistant Professor, *Interim Chair*, M.S. ED., Southern Illinois University Carbondale, 1988.

Hannon, Dennis R., Assistant Instructor, B.S., Loyola University Chicago, 1970; B.S., Southern Illinois University Carbondale, 1999.

Harrison, Matthew W., Assistant Instructor, B.S., Aviation Management, Southern Illinois University, 2002.

Hierholzer, Jeremy C., Assistant Professor, M.A., Western Michigan University, 1998.

Kolkmeier, Robert O., Associate Professor, *Emeritus*, M.S. ED., Southern Illinois University Carbondale, 1971.

Milton, William C., Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1986.

Most, Michael T., Associate Professor, M.A., Central Washington University, 1974.

O'Brian, Benjamin H., Assistant Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1985.

Ohman, Lennart R., Assistant Professor, *Emeritus*, B.S., University of Illinois, 1964.

Rodriguez, Charles L., Assistant Professor, Ph.D., Southern Illinois University Carbondale, 1997.

Russell, Lewis G., Assistant Professor, *Emeritus*, M.S. ED., Southern Illinois University Carbondale, 1978.

Sanders, Robert F., Assistant Professor, *Emeritus*, M.S. ED., Southern Illinois University Carbondale, 1986.

Staples, Laurence C., Assistant Professor, *Emeritus*, B.S., Southern Illinois University Carbondale, 1975.

Sullivan, Karen J., Assistant Instructor, B.S., Aviation Maintenance Technology, Central Missouri State University, 1999.

Verner, Gerry D., Assistant Professor, *Emeritus*, B.S., Southern Illinois University Carbondale, 1973.

Biochemistry (Courses, Faculty)

Biochemistry (BCHM) courses at the advanced undergraduate level are offered by the Department of Biochemistry and Molecular Biology. Faculty members of the Biochemistry and Molecular Biology department are also involved in School of Medicine programs, the Physician Assistant program and graduate program in Molecular Biology, Microbiology and Biochemistry (MBMB).

Courses (BCHM)

451-6 (3,3) Biochemistry. (Same as Chemistry 451 and Molecular Biology, Microbiology and Biochemistry 451.) (a) Chemistry and function of amino acids, proteins and enzymes; enzyme kinetics; chemistry, function, and metabolism of carbohydrates; citric acid cycle; electron transport and oxidative phosphorylation. (b) Chemistry, function, and metabolism of lipids; nitrogen metabolism; nucleic acid and protein biosynthesis; metabolic regulation. Three lectures per week. Must be taken in a,b, sequence. Prerequisite: one year of organic chemistry.

456-3 Biophysical Chemistry. (Same as Chemistry 456 and Molecular Biology, Microbiology and Biochemistry 456.) A one semester course in biophysical chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics and spectroscopy applied to biological systems. Prerequisite: Chemistry 340 and 342, 451a or concurrent enrollment, Mathematics 141 and 150.

490-1 to 3 Undergraduate Research Participation. Investigation of a problem, either individually or as a research group, under the direction of a member of the faculty. Not for graduate credit. Prerequisite: 3.0 grade point average in science courses and consent of instructor.

Biochemistry Faculty

- Bartholomew, Blaine**, Associate Professor, Ph.D., University of California, Davis, 1988

Bhaumik, Sukesh, Assistant Professor, Ph.D., University of Bombay, India, 1997.

Davie, Judith K., Assistant Professor, Ph.D., University of California, Berkeley, 1998.

Gupta, Ramesh, Associate Professor, Ph.D., University of Illinois, 1981.
- Hardwicke, Peter M.D.**, Professor, Ph.D., Kings College, London, 1969.

Niederhoffer, Eric C., Associate Professor, Ph.D., Texas A&M University, 1983.

Schmit, Joseph C., Associate Professor and Chair, Ph.D., Purdue University, 1971.

Bio Fuels

(See Agribusiness Economics)

Biological Sciences (Major)

Biological Sciences is an appropriate major for students wishing to pursue a pre-professional curriculum, planning a teaching career, seeking a career as a laboratory research scientist or pursuing an interest in environmental biology. The Biological Sciences major is an interdepartmental, interdisciplinary major designed to give the student a measure of breadth rather than an in-depth concentration in one particular facet of the biological areas. The curriculum is drawn from the resources of four life science departments, each of which have their own undergraduate degrees.

Students with a major in Biological Sciences may not select one of the four life science areas as a minor, and students electing to pursue a double major may not use more than 11 semester hours of biological sciences courses to satisfy the requirements for both majors. In addition to the biological sciences courses, students are required to take courses in mathematics, physics and chemistry.

Students planning a major in Biological Sciences should consult with the director of the Biological Sciences Program for information concerning specific questions about the curriculum requirements. Students cannot repeat a major course or its equivalent in which a grade of *B* or better was earned without consent of the director of biological sciences.

Bachelor of Science Degree in Biological Sciences, College of Science

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	6-8
Supportive Skills: at least 6 credit hours chosen from Mathematics 282 or 283 or Plant Biology 360; Computer Science 201 or 202; English 290, 291 or 491; or any two semester sequence of a foreign language ²	6-8
<i>Requirements for Biological Sciences</i>	65-67
Biology 200a,b	6 ³
Biology 305	3 ³
Microbiology 301	4 ³
Physiology 310	5 ³
Plant Biology 300	4 ³
Zoology 220a,b	6 ³
Any one of core Biology courses including 306, 307, 308 or 309	3 ³
At least nine credit hours of Microbiology, Physiology, Plant Biology or Zoology 400-level courses, one of which must be a laboratory course	9 ⁴

Senior Seminar in any of the four participating departments, Microbiology (MICR 495), Physiology (PHSL 490), Plant Biology (PLB 480) and Zoology (ZOOL 482)	1
Chemistry 200, 201	4
Chemistry 339 or 340, 341	5
Chemistry 350	3
Physics 203a, 253a or Physics 205a, 255a	4
Mathematics 108 and 109, or 111	5-6
Any one of the following: Mathematics 141 or 150; Plant Biology 360, Mathematics 282 or 283 ⁵	3-4
<i>General Electives</i>	<u>5-9⁶</u>
<i>Total</i>	121

¹ The 41 hour requirement may be reduced by taking major requirements which are approved substitutes for University Core Curriculum courses.

² The supportive skills language requirement may also be met by one of the following: (a) completing three years of one language in high school with a grade of C or better; or (b) earning 8 credit hours of 100-level courses in one language by proficiency examination.

³ Students must have a grade point average of 2.0 or better in these requirements for biological sciences.

⁴ Courses identified as independent research, special problems, readings or seminars including Biology 315 may not be used to fulfill this requirement.

⁵ If Plant Biology 360 or Mathematics 282 or 283 is used as a supportive skill requirement, it may not be used to fulfill the mathematics requirement.

⁶ Substitution of major courses for University Core Curriculum courses will increase the number of general elective hours.

Biological Sciences Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Humanities	3	3
Fine Arts, Social Science	6	-	MATH 141, Social Science	4	3
SPCM 101	-	3	ZOOL 220a,b	3	3
MATH 108,109	3	3	CHEM 339, 341, CHEM 350....	5	3
BIOL 200a,b	3	3	ENGL 290	-	3
CHEM 200, 201	-	4			
<i>Total</i>	15	16	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Multicultural, Interdisciplinary	3	3	PLB 300	4	-
PHYS 203a, 253a	4	-	BIOL 300-level, MATH 282	3	3
MICR 301	4	-	BIOL 400-level	3	3
BIOL 305, PHSL 310	3	5	Elective	5	9
BIOL 400-level	-	3	Senior Seminar	-	1
Elective	-	3			
<i>Total</i>	14	14	<i>Total</i>	15	16

Bachelor of Science Degree, College of Education and Human Services

Students planning to obtain their degree in the College of Education and Human Services must satisfy all the requirements of that college. The teacher education program requires 28 hours of professional education courses. See Teacher Education Program, Chapter 5. To meet teacher certification requirements, students will need a course in non-western/third world culture. The requirements in biological sciences will be the same as those in the College of Science. Those students desiring to attain a secondary education teaching certificate must also enroll in Curriculum and Instruction 468.

Biological Sciences Minor

A minor in Biological Sciences consists of a minimum of 20 hours and must include Biology 200a,b (six hours); any one of Biology 305, 306 or 307 (three hours); at least seven hours from Microbiology 301, Physiology 310, Plant Biology 300 and Zoology 220a,b; and at least four hours selected from course offerings in Microbiology, Physiology, Plant Biology or Zoology at the 400-level. A student with a major in one of the four life sciences may not take a minor in Biological Sciences. The director of the Biological Sciences Program must approve all minors.

Courses (BIOL)

200A-3 Cell and Molecular Biology, Genetics and Evolution. Basic concepts and principles of biology: chemistry of life; cell structure and function; energetics and biosynthesis; genetics and molecular biology; and evolution. Two lectures and one two-hour laboratory per week. For life science majors only. Prerequisite: high school chemistry and biology. Recommended that concurrent enrollment in Chemistry 140a or 200 and 201 be considered. Laboratory/field trip fee: \$20.

200B-3 Organismal and Ecological Biology. Basic concepts and principles of biology: organismal diversity (plants, animals and microorganisms); plant form and function; animal form and function; and ecology. Two lectures and one two-hour laboratory per week. For life science majors only. Prerequisite: high school chemistry and biology. Recommended that concurrent enrollment in Chemistry 140a or 200 and 201 be considered. Laboratory/field trip fee: \$20.

202-2 Human Genetics and Human Health. (University Core Curriculum) Acquaints the student with the role played by genetic information in human development and disease. Discussion topics will include genetics and human diversity, the interaction of genetic information and the environment, the concept of genetic disease, the mechanisms and ethics of gene therapy, and the possibilities of manipulating the genetic material.

210-2 to 6 Biology Field Studies. A trip of from two to six weeks to acquaint students with organisms in various environments or with methods of field study, collection, and preservation. Students will incur costs for food, lodging, and transportation. Prerequisite: consent of instructor.

305-3 Principles of Genetics. Principles of genetics including Mendelism; chromosome behavior; genetic mapping; mutation and allelism; replication transcription, and translation; gene function and regulation; polygenic systems; population genetics and evolution; and genetic applications. Prerequisite: 200a,b and Chemistry 140a or 200 and 201.

306-3 Cell Biology. The basic functions of the cell are considered. The biochemical basis and mechanisms of the cellular processes, the functions of the subcellular structures, and their ramifications will be explored in the context of plant and animal cells. Prerequisite: 200a,b and Chemistry 140a or 200 and 201.

307-3 Principles of Ecology. Broad principles of ecology on the organismic, the population, the community, and the ecosystem level. Includes environmental factors, adaptations, energy and material balance, succession, and human ecology. Prerequisite: Mathematics 108, Biology 200a,b and Chemistry 140a or 200 and 201.

308-3 Organismic Functional Biology. Fundamental principles and biological examples of basic phenomena characteristic of organisms, including transport, integration and reproductive systems. Detailed attention will be given to various organ systems with an emphasis on function. Prerequisite: 200a,b and Chemistry 140a or 200 and 201.

309-3 Developmental Biology. Basic principles and processes of embryonic development including contemporary research on molecular, cellular and genetic mechanisms of differentiation and morphogenesis; selected plants and invertebrate and vertebrate animals will be considered. Prerequisite: 200a,b and Chemistry 140a or 200 and 201.

315-2 History of Biology. The interrelationships between the development of biological knowledge and the history of the human races.

Black American Studies (Minor, Courses, Faculty)

The Black American Studies program is a part of the College of Liberal Arts and follows the academic requirements of College of Liberal Arts listed in Chapter 4.

A minor in Black American Studies consists of a minimum of 20 hours, which are to be selected from Black American Studies course offerings and organized according to each individual student's field of interest. Black American Studies 311a,b is required for the minor.

Courses (BAS)

109-3 Introduction to Black America. A survey course designed to expose the student to various aspects of the black experience. Aspects included are history, literature, theology, the arts, etc. The textbook is a collection of essays designed to use especially in this course and is supplemented by guest lecturers and audiovisual materials.

135-3 The Third World: The African Model. Study of Third World through a focus on Africa as a model; emphasis on the cultural traditions, impact of the West, and the problems facing Third World nations today.

209-3 Critical Issues in the Black American Experience. Insights into the black American experience. Concepts including race, ethnicity, class, caste, minorities, prejudice, discrimination will be analyzed. Main focus is on exploration of critical socio-economic, political, and cultural themes such as demographic trends; migration and urbanization, political participation and strategies, income and employment, housing, health, education, black family, black religion, law, and justice. Prerequisite: 109 recommended but not required.

215-3 Black American Experience in a Pluralistic Society. (University Core Curriculum) A study and understanding of the evolution of issues of pluralism in contemporary African American society. This course provides an interdisciplinary analysis of ideological and practical problems of racism, integration, class, equity, social institutions as they relate to the Black American experience.

- 225-3 Social Change in Africa.** Examination of the interplay between tradition and modernity in an effort to understand the new Africa. Some of the forces of social change are analyzed. Other topics include African women and the family structure in change and the problems of African development.
- 230-3 Introduction to Black Sociology.** An introductory course which focuses on the concepts of black sociology in order to fill the gaps of traditional sociology pertaining to the black experience. Designed to heighten the student's awareness of the black identity and the sociological phenomena which affect it and acquaints the student with specific sociological problems in the study of Afro-Americans.
- 257-1 Black American Studies Choir.** Prerequisite: consent of instructor.
- 271-3 Africa in African Cinema.** This course is a general introduction to African culture and history through the medium of movies by African filmmakers. Students will watch over a dozen important movies from Africa. These screenings are supplemented with appropriate readings, online resources, lecture and discussion. Students will learn aspects of African history and ethnology while also gaining the aesthetic and intellectual tools to appreciate African cinema.
- 310A-3 Peoples and Cultures of Africa.** (Same as Anthropology 310a) Introduction to the prehistory, cultural history, and modern cultures of people of Africa.
- 311-6 (3,3) Black American History.** (Same as History 362.) (a) Black American History to 1865; (b) Black American History since 1865. The role of blacks and contribution in the building of America and the ongoing fight for equality. Required for the minor.
- 314-6 (3,3) History of Africa.** (Same as History 387.) (a) To 1800; (b) Since 1800. A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence.
- 320-3 Leaders of the Black World.** A study of black rulers; governmental representatives; activists; and thinkers; both past and present; in Africa; the West Indies; and the United States, with emphasis on the effects of their philosophies on the black world.
- 330-3 Black American Social Problems.** Comparative study of the social problems which afflict black Americans and other minorities and their consequences; including crime and delinquency, mental and emotional disorders, drug addiction, housing conditions, poverty and unemployment, and labor conditions. Prerequisite: consent of instructor.
- 332I-3 Introduction to Civil Liberties and Civil Rights.** (University Core Curriculum)(Same as Political Science 332i.) This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court decides which rights and liberties get which protections, at which times. Specifically, our focus will be on the First Amendment, the Right of Privacy, Discrimination, and Voting Rights. Special emphasis will be placed on how the Supreme Court defines, established and protects these liberties through its interpretation of the Constitution.
- 333-4 The Black Family.** Exploring the myths and realities of the black family from sociological and psychological perspectives through a critical examination of scholarly controversies and research. Prerequisite: junior standing.
- 334-4 Psychology of African/African American Experience.** (Same as Psychology 334) Examines psychological characteristics of African descent, using an Africentric conceptual model. Theoretical models will be critiqued and empirical data will be examined. Selected issues include: critiques of research methodologies involving African descended populations; African American identities and personality development, psychopathology and cognitive development issues (i.e., language). Prerequisite: Psychology 102 or consent.
- 339-3 Black Americans and the Correctional Process.** Analysis of selected topics: the prison community and the black inmate; correction education and the black inmate; and the black professional. Prerequisite: 332.
- 350-3 Contemporary Black Drama.** Surveys in the works of major and minor writers of contemporary black dramas from *A Raisin in the Sun* to *No Place to Be Somebody*. Explores recent criticism on black theater, and approaches oral and written criticism from the point of view of black aesthetics.
- 355-3 The Black American Novel Since *Native Son*.** The black American novel and its major themes since Richard Wright's *Native Son*. Includes such authors as Baldwin, Petry, Williams, etc.
- 357-3 Blacks in the Performing Arts.** History of the role of blacks in the performing arts covering dance companies, ballet, folk dance and black dramatists; cinema, in all its forms; radio and television; and music (spirituals, jazz, opera, classics, etc.)
- 360-3 Race and History in the United States.** (See History 361.)
- 375-3 to 6 Topics in Africana Aesthetics.** Course will investigate theories of African art, especially music, dance, sculpture, textile design and adornment styles of cultural groups in West Africa. Cultural transferences and continuities of African art as found in the African diaspora (with special attention to African American art production) will also be studied. Students will be expected to develop a philosophy of art. Prerequisite: 109 or permission of instructor.
- 399-1 to 6 Independent Study in Black American Studies.** Independent study which examines problems and issues not covered in a specific course. Hours and subject matter decided during consultation with a faculty member. Prerequisite: consent of instructor and approval of director of program.
- 410H-3 African Expressive Culture.** (Same as Anthropology 410h) This course examines aspects of African expressive culture including the visual arts, music, dance, orature, cinema, drama, and ceremony from an anthropological perspective. Particular attention is given to analysis of African expressive culture in social context and the role of the arts in the practice of politics, religion, medicine, and other aspects of African life. Many of the expressive genres examined deal with historical representation and political resistance. Therefore, this course provides insights into African history and politics through the creation of African artists.

430-3 Black Political Socialization. Definitive approach to how people learn about politics focusing on blacks because of their unique experience; i.e., prolonged minority group status. Research oriented, in that, it takes an explanative and predictive approach to produce models of political learning. Not for graduate credit. Prerequisite: 230, junior or senior standing, or consent of department.

449-3 Race and Media in United States History. (Same as History 449 and Mass Communication and Media Arts 449) This course explores the history of race in the modern United States by focusing on moments of racial crisis that garnered media attention. The course asks what these moments reveal about the shifting status of "race," as well as how spectacles have changed with the transformation of modern media.

460-3 Slavery and The Old South. (Same as History 460) This course examines slavery and southern distinctiveness from the colonial period to 1861. Discussion topics include the plantation system, race relations, women and slavery, and southern nationalism.

461-3 Black Americans on the Western Frontier. (Same as History 461) This course examines the history of African Americans in the American West. Taking both a chronological and thematic approach, it begins with a discussion of early black explores in the age of encounter, and ends with a focus on black western towns established in the United States by the 1880's.

465-3 Governments and Politics of Sub-Saharan Africa. An examination of the impact of western colonial rule on the societies and politics of Africa, the method by which these colonial areas became sovereign states in the post-World War II era, the role of domestic political institutions, African political thought and behavior, and the development of foreign policies regarding relations with other African states, continental and international organizations, and international organizations, and non-African states.

472-3 Psychology of Race and Racism. (Same as Psychology 470) A review of the history and evolution of the construct of race as a psychological phenomenon. The persuasiveness of race in every sphere of life will be studied, from a multidisciplinary perspective.

473-3 Comparative Slavery (Same as History 473) A comparative study of slavery from antiquity to its abolition in the 19th century with the differing socio-cultural, political and economic contexts; organized chronologically, regionally, and thematically.

475-3 Education and Black America. This course uses the best scholarship of cultural anthropology and social studies to look at the history of education in the African American community; how public education affects African American families; how school shape cultural change and how racial, ethnic peer group, and gender issues help determine curriculum issues. For graduate credit.

490-1 to 3 Cross-Cultural Rehabilitation. (See Rehabilitation 419.) Not for graduate credit.

495-3 to 9 African Cultural Continuities: Study Abroad. Study abroad 4-6 week program is designed to introduce similarities in culture (food, dance, music, family traditions, religion) of people in Ghana and in the cultures of people in the African diaspora. Class begins on the SIUC campus and will re-locate to Elmina and Cape Coast, Ghana, during the first year of a three year sequence. Other years will locate in areas of the West Indies, Caribbean & Central America. May be taken for graduate credit. Prerequisite: six hours of Black American Studies or African Studies courses and permission of instructor.

499-3 to 9 (3 per topic) Special Topics in Black American Studies. Topics vary and are announced in advance. May be repeated as the topic varies. Prerequisite: 109 or permission of instructor.

Black American Studies Faculty

Brown, Joseph A., Professor and *Director*, Ph.D., American Studies, Yale University, 1984.

Chipasula, Frank, Professor, Ph.D., Black American Studies, English, 1987.

Gadzekpo, Leo K., Assistant Professor, Ph.D., American Cultural Studies, Bowling Green University, 1997.

Smoot, Pamela A., Assistant Professor, Ph.D., American History, Michigan State University, 1998.

Business and Administration (College, Courses)

Courses (BUS)

123-1 Main Street to Wall Street. An introduction to business functions and opportunities. Students will also be provided information on the support services and resources available to them in the college and across the University.

259-1 to 6 Intern-Work Experience. Current practical experience in business or other work directly related to coursework in a College of Business and Administration program and to the student's educational objectives may be used as a basis for granting credit in the college. Credit is given when specific program credit cannot be granted and may only be used for free elective or general elective credit. Credit is sought by petition and must be approved by the dean before registration. Mandatory Pass/Fail. Prerequisite: College of Business and Administration major with at least twelve hours with a 2.5 grade point average.

291-1 to 6 Individual Study. Supervised work that relates to the students academic programs and career objectives. Enrollment provides access to resources of the entire college. Each student will work under the supervision of a sponsoring staff member. May only be used for free or general elective credit. Credit is sought by petition and must be approved by the dean before registration. Prerequisite: College of Business and Administration major with at least twelve hours and with a 2.5 grade point average.

302-1 Business Career Transitions. This one credit, required course is designed to prepare business students to make a successful transition from the academic community to the business and professional world. Students develop a personal career strategy, learn how to conduct a proactive job search campaign,

and explore the types of challenges they are likely to experience in the work world. The class features alumni and business guest speakers as well as videos, case studies and discussion seminars. Not for graduate credit. Course should be taken no later than the second semester of the junior year. Prerequisite: English 291.

Business and Administration (Major, Minor)

The Bachelor of Science degree program with a major in business and administration is a college-wide degree which is intended for those students with personal and professional goals which cannot be met by one of the existing majors; i.e., accounting, business economics, finance, management, or marketing, available in the college and in addition have an interest in subject areas offered in other schools and colleges of the University. The program requires students to combine interests - business with an outside field - into a unique program. For example, a student with international business interest can combine business and administration with foreign languages; a student interested in going into the restaurant business can combine course work in food and nutrition with business and administration. The outside field, or secondary concentration, must be consistent with a specific career objective or personal development plan and at least 20 semester hours must be structured to achieve this objective. Individual programs are subject to the approval of the dean of the College of Business and Administration.

Technology Fee

The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.

Bachelor of Science Degree in Business and Administration, College of Business and Administration

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core</i> (See Chapter 4)	45
<i>Requirements for Major in Business and Administration</i>	20-22
Secondary concentration approved by the dean	
<i>Business Prefix Electives</i>	12
<i>Approved Electives</i>	0-2
<i>Total</i>	120

Business and Administration Suggested Curricular Guide

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
BUS 123, UCC Fine Arts	1	3		ACCT 220, 230	3	3	
ENGL 101, 102	3	3		ECON 241, 240	3	3	
UCC Science	3	3		ACCT/MGMT 208	-	3	
PSYC 102/SOC 108	-	3		CS 200b or ISAT 229	3	-	
UCC Humanities	3	-		UCC Humanities	3	-	
UCC Human Health	2	-		SPCM 101, ENGL 291	3	3	
MATH 140, 139	4	3		UCC Integrative Studies	-	3	
<i>Total</i>	16	15		<i>Total</i>	15	15	
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
MGMT 304, 318	3	3		FIN 270 ²	3	-	
FIN 330, Business Prefix	3	3		MGMT 481	-	3	
Secondary Concentration ³	-	8		Secondary Concentration ³	6	6	
MKTG 304, BUS 302	3	1		Business-Prefix	6	-	
UCC Integrative Studies	3	-		Business-Prefix	-	3	
MGMT 345	3	-		Approved Elective	-	2	
<i>Total</i>	15	15		<i>Total</i>	15	14	

¹120 Semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

³Major option, Major specialization or Secondary concentration.

Business and Administration Minor

A minor in Business and Administration consists of a minimum of 15 semester hours, including Accounting 220, 230, Finance 330, Management 304 and Marketing 304. All prerequisites for these classes must also be satisfied. At least nine of the fifteen semester hours must be taken at Southern Illinois University Carbondale. An advisor within the College of Business and Administration must be consulted before selecting this field as a minor.

Business Economics (Major)

The business economics major offered through the College of Business and Administration emphasizes the application of economic concepts and the use of critical analysis to the solution of economic and managerial problems.

This undergraduate program is an excellent general preparation for future managerial and staff assignments in a variety of business and public organizations. The program also prepares students for graduate study in economics as well as for the Master of Business Administration (MBA) degree.

Those students who desire professional careers as business and managerial economists are advised to plan to complete one to four years of postgraduate study.

Technology Fee

The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.

Bachelor of Science Degree in Business Economics, College of Business and Administration

University Core Curriculum Requirements	41
Professional Business Core (See Chapter 4)	45
Requirements for Major in Business Economics	21
Economics 340, 341	6
Finance 361 and 462 or 463	6
Three courses from the following list, two of which must be in economics:	9
Economics 310, 329, 330, 436, 443, 465, Accounting 331, 321, 471, Finance 331, 464, Management 352, Marketing 390, 435	
Approved Electives (at least three credits non-business)	13
Total	120

Business Economics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BUS 123, UCC Fine Arts	1	3	ACCT 220, 230	3	3
ENGL 101, 102	3	3	ECON 241, 240	3	3
UCC Science	3	3	ACCT/MGMT 208	-	3
PSYC 102 or SOC 108	-	3	CS 200b or ISAT 229	3	-
UCC Humanities	3	-	UCC Humanities	3	-
UCC Human Health	2	-	SPCM 101, ENGL 291	3	3
MATH 140, 139	4	3	UCC Integrative Studies	-	3
Total	16	15	Total	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MGMT 304, 318, 345	3	6	Fin 270 ²	3	-
ECON 340, 341	3	3	MGMT 481	-	3
FIN 330, 361	3	3	ECON ³	3	3
MKTG 304, BUS 302	3	1	FIN 462 or 463	-	3
Approved Elective ¹	-	2	Major Option ³	3	-
UCC Integrative Studies ¹	3	-	Approved Elective ¹	6	5
Total	15	15	Total	15	14

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

³Major option, Major specialization or Secondary concentration.

Chemistry and Biochemistry (Department, Major

[Chemistry] Minor, Courses, Faculty)

The Department of Chemistry and Biochemistry offers two degree programs with a major in chemistry. The Bachelor of Science degree in the College of Science is for those who wish to prepare for graduate study in chemistry or who will become professional chemists. Within the degree a student may also choose to specialize in biochemistry, business, environmental, and forensic chemistry and/or receive certification from the American Chemical Society (ACS), 1155 Sixteenth St. S.W., Washington, D.C., 20036. Students are encouraged to seek ACS certification but it should be understood that ACS certification is not a requirement for graduate study or employment as a chemist.

The Bachelor of Arts degree in the College of Science is designed primarily for students who wish to complete a major in chemistry but will specialize in areas related to it. Students complete a group of core courses, along with additional courses that will lead to a specialization in biochemistry, business, and environmental or forensic chemistry.

Knowledge of computer programming is recommended for majors in chemistry.

The department enforces the following retention policy: A grade point average of at least 2.0 in a student's chemistry courses is required on completion of the first 22 hours of formal chemistry course work. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the department. Any exception will require written approval of the chair of undergraduate advisement. A minimum gpa of 2.0 in chemistry course work is needed in order for a student to receive a degree in chemistry. Students will meet with a departmental advisor each semester for planning, monitoring progress, and approval of courses appropriate to their goals and interests.

Students taking a laboratory course will be required to purchase a notebook or laboratory exercise book. Students are required to wear approved safety glasses in the laboratory at all times. All students enrolled in a chemistry class that includes a laboratory session will be assessed a breakage charge for all glassware broken. The amount assessed will be based on actual replacement costs. A fee will also be assessed if a student fails to check in his/her locker at the end of the semester.

Students wishing more detailed information should contact the undergraduate advisor, Department of Chemistry and Biochemistry, Southern Illinois University Carbondale, Carbondale, IL 62901-4409.

Bachelor of Science Degree in Chemistry, College of Science

*University Core Curriculum Requirements*¹ 41

College of Science Academic Requirements 6-8

Biological Sciences—six hours (not University Core Curriculum Courses)^{1,2}

Mathematics – completed with the Chemistry major

Physical Sciences – completed with the Chemistry major

Supportive Skills: a minimum of six hours from among: Chinese

120, Classics 130, 133, French 123, German 126, Japanese 131,

Russian 136, Spanish 140, Computer Science 105 or 200b,

Mathematics 483, 484 and English 291. If a foreign language is

chosen, two semesters of one language must be taken to satisfy

the requirement

<i>Requirements for Major in Chemistry</i>	56-71
Chemistry 200, 201 ¹ , 210, 211, 230, 340, 341, 342, 343, 350 (or 451a) ² , 351, 410, 411, 434, 461, 462, 466a,b	
Mathematics 150 ^{1,3} , 250 and either 221 or 305	
Physics 205a,b; 255a,b	
Optional Curriculum Specialization ⁴ (see below)	
<i>Biochemistry Specialization</i>	9
For students interested in the biological aspects of chemistry.	
Required: An additional nine hours at the 300- to 400-level in biochemistry, microbiology, physiology, plant biology or zoology, chosen in consultation with an advisor in chemistry and approved by the chair of the department. Chemistry 451a,b is strongly recommended in lieu of 350 and three of the additional nine hours above. Chemistry 456 can be substituted for 462. A course at the 300 to 400-level that includes a lab in a bioscience area is recommended.	
<i>Business Specialization</i>	18 ¹
For students interested in pursuing a career in chemistry, but with an interest in the business aspects of it such as management, marketing, and production, rather than research and development.	
Required: Accounting 220, 230; Economics 240 ¹ ; Finance 330; Management 304; and Marketing 304.	
<i>Environmental Chemistry Specialization</i>	12-13
For students interested in chemistry as it relates to air, water and soil in the environment.	
Required: Chemistry 431 and six hours from among, Civil Engineering 310, Mechanical Engineering 416 or Plant and Soil Science 446 (has 240 as a prerequisite); Mathematics 283 or 483.	
<i>Forensic Chemistry Specialization</i>	5
For students interested in chemistry applied to solving problems encountered in crime labs. Student must apply and be accepted in the program.	
Required: Chemistry 439, 396-2 (Chemistry 396 will involve research on problems of interest to the State Crime Lab or a formal internship at the State Crime Lab. The latter is subject to availability and approval of the Crime Lab).	
<i>American Chemical Society Certification</i>	11
To receive certification by the ACS a student must complete the following additional courses: Chemistry 396 (2) or 496 (2) and any two courses from: 431, 439, 444, 451b and 468; and Mathematics 251. A student can receive ACS certification and a specialization in one of the areas above.	
<i>Electives</i>	0-17
<i>Total</i>	120

¹A total of nine hours of biological science, mathematics, and physical science course work are accounted for in the 41-hour University Core Curriculum requirement. An additional three hours of social science are accounted for if students choose the *Business Specialization*.

²A total of three hours of biological sciences are completed with biological chemistry or biochemistry.

³Prerequisite is Mathematics 111 or 108 and 109. The elective hours are decreased by three to six hours for students who place into a course lower than calculus.

⁴Students choosing to specialize must complete all of the additional courses listed under the specialization. These courses can substitute for electives.

Bachelor of Arts Degree in Chemistry, College of Science	
<i>University Core Curriculum Requirements</i> ¹	41
<i>College of Science Academic Requirements</i>	6-8

Biological Sciences—six hours (not University Core Curriculum Courses)^{1,2}

Mathematics – completed with the Chemistry major

Physical Sciences – completed with the Chemistry major

Supportive Skills: a minimum of six hours from among: Chinese 120, Classics 130, 133, French 123, German 126, Japanese 131, Russian 136, Spanish 140, Computer Science 105 or 200b, Mathematics 483, 484 and English 291. If a foreign language is chosen, two semesters of one language must be taken to satisfy the requirement.

Requirements for Major in Chemistry 54-67

Chemistry 200, 201¹, 210, 211, 230, 340, 341, 342, 343, 350 (or 451a)², 351, 411, 462, 466a

Mathematics 150^{1,3}, 250

Physics 203a,b and 253a,b or 205a,b and 255a,b

Required Curriculum Specialization (see below)

Biochemistry Specialization 9

For students interested in the biological aspects of chemistry.

Required: An additional nine hours at the 300- to 400-level in biochemistry, microbiology, physiology, plant biology or zoology, chosen in consultation with an advisor in chemistry and approved by the chair of the department. Chemistry 451a,b is strongly recommended in lieu of 350 and three of the additional nine hours above. Chemistry 456 can be substituted for 462. A course at the 300- to 400-level that includes a lab in a bioscience area is recommended.

Business Specialization 25¹

For students interested in pursuing a career in chemistry, but with an interest in the business aspects of it such as management, marketing, and production, rather than research and development.

Required: An additional three hours in chemistry at the 300- to 400-level, chosen in consultation with an advisor and approval of the chair of the department; Accounting 220, 230; Economics 240¹; Finance 330; Management 304; and Marketing 304.

Environmental Chemistry Specialization 16-17

For students interested in chemistry as it relates to air, water and soil in the environment.

Required: Chemistry 431 and six hours from among Chemistry 434, Civil Engineering 310, Mechanical Engineering 416 or Plant and Soil Science 446 (has 240 as a prerequisite); Mathematics 283 or 483.

Forensic Chemistry Specialization 13

For students interested in chemistry applied to solving problems encountered in crime labs.

Required: Chemistry 434, 439, 396-2 (Chemistry 396 will involve research on problems of interest to the State Crime Lab or a formal internship at the State Crime Lab. The latter is subject to availability and approval of the Crime Lab).

Electives 14-19

Total 120

¹A total of nine hours of biological science, mathematics, and physical science course work are accounted for in the 41-hour University Core Curriculum requirement. An additional three hours of social science are accounted for if students choose the *Business Specialization*.

²A total of three hours of biological sciences are completed with Biological Chemistry or Biochemistry.

³ Prerequisite is Mathematics 111 or 108 and 109. The elective hours are decreased by three to six hours for students who place into a course lower than calculus.

Chemistry Minor

The minor in chemistry requires a minimum of 16 semester hours of chemistry in formal course work at the 200 level or above, including 200, 201, 210, 211. At least eight of the sixteen hours must be taken at SIUC. A grade point average of at least 2.0 is required in the minor, both in course work taken at SIUC and overall.

Transfer Credit

Credit for a course in chemistry successfully completed at another accredited institution will be transferred to meet major or minor requirements in chemistry at SIUC, subject to the following conditions:

1. The course number must bear a departmental prefix clearly indicating the course is a chemistry (or biochemistry) course.
2. The course must have covered substantially the same material as a course currently offered at SIUC to meet major requirements.
3. Credit for a course completed at a community or junior college is not transferable if the corresponding course at SIUC is offered at the 400-level.
4. All transfers of credit to meet major or minor requirements in chemistry must be explicitly approved by the Department of Chemistry and Biochemistry.

Courses (CHEM)

106-3 Chemistry and Society. (University Core Curriculum) [IAI Course: P1 903L] Exploration of the many implications that chemistry has upon modern society. Topics include air and water quality, global warming, acid rain, fossil, solar and nuclear fuels, nutrition and drugs. Three lectures per week except that every other week a three-hour lab is substituted for one of the lectures that week. Lab fee: \$30.

140-8 (4,4) Chemistry. (Advanced University Core Curriculum course) [IAI Course: P1 902L] A two-semester course of general, organic and biological chemistry designed to meet the needs of nursing, dental hygiene, physical therapy, other allied health programs, agriculture, forestry, family and consumer sciences education and other majors with comparable requirements. This course does not satisfy prerequisite requirements for other courses offered by the Department of Chemistry and Biochemistry. It is not applicable to a major in chemistry. Chemistry 140a can serve as a preparation for 200 for students without a year of high school chemistry or for those who feel their background is inadequate. Three lectures and one three-hour laboratory per week. Chemistry 140a satisfies University Core Curriculum Science Group I requirement in lieu of 106. Lab fee: \$30.

200-3 Introduction to Chemical Principles. (Advanced University Core Curriculum course) [IAI Course: P1 902L] A first semester chemistry course for students majoring in scientific, pre-professional, engineering or technological programs. Atomic structure, molecular structure, bonding, solutions, stoichiometry, gases, liquids and solids. Three lectures per week. Prerequisite: one year of high school or Chemistry 140a; completion or concurrent enrollment in Chemistry 201; two years high school algebra or concurrent enrollment in Mathematics 108. With Chemistry 201 satisfies University Core Curriculum Science Group I requirement in lieu of 106.

201-1 General Chemistry Laboratory I. (Advanced University Core Curriculum course) [IAI Course: P1 902L] Synthesis and exploration of the properties of compounds and elements. One three-hour laboratory per week. Lab fee: \$30. Prerequisite: completion of or concurrent enrollment in Chemistry 200. If Chemistry 200 is dropped, the laboratory course must also be dropped. With Chemistry 200 satisfies University Core Curriculum Science Group I requirement in lieu of 106.

210-3 General and Inorganic Chemistry. Second semester chemistry for science, engineering and pre-professional majors. Rates of reaction, chemical equilibrium, acid-base equilibria, pH, electrochemistry, transition metals, properties of inorganic compounds, nuclear chemistry and organic chemistry. Three lectures per week. Prerequisite: C or better in 200, 201.

211-1 General Chemistry Laboratory II. Continued synthesis and exploration of properties of compounds and elements. Lab fee: \$30. Prerequisite: C or better in 200, 201; completion of or concurrent enrollment in 210. If 210 is dropped, 211 must also be dropped.

230-4 Quantitative Analysis. A one-semester course in analytical chemistry that emphasizes quantitative analyses based on wet-chemical methods and modern instrumentation. Topics include statistics, sampling strategy, gravimetry, multiple chemical equilibria, titrimetry, potentiometry, voltammetry, absorbency and fluorescence spectroscopies, gas and liquid chromatographies, and capillary electrophoresis. Two lectures and two laboratories per week. Ability to solve simple algebraic equations and familiarity with logarithms essential. Lab fee: \$30. Prerequisite: C or better in 210, 211.

339-3 Introduction to Organic Chemistry. An introduction to the chemistry of carbon-based compounds. Intended to introduce students to functional groups; their structure properties and reactivity. For students

requiring only one semester of organic chemistry. Three lectures per week. Prerequisite: 200, concurrent enrollment in 341 recommended.

340-3 Organic Chemistry I. The first part of a two semester introduction to organic chemistry. This course will introduce basic nomenclature, bonding, stereochemistry, reactivity and the spectroscopic methods common to organic chemistry. Three lectures per week. Prerequisite: C or better in 210, 211. Offered fall semester only.

341-2 Organic Chemistry Laboratory I. An introductory lab course based upon a problem-solving approach to organic chemistry. Students will identify and derivatize unknowns using modern organic techniques. One one-hour lecture and one four-hour laboratory per week. Lab fee: \$30. Prerequisite: C or better in 210, 211; 339 or 340 taken concurrently.

342-3 Organic Chemistry II. This is a continuation of 340 emphasizing topics that were not covered in the first semester. Topics will include the chemistry of aromatic compounds, dienes and other carbon-carbon bond forming reactions. Advanced topics such as polymers and biomolecules may also be covered. Three lectures per week. Prerequisite: C or better in 340, 341; concurrent enrollment in 343 is recommended. Offered spring semester only.

343-2 Organic Chemistry Laboratory II. A second organic laboratory course based upon a synthetic approach. Students will learn modern synthetic organic chemistry techniques including modern spectroscopic techniques. One one-hour lecture and one four-hour laboratory per week. Lab fee: \$30. Prerequisite: C or better in 340, 341, or concurrent enrollment in 342. Offered spring semester only.

350-3 Introduction to Biological Chemistry. Survey of basis elements of biochemistry. Three lectures per week. Prerequisite: C or better in 339 or 340. Offered spring semester only.

351-1 Biochemistry Laboratory. A one semester biochemistry laboratory covering amino acid titrations, separation techniques, enzyme assay and kinetics, spectrophotometric determination of Ca^{++} ATPase activity, serum proteins, clinical biochemistry, plasmid DNA purification and restriction enzyme mapping. Lecture and laboratory experiments are on alternate weeks. Lab fee \$30. Prerequisite: Pre or co-requisite: 350 or 451a. Offered spring semester.

386-2 (1, 1) Problem Solving Workshop. A two semester workshop sequence for chemistry majors. One two-hour workshop per week per semester. (a) Introduction to problem solving strategies with examples and practice problems. Prerequisite: chemistry major, Chemistry 200. (b) Advanced problem solving with general applications. Prerequisite: 386a.

396-1 to 2 Undergraduate Research. Chemical investigations under the direction and supervision of a faculty member culminating in a written report. Student may take 1 - 2 hours per semester and a total of 6 hours. Prerequisite: consent of instructor and one semester of chemistry laboratory.

410-2 Inorganic Synthesis and Characterization Laboratory. Introduction to synthesis techniques and characterization methods of inorganic compounds. One four hour lab per week. Lab fee: \$30. Not for graduate credit. Prerequisite: completion of or concurrent enrollment in 411. Offered spring semester only.

411-3 Intermediate Inorganic Chemistry. Fundamentals of inorganic chemistry, covering bonding and structure, coordination compounds and the chemistry of some familiar and less familiar elements. Three lectures per week. Prerequisite: 456 or 462 or concurrent enrollment. Offered spring semester only.

431-3 Environmental Chemistry. Chemical principles applied to the environment and environmental problems. Chemical kinetics, thermodynamic, and equilibrium concepts as they relate to the atmosphere, water and soil will be discussed to include current problems of pollutants, pollutant evaluation and pollutant remediation. Discussion of methods for the chemical analysis of environmental samples will also be included. Prerequisite: C or better in 230 and 340. Offered spring semester in even years only.

434-2 to 4 Instrumental Analytical Chemistry. Theory and practice of instrumental measurements, including emission and absorption spectroscopic, capillary electrophoretic and chromatographic methods. Two lectures and two three-hour laboratories per week for four credits. Enrollment for two credit hours is restricted to graduate students in the Department of Chemistry and Biochemistry who are advised to take instrumental analysis. Laboratory fee \$30. Prerequisite: C or better in 230. Offered fall semester only.

439-3 Forensic Chemistry. A one-semester course covering the collection, handling and analyses of forensic samples and evidence. Topics include procedures to collect, preserve, maintain custody, analyze, validate the data and report conclusions from the analyses of crime related samples. Analytical methods for the qualitative and quantitative analyses of sample by gas chromatography, mass spectroscopy, infrared spectroscopy, fluorescence spectroscopy, ultraviolet and visible spectroscopy will be covered. Other techniques such as capillary and gel electrophoresis, high-pressure liquid chromatography, thin layer chromatography, blood splatter analyses, fingerprint identification, scanning electron microscopy and light microscopy may be included as time permits. One lecture and two three-hour periods containing laboratory experiments, demonstrations, and group discussions per week. Enrollment is limited with preference given to students with high academic standing. Lab fee: \$30. Prerequisite: C or better in 230 and previous or concurrent enrollment in 434 and instructor consent. Offered spring semester only.

444-3 Intermediate Organic Chemistry. A transitional course between introductory and graduate level chemistry. The chemistry of carbon compounds based upon a mechanistic approach will be discussed. Three lectures per week. Prerequisite: C or better in 340, 342. Offered fall semester only.

451-6 (3,3) Biochemistry. (Same as Biochemistry 451 and Molecular Biology, Microbiology and Biochemistry 451.) (a) Chemistry and function of amino acids, proteins, and enzymes; enzyme kinetics; chemistry, function and metabolism of carbohydrates; citric acid cycle; electron transport and oxidative phosphorylation. (b) Chemistry, function and metabolism of lipids; nitrogen metabolism; nucleic acid and protein biosynthesis; metabolic regulation. Three lectures per week. Must be taken in a,b sequence. Prerequisite: one year of organic chemistry.

456-3 Biophysical Chemistry. (Same as Biochemistry 456 and Molecular Biology, Microbiology and Biochemistry 456.) A one semester course in biophysical chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics, and spectroscopy applied to biological systems. Prerequisite: 340 and 342, 451a or concurrent enrollment, Mathematics 141 or 150.

461-3 Quantum Mechanics and Spectroscopy. An introduction to quantum mechanics and spectroscopy. Prerequisite: Mathematics 250; C or better in 230, 342, 343. Mathematics 221 or 305 is recommended as prerequisite or concurrent enrollment. Offered fall semester only.

462-3 Classical Physical Chemistry. An introduction to chemical, statistical thermodynamics and kinetics. Prerequisite: Mathematics 250; C or better in 230, 342, 343. Mathematics 221 or 305 is recommended as prerequisite or concurrent enrollment. Offered spring semester only.

466-2 (1,1) Physical Chemistry Laboratory. A two semester laboratory sequence. One three hour laboratory per week per semester. (a) Experiments relating to topics covered in 462. Prerequisite: 462 or 456 or concurrent enrollment. (b) Experiments relating to topics covered in 461. Lab fee: \$30. Prerequisite: 461 or concurrent enrollment. 466a offered spring semester only. 466b offered fall semester only.

468-3 Application of Symmetry to Chemistry. The concepts of symmetry elements, groups and character tables will be taught. Symmetry will be applied to molecules in order to simplify and characterize their wave functions and vibrational frequencies. Prerequisite: C or better in 461 or consent of instructor. Offered spring semester in odd years only.

479-3 Principles of Materials Chemistry. Introduction to fundamental concepts of materials chemistry. Synthesis, characterization, processing and applications of different materials including solids, polymers, ceramics and molecularly designed materials. Prerequisite: 411, 462, concurrent enrollment, or consent of instructor. Offered fall semester in odd years only.

489-1 to 3 Special Topics in Chemistry. Prerequisite: consent of instructor and of chair.

496-1 to 8 Undergraduate Research — Honors. Introduction to independent research under the direction of a faculty member culminating in a written report. Not for graduate credit. Prerequisite: a 3.0 grade point average, five semesters of chemistry laboratory including one semester of physical chemistry, consent of instructor and department chair.

Chemistry and Biochemistry Faculty

Bausch, Mark J., Associate Professor, Ph.D., Northwestern University, 1984.

Beyler, Roger E., Professor, *Emeritus*, Ph.D., University of Illinois, 1949.

Caskey, Albert L., Associate Professor, *Emeritus*, Ph.D., Iowa State University, 1961.

Dave, Bakul C., Associate Professor, Ph.D., University of Houston, 1993.

Dyer, Daniel, Associate Professor, Ph.D., University of Colorado at Boulder, 1996.

Gao, Yong, Assistant Professor, Ph.D., University of Alberta, 1998.

Ge, Qingfeng, Assistant Professor, Ph.D., Tianjin University, 1991.

Goodson, Boyd, Assistant Professor, Ph.D., University of California, Berkeley, 1999.

Guyon, John C., Professor, *Emeritus*, Ph.D., Purdue University, 1961.

Hadler, Herbert I., Professor, *Emeritus*, Ph.D., University of Wisconsin, 1952.

Hinckley, Conrad C., Professor, *Emeritus*, Ph.D., University of Texas, 1964.

Huff-Hartz, Kara, Assistant Professor, Ph.D., Purdue University, 2002.

Kinsel, Gary, Professor, Ph.D., University of Colorado-Boulder, 1989.

Kohli, Punit, Assistant Professor, Michigan State University 2000.

Koropchak, John A., Professor, Ph.D., University of Georgia, 1980.

Koster, David F., Professor, *Emeritus*, Ph.D., Texas A & M University, 1965.

Lee, Brian, Assistant Professor, Ph.D., University of Maryland, 1997.

McCarroll, Matthew, Assistant Professor, Ph.D., University of Idaho, 1998.

Meyers, Cal Y., Distinguished Professor, *Emeritus*, Ph.D., University of Illinois, 1951.

Perez-Alvarado, Gabriela, Assistant Professor, Ph.D., University of Maryland, 1995.

Schmullbach, C. David, Professor, *Emeritus*, Ph.D., University of Illinois, 1958.

Smith, Gerard V., Professor, *Emeritus*, Ph.D., University of Arkansas, 1959.

Tolley, Luke, Assistant Professor, Ph.D., University of North Carolina at Chapel Hill, 2001.

Trimble, Russell F., Professor, *Emeritus*, Ph.D., Massachusetts Institute of Technology, 1951.

Tyrrell, James, Professor, Ph.D., University of Glasgow, 1963.

Vermeulen, Lori A., Associate Professor and Chair, Ph.D., Princeton University, 1994.

Wang, Lichang, Assistant Professor, Ph.D., University of Copenhagen, 1993.

Zang, Ling, Assistant Professor, Ph.D., Chinese Academy of Sciences, Beijing China, 1995.

Cinema and Photography (Department, Major, Courses,

Faculty)

The major in cinema and photography provides undergraduate students with experience and background in the history, theory, and practice of cinematic and

photographic communication and expression. The program is structured to make available a foundation for fine arts, professional, and education careers in cinema and photography to explore the social, critical, and ideological implications of still and motion pictures; and to provide opportunities for study of and experimentation with both cinema and photography as media for communication and personal expression. Creation and exploration are stressed in programs of study that are founded in traditional techniques and approaches with a trajectory into the evolving digital techniques and approaches.

The major has two specializations, a Cinema Specialization, a Photography Specialization. Within these specializations, through selection of correlated courses, students achieve integrated areas of emphasis under one of the following general headings: cinema production, cinema studies, fine arts photography or professional photography. See suggested curricular guides and course descriptions below.

Students are urged to declare the major and select the specialization as soon as possible. Unless otherwise specified in individual course prerequisites, the student must achieve and maintain an overall grade point average of at least a *C* (2.00) and at least a *C* average (2.00) for all Cinema and Photography and Mass Communication and Media Arts course work. Particular courses do require a higher grade point average as a prerequisite. In all cases, grades below *C* in any Cinema and Photography and Mass Communication and Media Arts courses will not be accepted as fulfilling requirements in the major. Without exception, Cinema and Photography and Mass Communication and Media Arts courses in which students have received grades of *D*, *F*, *AU*, or *INC* cannot be used to satisfy prerequisite requirements for other Cinema and Photography and Mass Communication and Media Arts courses. A grade of *B* (3.00) or better is required in some courses to fulfill prerequisite credit for subsequent courses. See course descriptions for prerequisite requirements. Students must earn a grade of at least a *C* in Mass Communication and Media Arts 201 and 202 to fulfill the college requirement.

Courses in Cinema and Photography and Mass Communication and Media Arts may have limited enrollments, especially advanced courses. Not all courses are offered each semester. Admission to certain Cinema and Photography and Mass Communication and Media Arts courses is restricted, and consent of department or permission of instructor must be obtained prior to registration. Consent of department to register for some courses may be based upon grade point average, performance in the program, and submission of creative portfolio, scholarly papers, and/or written proposals for work to be accomplished. Students are encouraged to plan well in advance ensure meeting course prerequisites and fulfilling all requirements of the major.

Student enrollment in Cinema and Photography and Mass Communication and Media Arts (MCMA) courses may be cancelled for those who do not attend all class meetings during the first week of classes.

Students may design their own programs of study within the requirements for either the Cinema Specialization or Photography Specialization. The Department recommends that students choose an area of emphasis within their specialization to give a sense of direction to their studies. For an emphasis in cinema production, students will enroll in: Cinema and Photography 101, 352, 355, 360, 368, 376; six credits from Cinema and Photography 449, 461, 462, 463, 466 or 467; 496a/496b or 499p pr 499w; and select nine to twelve credit hours of Cinema and Photography 400 level cinema production or screenwriting courses; For cinema studies, students will enroll in: Cinema and Photography 101, 352, 355, 360, 368, 376; up to eighteen credit hours from Cinema and Photography 449, 461, 462, 463, 466 or 467; and 499s. For fine arts photography, students will enroll in: Cinema and Photography 310, 320, 322, 324; three to nine credit hours from Cinema and Photography 401, 402, 410, 415; and twelve to eighteen credit hours from

Cinema and Photography 421, 425, 426, 427, 470c and 498; For applied photography, students will enroll in: Cinema and Photography 310, 320, 322, 324; three to nine credit hours from Cinema and Photography 401, 402, 404; and twelve to eighteen credit hours from Cinema and Photography 427, 431, 432, 435, 436, 470c and 498 (or 431 and 432 a public exhibition). Please look under the School of Journalism for the course of study for the photojournalism major.

All Cinema and Photography majors are required to produce a senior thesis project during the senior year. For the Cinema Specialization, the choice is either Cinema and Photography 496a/496b or 499. For the Photography Specialization, the choice is either Cinema and Photography 431/432 and a public exhibition or 498. This senior thesis will consist of a film, screenplay, research or critical paper, or an exhibition portfolio, completed under the supervision of a cinema and photography faculty member. The Department requires a copy of the thesis, usually on video, DVD, slides, or CD-ROM. Collected images, tapes or disks become part of a permanent departmental archive.

Students must purchase materials for all Cinema and Photography and Mass Communication and Media Arts production courses. In cinema production courses, students provide film stock, processing, printing and other lab services, recording materials, editing supplies, and they must have access to a Super 8 film camera for their own use in Cinema and Photography 355 Film Production I and a light meter of their own for all subsequent film production courses. In still photography production courses, students provide their own film, photographic paper, certain specialized chemicals, and a fully adjustable 35mm or 120 roll film cameras. Some photography students have found that owning additional items of equipment is advantageous. Digital imaging courses require students to provide storage media and pay fees for materials for digital printing in departmental facilities. An equipment usage fee is charged for each cinema production course. A laboratory fee is charged for each still photography production course. A screening fee is charged in each course that depends on presentation of slides, CD-ROM's film, videos and DVD's.

A maximum of 54 credit hours in Cinema and Photography course work may be applied toward the completion of the Bachelor of Arts degree. No more than nine credit hours of Cinema and Photography 491, 495 and 497 combined may count toward the first 41 hours in the Cinema Specialization. No more than six hours of Cinema and Photography 491, 495 and 497 combined may count toward the first 33 hours in the Photography Specialization.

Electives are defined as course work outside the University Core Curriculum requirements and the requirements of the chosen specialization in the Cinema and Photography major. There is no required minor.

Bachelor of Arts Degree in Cinema and Photography, College of Mass Communication and Media Arts

CINEMA SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
<i>Mass Communication and Media Arts College Requirements</i>	6
Mass Communication and Media Arts 201 and 202	
<i>Requirements for the Cinema Specialization in the Cinema and Photography Major</i>	41
Cinema Core Courses: Cinema and Photography 101, 352, 355, 360, 368, 376	20
Cinema courses numbered 400 to 499	21
Must include six credits from 449, 461, 462, 463, 466 or 467. Must include either 499 or 496a,b. No more than nine credit hours from a combination of 491, 495 and 497 may count toward the 21 credit hours in the Cinema Specialization.	
<i>Electives</i>	32

A maximum of 54 credit hours of Cinema and Photography course work may be used to complete Bachelor of Arts degree requirements. A minimum of 41 credit hours are required for the Cinema Specialization and up to 13 additional credit hours in Cinema and Photography course work may be used toward elective.

Total 120

Cinema Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MCMA 201,202.....	3	3	CP 352, 355.....	3	4
CP 101.....	-	3	CP 360.....	3	-
ENGL 101,102.....	3	3	CP 368.....	-	3
SPCM 101.....	3	-	Core Disciplinary Studies.....	9	5
MATH 113.....	-	3	Core Integrative Studies.....	-	3
Core Disciplinary Studies.....	6	3			
<i>Total</i>	15	15	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
CP 376.....	4	-	CP 496a or Selected 400-Level..	3	-
CP 400-level.....	3	6	CP 400-level.....	3	3
Integrative Studies.....	3	-	CP 496b or CP 499.....	-	3-4
Electives.....	5	9	Electives.....	9	9
<i>Total</i>	15	15	<i>Total</i>	15	15-16

PHOTOGRAPHY SPECIALIZATION

University Core Curriculum Requirements 41

Mass Communication and Media Arts College Requirements 6

Mass Communication and Media Arts 201, 202

Requirements for the Photography Specialization in the Cinema and

Photography Major 33

Photography Core Courses: 310, 320, 322, 324 12

Photography courses numbered 400 and above 21

Intermediate level courses 401, 404, 410, 415 3

Advanced level courses 420 and above 12

Must include Cinema and Photography 498 or 431 and 432 and public exhibition.

Additional intermediate or advanced Cinema and Photography 400 level photography courses 6

No more than six credit hours from a combination of Cinema and Photography 491, 495 and 497 may count toward the 21 credit hours in the Photography Specialization.

Electives (up to 21 additional hours in *Cinema and Photography* course work may be used toward electives) 40

A maximum of 54 credit hours of Cinema and Photography course work may be used to complete Bachelor of Arts degree requirements. A minimum of 33 hours are required for the Cinema Specialization and up to 21 additional credit hours in Cinema and Photography course work may be used toward electives

Total 120

Photography Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MCMA 201,202.....	3	3	CP 310.....	3	-
ENGL 101,102.....	3	3	CP 320, 322.....	3	3
SPCM 101.....	3	-	CP 400 Intermediate Level.....	-	3
MTH 113.....	-	3	Core Disciplinary Studies.....	6	5
Core Disciplinary Studies.....	6	6	Core Integrative Studies.....	3	3
<i>Total</i>	15	15	<i>Total</i>	15	14

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
CP 324	3	-	CP 400-Level.....	6	3
CP 400-Level	3	6	Electives.....	9	13
Electives.....	9	9			
Total.....	15	15	Total	15	16

Course (CP)

Students provide photographic materials for all photography production courses, including film, photographic paper, certain specialized chemicals, fully adjustable roll film or view camera and transportable digital media when required. There is a \$25 fee for laboratory materials for each photography production course. In motion picture production courses, students provide their own film stock, processing, recording materials, and editing supplies. There is a \$50 equipment use fee for each film production course. In courses, which include analysis and screening of slides and films, a \$20 fee will be accessed. Students may be required to purchase texts for various courses.

101-3 Film History and Analysis. (University Core Curriculum) [IAI Course: F2 905] An introduction to world history of cinema from its origins to the present, featuring important and influential films of various types and genres from many countries. Basic formal and technical aspects of the medium and means of analysis are also introduced. Students purchase texts. This is a University Core Curriculum course which counts as Fine Arts credit in the Illinois Articulation Initiative. It is also the required foundation course for the Cinema Specialization in the Cinema and Photography major. Screening fee: \$20.

220-2 Introduction to Photography. An introduction to the basic technical information and black and white laboratory processes. The emphasis is upon an exploration of the technical process rather than photographic vision. Students will have hands-on experience in the labs. Students will supply their own film and paper. Lab fee: \$25.

225-3 Photography for Design Majors. An introduction to the principles of photographic language and techniques specifically tailored to the need of the art and design student. Will cover the basic photographic skills as well as specific techniques of interest to art and design students. Students will supply their own camera, materials and some chemicals. Lab fee: \$25.

257-1 to 6 Work Experience. Used to recognize work experience related to the student's educational objective. One to six hours of credit may be applied toward graduation requirements following departmental evaluation and approval. Mandatory Pass/Fail. Prerequisite: consent of the department.

310-3 History of Still Photography. A survey of the important images, ideas, people, and processes that make up the history of still photography. Covers from 1839 to the mid-twentieth century. Students purchase texts. Screening fee: \$20.

311-3 Contemporary Photography. A survey of contemporary photographers, their ideas, and the influences of their work upon culture. Covers from mid-twentieth century to the present. Students may be required to purchase texts. Completion of 310 may be helpful, but is not required.

320-3 Photography I. [IAI Course: ART 917] An introduction to black and white still photography; its materials, processes and vision. Designed to give technical knowledge and to explore visual perception. Students must have fully adjustable camera, may purchase texts, and will supply their own materials and some chemicals. Lab fee: \$25. Prerequisite: Non-majors by consent of department.

322-3 Photography II. Introduction to color still photography, its materials, processes, and vision. Students purchase materials and may purchase texts. Lab fee: \$25. Prerequisite: 320 or equivalent and consent.

324-3 Photography III. An introduction to Macintosh operating system, image editing, input and output through lecture, hands-on in class sessions and outside lab-work assignments. Focuses on the creative application of digital skills. Through critiques of student work and discussion, students will explore the creative and aesthetic challenges and possibilities inherent in the digital medium. Students provide photographic materials, disks and must purchase text. Lab fee: \$25. Prerequisite: 322 or consent of instructor.

344-3 Intro to Digital Imaging. Designed to give students knowledge of the Macintosh environment; develop skills in digital image editing; develop skills in image input; develop a working knowledge of Adobe Photoshop; develop a knowledge of output options; apply critical thinking skills to digital imaging and its uses for creative investigations. Note: students selecting the digital communication specialization in the cinema and photography major cannot apply this course to the bachelor of arts degree. Varying costs will be incurred for image output. Lab fee: \$25.

349-3 The Cinema. The cinema as a communicative and expressive media. Study of film types illustrated by screenings of selected films. Screening fee: \$20.

352-3 Writing the Short Film. This course examines writing for the short form film (documentary, experimental and fiction narrative) through lectures, screenings, discussions, writing exercises and assignments in a workshop environment. By the end of the course, students will have written a script for each of the three types of film and will develop one for production. Students purchase texts. Screening fee: \$20. Prerequisite: sophomore standing, 101 with a grade of B or better, Mass Communication and Media Arts 202, overall gpa of 2.75 or higher, or consent of department.

355-4 Film Production I. Basic techniques for filmmaking using Super 8 film. Students must have access to a Super 8 camera for their own use. Students purchase texts, film stock, and processing. Editing facilities

- provided by department. Equipment usage fee: \$20. Prerequisite: sophomore standing, 101 with a grade of *B* or better, Mass Communication and Media Arts 202, overall gpa of 2.75 or higher, or consent of department.
- 360-3 Film Analysis.** An introduction to analytic concepts and critical vocabulary necessary for understanding film as an art form, to various elements and formal principles that make up film, and to how film has evolved historically. Students purchase texts. Screening fee: \$20. Prerequisite: sophomore standing, 101 with a grade of *B* or better, Mass Communication and Media Arts 202 (concurrent enrollment in Cinema and Photography 101, and Mass Communication and Media Arts 202, and Cinema and Photography 360 possible for transfer students only with permission of department), overall gpa 2.75 or higher, consent of department.
- 368-3 Introduction to Film Theory.** A survey of the major aesthetic, political, and critical concepts and debates in film theory that have attempted to relate the power of cinema to the larger historical, political, and cultural contexts in which we live. Students purchase texts. Screening fee: \$20. Prerequisite: sophomore standing, 360, overall gpa of 2.75 or higher, or consent of department.
- 376-4 Film Production II.** (Formerly Cinema and Photography 356) Techniques of and approaches to traditional 16mm sound film production. Each student will complete, to composite print, his/her own individual film project. Students purchase texts, light meters, film stock, processing, sound materials and outside laboratory services. Equipment usage fee: \$50. Prerequisite: junior standing, 352, 355 with a grade of *B* or better, and 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.
- 401-3 Large Format Photography.** Introduction to the aesthetics and techniques of large format (sheet film cameras) photography with emphasis on personal expression and commercial/professional applications. Students purchase texts and provide photographic materials and chemicals. Lab fee: \$25. Prerequisite: 322 or concurrent enrollment and consent of department.
- 402-6 (3, 3) Sensitometry.** An advanced course taught in two semesters covering the technical and visual applications of the black and white process. The initial semester deals primarily with controls over the photographic negative, the zone system, density parameters and practical chemistry. The second semester encompasses all the factors related to the production of the silver print. Topics covered are materials, chemistry, equipment and the aesthetics of photographic printing. The two semesters are sequential and must be taken in order. Laboratory fee for each section: \$25. Prerequisite: 322 or concurrent enrollment, consent of department.
- 404-3 Introduction to the Studio.** Problems and possibilities in the aesthetics and techniques of studio photography: lighting, visual perception, environment, history, theory. Students purchase texts and provide photographic materials. Lab fee: \$25. Prerequisite: 322 or concurrent enrollment and consent of department.
- 410-3 Topics in the History of Photography.** Focused study on special topics in the history of photography. Sample topics: The Mythic American Image; The History of Color Photography; African American Photographers; The Appropriated Image; The History of the Image in Social Documentary. Screening fee: \$20. Prerequisite: 310 and 320 with a grade of *C* or better.
- 415-3 Photographic Criticism and Practice.** Introduction to photographic criticism and its application in photographic practice. Through readings, writings and practical exercises, students will gain a broad-based knowledge of critical approaches to the photographic image. Screening fee: \$20. Prerequisite: 310 with a grade of *B* or better and 320 with a grade of *C* or better.
- 421-6 (3,3) Experimental Photographic Techniques.** Experimental approaches to the creation of photographic images. Specific course content may include experimental techniques utilizing the camera, the darkroom and a wide range of additional media. Students provide materials and may purchase texts. Lab fee: \$25. Prerequisite: 320, 322 and consent of department.
- 426-3 Non-Silver Photography.** Intensive introduction to hand-applied emulsions such as cyanotype, Vandyke brownprinting, gum printing, etc. Students purchase materials and may purchase texts. Lab fee: \$25. Prerequisite: 322 and consent of department.
- 427-3 Advanced Color Photography.** Advanced study and production of color photographs. Students provide materials and may purchase texts. Lab fee: \$25. Prerequisite: 322 and consent of department.
- 429-3 to 6 (3,3) Studio Workshop.** An intensive workshop focusing on current trends in photography. Topics have included landscape photography, architectural photography, environmental portraiture, and imagemaking, among others. Students provide photographic materials and may purchase texts. May be taken two times if topic differs. Lab fee: \$25. Prerequisite: 322 and consent of department.
- 431-3 Applied Photography I.** An introduction to the theory, practice and professional responsibilities of contemporary commercial photography. Students produce a portfolio that surveys commercial applications. Areas of study include advertising, editorial and industrial components. Students provide materials and may purchase additional equipment. Lab fee: \$25. Prerequisite: 322 and consent of the department.
- 432-3 Applied Photography II.** An advanced investigation into the principles outlined in 431. Students pursue a specific portfolio application throughout the course. Students provide materials and may purchase additional equipment. Lab fee: \$25. Prerequisite: 431 and consent of the department.
- 435-3 Photography and the Mass Media.** Exploration of the use, context, and meaning of photography in the mass media. The photograph as a communications tool will be evaluated along with the role and responsibility of the photojournalist. Students will apply theoretical concepts through group and individual assignments. Students purchase texts and provide photographic materials. Lab fee: \$25. Prerequisite: 322 or concurrent enrollment and consent of department.
- 436-3 Documentary Photography: Method, Format, and Distribution.** Exploration of the techniques, history, and contemporary context of documentary photography. Audience, publication, and distribution of documentary projects will be addressed. Each student will produce an in-depth documentary photographic project. Students purchase texts and provide photographic materials. Lab fee: \$25. Prerequisite: 322 and consent of department.

449-3 to 6 (3,3) Survey of Film History. Intensive study of particular periods of cinema history, including technological developments, national and international movements, aesthetic traditions, economic and political determinations, and concerns of film historiography. May be taken twice, if topic differs. Students purchase texts. Screening fee \$20. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher or consent of department.

452-3 Screenwriting. A study of screenplay structure for feature-length, classically-structured scripts. Includes treatments, scene by scene outlines, character development, and script formatting. Students are required to create original script material. Screening fee: \$20. Prerequisite: junior standing, 360, 352 with a grade of *B* or better, an overall gpa of 2.75 or higher, or consent of department.

454-3 Animated Film Production. Practical course for visual expression exploring various 2-D animation techniques such as developmental, filmographic, rear lit, cut out, line, cell, etc. Students purchase texts, art supplies, film materials and processing. Equipment use fee: \$20. Prerequisite: 355 with a grade of *B* or better, 360, and overall gpa of 2.75 or higher, or consent of department.

461-3 International Documentary Film (1875-1950). The study of significant developments in international documentary film from 1875 to 1950. A discussion of documentary as a distinct art form with its own history and set of theoretical concerns around politics, poetics, and ethnographic filmmaking. Students purchase texts. Screening fee: \$20. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

462-3 International Documentary Film (1950-Present). An examination of styles in documentary film based upon historical precedent, technological changes, responses to theoretical and ethical questions, and the influences of theatrical distribution and television. Students purchase texts. Screening fee: \$20. Prerequisite: 461, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

463-3 History of the Experimental Film. Study of experimentation in cinema from the turn of the 20th century to contemporary avant-garde films. Student purchase texts. Screening fee: \$20. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

466-3 to 6 (3,3) Film Styles and Genres. Intensive study of a specific body of films grouped by similarities in style, genre, period, or cultural origin. Emphasis on historical, theoretical, and critical issues. Topics vary. Sample topics: Science Fiction Film; Film Noir, French New Wave; Third World Cinema; Surrealism in Film. May be taken twice, if topic differs. Students purchase texts. Screening fee: \$20. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

467-3 to 6 (3,3) Film Authors. Intensive study of the work of one or more film authors (directors, screenwriters, etc.). Emphasis is on historical, theoretical, and critical issues. Topics vary. Sample topics: the films of Alfred Hitchcock; the films of Jean Renoir; the films of Andrei Tarkovsky. May be taken twice, if the topic differs. Student purchase texts. Screening fee: \$20. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

470A-3 to 12 (3,3,3,3) Advanced Topics Cinema Studies. (Formerly Cinema and Photography 470 Advanced Topics, with (a) in the body of a composite course description) An advanced topics course in cinema studies: history, theory, criticism. Sample topics: visualizing the body, feminist film theory, surveillance and the cinema. may be repeated, if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the first 41 credits of the Cinema Specialization in the undergraduate Cinema and Photography major. No more than six credit hours of 470 Advanced Topics courses counted for graduate credit. Screening fee: \$20. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

470B-3 to 12 (3,3,3,3) Advanced Topics Film Production. (Formerly Cinema and Photography 470 Advanced Topics, with (b) in the body of a composite course description) An advanced topics course in film production. Sample topics: location lighting, production management, film sound workshop. May be repeated, if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the first 41 credits of the Cinema Specialization in the undergraduate Cinema and Photography major. No more than six credit hours of 470 Advanced Topics courses counted for graduate credit. Equipment usage fee: \$50. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

470C-3 to 12 (3,3,3,3) Advanced Topics Photography. (Formerly 470 Advanced Topics, with (c) in the body of a composite course description) An advanced topics course in photography. Sample topics: still life, narrative tableau, digital presentation. May be repeated, if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the first 33 credits of the Photography Specialization in the undergraduate Cinema and Photography major. No more than six credit hours of 470 Advanced Topics courses counted for graduate credit. Lab fee: \$25. Prerequisite: junior standing, 322 or concurrent enrollment.

470D-3 to 12 (3,3,3,3) Advanced Topics Interdisciplinary Studies. (Formerly 470 Advanced Topics, with (d) in the body of a composite course description) An advanced topics course in interdisciplinary studies between cinema and photography. Sample topics: visual perception, ethics of image making, 3-D filmmaking, filmograph production. May be repeated, if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the 41 credits of the Cinema Specialization or the 33 credits of the Photography Specialization in the undergraduate Cinema and Photography major. No more than six credit hours of 470 Advanced Topics courses counted for graduate credit. Prerequisite: junior standing, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

470W-3 to 6 (3,3) Advanced Topics Screenwriting. An advanced topics course in screenwriting. Sample topics: adaptation, comedy, autobiography. May be repeated, if topics differ. No more than twelve (12) credit hours combined from 470 Advanced Topics courses counted in the first 41 credits of Cinema Specialization in the undergraduate Cinema and Photography major. No more than six credit hours of 470 Advanced Topics

courses counted for graduate credit. Screening fee: \$20. Prerequisite: junior standing, 452, a gpa in cinema and photography courses of 2.75 or higher or consent of department.

472-3 to 6 (3,3) Problems Creative Production: Cinema. Intensive examination and problem solving, through readings, screenings, and filmmaking, of a cinematic genre, style, or technical challenge. Theory is combined with practice. Individual and group projects. Sample problems: cinematography, digital filmmaking, 35mm filmmaking, film as performance, optical printing. May be repeated once if topic differs. Equipment usage fee: \$50. Prerequisite: junior standing, 368, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

484-3 Optical Printing. A creative, frame by frame study and practice of 16mm filmmaking. Advanced filmmaking by the individual using a 16mm optical printer to complete a number of projects during the semester. Optical printing techniques incorporated into projects include: fades, dissolves, freeze frames, step printing, multi-frame presentations, frame magnification, Super 8 enlargement to 16mm, matt construction, and other. Students will process their 16mm and Super 8 film. Optical printer, film processors, cameras, and processing chemistry provided by the department. Equipment use fee: \$50. Prerequisite: junior standing, 376, a gpa in cinema and photography course of 2.75 or higher, or consent of department.

491-1 to 9 Individual Study in Cinema or Photography. Individually directed research in film history, theory, or aesthetics. Usually taken 3, 3, 3. No more than nine hours of 491, 495 and 497 combined may count toward the first 41 hours in the Cinema Specialization. No more than six hours of 491, 495 and 497 combined may count toward the first 33 hours in the Photography Specialization. Not for graduate credit. Prerequisite: a gpa in cinema and photography courses of 2.75 or better and permission of instructor.

492-1 to 3 Practicum. Practical experience in the presentation of photographic theory and procedures. Not for graduate credit. Prerequisite: consent of department. Mandatory Pass/Fail.

495-1 to 12 Internship. Credit for internship with professional film or photographic units. Each enrollment is limited to a maximum of six credit hours. No more than nine hours of 491, 495 and 497 combined may count toward the first 41 hours in the Cinema Specialization. No more than six hours of 491, 495, and 497 combined may count toward the first 33 hours in the photography specialization. Traditional grading system is employed. Not for graduate credit. Prerequisite: consent of department.

496A-3 Film Production III. (Formerly Cinema and Photography 455) Advanced filmmaking, by individuals or groups, from pre-production through completion of filming, ready for post-production. Study and practice of script breakdown, budgeting, production planning, casting, location and studio techniques, equipment rental, lighting, and double system synchronous sound filming. Students purchase film stock, sound recording materials, lab processing and workprint or telecine services, and other incidental materials. Camera, sound, and lighting equipment are provided by the department. Equipment usage fee: \$50. Prerequisite: senior standing 376, any two 400 courses numbered 489 or lower; a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

496B-3 Film Production IV. (Formerly Cinema and Photography 456) Advanced post-production, completion of first composite film print or on-line video master, for project begun in 496a. Study of aesthetics and practice of film editing, sound design, sound mixing, and laboratory finishing procedures. Students purchase picture and sound editing materials and are responsible for laboratory costs. Department will retain a copy of this culminating work in the program, usually on video or DVD. Editing facilities are provided by the department. Equipment use fee: \$50. Prerequisite: 496a, a gpa in cinema and photography courses of 2.75 or higher, or consent of department.

497A-1 to 9 Projects in Cinema. Individual supervised motion picture production project by an individual student or group of students. No more than nine hours of 491, 495 or 497 combined may count toward the first 41 hours in the Cinema Specialization. No more than six hours of 491, 495 or 497 combined may count toward the first 33 hours in the Photography Specialization. Not for graduate credit. Equipment use fee: \$50. Prerequisite: a gpa in cinema and photography of 2.75 or better and permission of instructor.

497B-1 to 9 Projects in Photography. Individually directed projects in still photography. No more than nine hours of 491, 495 and 497 combined may count toward the first 41 hours in the Cinema Specialization. No more than six hours of 491, 495 and 497 combined may count toward the first 33 hours in the Photography Specialization. Not for graduate credit. Lab fee: \$25. Prerequisite: Permission of instructor.

498-3 Senior Portfolio. Preparation of a portfolio directed at a specific arena of professional practice (e.g., gallery exhibition, photojournalism, etc.) or in preparation for application to graduate study. A selection of the work must be publicly exhibited prior to completion of the course. The course will also include a series of seminar style presentations imparting important career skills (e.g., grant writing, business practices, portfolio presentation, etc.); Required for all photography students not taking 432. To be taken during the last year in residence. Not for graduate credit. Prerequisite: 324.

499P-4 Senior Thesis-Production. (Formerly 499A) Individually supervised senior thesis production under a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis, usually on video or DVD. Not for graduate credit. Prerequisite: senior standing, 376, any two 400-level courses numbered 489 or lower, a gpa in cinema and photography courses of 2.75 or higher, and permission of instructor.

499S-4 Senior Thesis-Studies. (Formerly 499B) Completion of a critical or research paper as thesis work under the supervision of a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis. Not for graduate credit. Prerequisite: senior standing, and any two courses from 449, 461, 462, 463, 466, or 467, a gpa in cinema and photography courses of 2.75 or higher, and permission of instructor.

499W-4 Senior Thesis-Screenwriting. Writing of a screenplay as a thesis work under the supervision of a cinema faculty member. Opportunities for enrollment are limited. Normally taken during last term in residence. The department will retain a copy of the thesis. Not for graduate credit. Prerequisite: senior standing,

452, one course from 449, 461, 462, 463, 466 or 467, a gpa in cinema and photography courses of 2.75 or higher, and permission of instructor.

Cinema and Photography Faculty

Boruszkowski, Lilly A., Associate Professor, M.F.A., Northwestern University, 1980.

Bursell, Cade, Assistant Professor, M.F.A. San Francisco State University, 2003.

Cocking, Loren D., Assistant Professor, *Emeritus*, M.A., Ohio State University, 1969.

Covell, Michael D., Assistant Professor, M.F.A., Ohio University, 1975.

Felleman, Susan, Associate Professor, Ph.D., City University of New York, 1993.

Gilmore, David A., Associate Professor, *Emeritus*, M.F.A., Ohio University, 1969.

Kanouse, Sarah E., Assistant Professor, M.F.A., University of Illinois, 2004.

Kapur, Jyotsna, Associate Professor, Ph.D., Northwestern University, 1998.

Kolb, Gary P., Associate Dean, Professor, M.F.A., Ohio University, 1977.

Logan, Fern, Assistant Professor, M.F.A., School of the Art Institute of Chicago, 1993.

Overturf, Daniel V., Associate Professor, M.F.A., Southern Illinois University Carbondale, 1983.

Paine, Frank, Associate Professor, *Emeritus*, B.S., Iowa State University, 1950.

Reed, Lori, Assistant Professor, Ph.D., University of Illinois at Urbana-Champaign, 2000.

Roddy, Jan P., Associate Professor, M.F.A., University of Illinois, 1987.

Rowley, R. William, Associate Professor, M.F.A., University of Iowa, 1974.

Swedlund, Charles A., Professor, *Emeritus*, M.S., Illinois Institute of Technology, 1961.

Vratil, Dru, Assistant Professor, M.F.A., University of Iowa, 1998.

Civil and Environmental Engineering (Department,

Major, Courses, Faculty)

The Department of Civil and Environmental Engineering provides educational opportunities that will prepare students for effective and productive careers in Civil and Environmental Engineering and other related professions. Continued professional growth, discovery, innovation and development of technologies, and service to the community are characteristics of this area of study.

The primary mission of the Department is to prepare students for careers that will span forty years or more. Most Civil and Environmental Engineers will be employed by public agencies at all levels of government, by various industries, and by a variety of large and small consulting firms. Virtually all of this practice relates in some way to the welfare of the general public. Those involved in this field will need to possess the ability to conceptualize, plan, design, and construct new and innovative works and systems. Technical knowledge of great sophistication will be needed, as well as an understanding of the interrelated social, political, and environmental issues that will be key elements in the decision making process.

Preparing Engineers for this role requires a broad liberal education program as well as one of technical depth and breadth. The undergraduate core curriculum is broad-based and includes courses in mathematics, science, communication, and social science. The Civil Engineering curriculum begins with fundamental engineering skills and ends with a two-semester capstone design experience. Students are required to take courses in environmental engineering, geotechnical engineering, hydraulic engineering, structural engineering, and surveying.

The educational goals of the undergraduate civil engineering program are to provide a quality civil engineering education that will prepare our graduates to become practicing civil engineering professionals able to meet the technological challenges of the 21st century. To this end we strive to instill in our graduates the knowledge, skills, attitudes, and ethical and social values necessary to be successful civil engineering practitioners. Also, we seek to provide the necessary academic background for successful graduate study in engineering or other fields for those graduates interested in pursuing advanced degrees. The objectives employed to achieve these goals are to ensure that graduates will:

1. Demonstrate how mathematics and the sciences together are used in the analysis, modeling and understanding of engineering systems, processes and/or facilities.
2. Recognize the variable nature of experimentally determined values and be able to perform data reduction as well as interpret and use experimental data with the appropriate statistical analysis.
3. Generate multiple design solutions based on specified criteria, select the most appropriate design, and document the design solution.
4. Have the ability to work with a multi-disciplinary team and employ team-work principles.
5. Have the ability to construct a problem statement as well as solve defined and open-ended engineering problems.
6. Interpret and apply ethical standards and responsibilities as demanded by the civil engineering profession and defined by the ASCE, NSPE, ACSM, and NSPS Codes of Ethics.
7. Prepare effective written and graphical communications and make effective formal presentations.
8. Have a background in social science and humanities that provides them with a foundation for understanding the impact of engineering solutions in a global and societal context.
9. Recognize that a BSCE degree is the beginning of their professional education, and the importance of continuing education and professional licensure.
10. Be aware of emerging technologies and professional practice issues important for civil engineering practitioners.
11. Demonstrate competence in the use of modern engineering tools necessary for engineering practice, including computer-aided drawing software (CAD) and discipline-specific software.

The Department of Civil and Environmental Engineering offers programs leading to a Bachelor of Science degree in Civil Engineering and a Bachelor of Science degree in Civil Engineering with specialization in Environment Engineering.

The civil engineering program leading to the Bachelor of Science degree at SIUC is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (111 Market Place, Suite 1050, Baltimore, MD 21202, Phone (410) 347-7700), the recognized agency for accrediting engineering curricula in the United States. The program is designed to provide the students with the broad educational background essential to modern civil engineering practice with emphases in the areas of geotechnical engineering, hydraulic engineering, structural engineering and land surveying. Students may choose to specialize in the area of Environmental Engineering.

Bachelor of Science Degree in Civil Engineering, College of Engineering Civil Engineering Major

<i>University Core Curriculum Requirements</i>	41 ¹
Foundation Skills	12
English 101, 102	6
Mathematics (substitute Mathematics in major)	3 ¹
Speech Communication 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health (Biology 202 or Physiology 201 or an approved substitute)	2
Humanities	6 ^{2,3}
Science (substitute Physics and Chemistry in major)	6 ¹

Social Science	6 ^{2,3}
Integrative Studies	6
Multicultural	3
Interdisciplinary	3
Requirements for Major in Civil Engineering	(9) + 88
Mathematics and Basic Sciences	(9) + 23
Mathematical Analysis	(3) + 14
Mathematics 150, 250, 251 and 305	(3) + 11 ²
Engineering 351	3
Basic Sciences	(6) + 9
Physics 205a,b; 255a,b	(3) + 5 ²
Chemistry 200, 201, 210	(3) + 4 ²
Core Courses: Engineering 102, 300, 361, ME 261	10
Civil Engineering Core Courses	43
Civil Engineering 101, 250, 263, 310, 320, 330, 340, 350, 370, 418, 421, 474, 495a,b and either 442 or 444	
Approved Technical Electives	12
Total	129

¹Courses required for the major will apply toward nine hours of University Core Curriculum, making a total of 41 in that area.

²Department requirements for University Core Curriculum are more restrictive than those of the University as a whole. Students should consult advisor for approved courses.

³Transfer students holding an associate degree in a baccalaureate-oriented program must have a sequence of courses in social science or humanities. See departmental advisor for an approved course. Students transferring from other programs or institutions will be required to (a) complete a course sequence in the humanities or social sciences and (b) meet the University Core Curriculum requirements for engineering students.

Civil Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BIOL 202, CE 250	2	3	Core Humanities	-	3
Core Humanities	3	-	MATH 251, 305.....	3	3
ENGL 101,102	3	3	CHEM 210, SPCM 101.....	3	3
MATH 150, 250	4	4	PHYS 205b, 255b.....	4	-
PHYS 205a, 255a.....	-	4	CE 310.....	-	3
ENGR 102, CHEM 200, 201	2	4	ME 261, CE 263	3	3
CE 101	1	-	CE 350, 340	3	3
Total.....	15	18	Total	16	18
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Social Science.....	3	3	Core Fine Arts	-	3
ENGR 351, CE 442 or 444	3	3	Core Integrative Studies.....	3	3
ENGR 361, CE 474	2	3	Tech Electives	6	6
CE 320, 330.....	3	3	CE 495a,b	3	3
CE 370, 418	3	3	ENGR 300, CE 421	3	3
Total.....	14	15	Total	15	18

Civil Engineering Transfer Students Suggested Curricular Guide¹

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
CE 350, 370, 418.....	6	3	ENGR 300, CE 421	3	3
ENGR 351, CE 474.....	3	3	CE 442 or 444	3	-
ENGR 361, CE 340	2	3	Tech Electives	6	6
CE 263, 330	3	3	CE 495a,b	3	3
CE 310, 320.....	3	3	Electives	-	3
Total.....	17	15	Total	15	15

¹This assumes that the transfer student satisfied the university core curriculum requirements and has had all of the Mathematics, Chemistry and Physics required for the Civil Engineering curriculum. Furthermore, this assumes that the transfer student has had the equivalent of ENGR 102, CE 250, and ME 261. Community College transfer students should make special note of the requirement that a minimum of 60 semester hours must be completed at a senior institution.

Bachelor of Science Degree in Civil Engineering, College of Engineering
Civil Engineering Major-Environmental Engineering Specialization

University Core Curriculum Requirements	41 ¹
Foundation Skills	12
English 101, 102	6
Mathematics (substitute Mathematics in major)	3 ¹

Speech Communication 101	3	
Disciplinary Studies	23	
Fine Arts	3	
Human Health (Biology 202 or Physiology 201 or an approved substitute)	2	
Humanities	6 ^{2,3}	
Science (substitute Physics and Chemistry in major)	6 ¹	
Social Science	6 ^{2,3}	
Integrative Studies	6	
Multicultural	3	
Interdisciplinary	3	
Requirements for Major in Civil Engineering	(9) + 88	
Mathematics and Basic Sciences	(9) + 23	
Mathematical Analysis	(3) + 14	
Mathematics 150, 250, 251 and 305	(3) + 11 ²	
Engineering 351	3	
Basic Sciences	(6) + 9	
Physics 205a,b; 255a,b	(3) + 5 ²	
Chemistry 200, 201, 210	(3) + 4 ²	
Engineering Core Courses	10	
Engineering 102, 300, 361, ME 261		
Civil Engineering Core Courses	43	
Civil Engineering 101, 250, 263, 310, 320, 330, 340, 350, 370, 418, 421, 474, 495a,b and either 442 or 444		
Approved Technical Electives	12	
The approved electives must include the following: Civil Engineering 410, 412, 419.		
Total	129	

¹Courses required for the major will apply toward nine hours of University Core Curriculum, making a total of 41 in that area.

²Department requirements for University Core Curriculum are more restrictive than those of the University as a whole. Students should consult advisor for approved courses.

³Transfer students holding an associate degree in a baccalaureate-oriented program must have a sequence of courses in social science or humanities. See departmental advisor for an approved course. Students transferring from other programs or institutions will be required to (a) complete a course sequence in the humanities or social sciences and (b) meet the University Core Curriculum requirements for engineering students.

Civil Engineering-Environmental Engineering Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BIOL 202, CE 250	2	3	MATH 251, 305	3	3
Core Humanities	3	-	CHEM 210, SPCM 101	3	3
ENGL 101, 102	3	3	PHYS 205b, 255b	4	-
MATH 150, 250	4	4	Core Humanities	-	3
PHYS 205a, 255a	-	4	ME 261, CE 263	3	3
ENGR 102	2	-	CE 350, 340	3	3
CE 101, CHEM 200, 201	1	4	CE 310	-	3
Total	15	18	Total	16	18
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Social Science	3	3	Core Fine Arts	-	3
ENGR 351, CE 474	3	3	Core Integrative Studies	3	3
ENGR 361, CE 442 or 444	2	3	Tech Electives, CE 421	3	3
CE 320, 330	3	3	CE 412, 419	3	3
CE 370	3	-	CE 495a,b	3	3
CE 410, 418	3	3	ENGR 300	3	-
Total	17	15	Total	15	15

Courses (CE)

Safety glasses, a hand-held scientific calculator, and textbooks are required of all civil engineering students.

101-1 Introduction to Civil and Environmental Engineering. Civil and Environmental Engineering as a profession. Introduction to the use of computers in engineering, in particular DOS and WINDOWS operat-

- ing systems, word processing, spread sheets, equation solvers. Introduction to statistics. The Internet (e-mail, FTP, telnet, World Wide Web) and the UNIX operating system. Small design projects emphasizing team design process.
- 250-3 Statics.** Principles of statics; force systems; equilibrium of particles and rigid bodies; trusses; frames; 2-D centroids; friction; moments of inertia; distributed loads; 3-D centroids; internal forces; shear and bending moment diagrams. Mass moment of inertia. Prerequisite: Engineering 102 and Mathematics 150.
- 263-3 Basic Surveying.** An introductory course designed to introduce the principles, theory and equipment of surveying. Development of survey field practices on the earth's surface and subsurface and related computations. Prerequisite: Engineering 102 and Mathematics 111.
- 310-3 Environmental Engineering.** Basic engineering aspects of water, land and air pollution and control. Problems, sources and effects of pollution. Major state and federal regulations relating to environmental issues. Lab fee \$30. Prerequisite: Chemistry 210, Mathematics 250, Engineering 102.
- 320-3 Soil Mechanics.** Physical and mechanical properties of soils, flow through soils, effective stresses, consolidation, shear strength, soil improvement, lateral earth pressures. Lab fee: \$30. Prerequisite: 101, 250 and 350.
- 330-3 Civil Engineering Materials.** Introduction of cements and aggregates; production and evaluation of concrete structures; mechanical properties of steels and timber; mixing and evaluation of pavement materials; testing of asphalt and masonry. Lab fee: \$30. Prerequisite: 101 or concurrent enrollment and 350.
- 331-3 Transportation Engineering.** Introduction to geometric design, earth work, drainage and traffic. Basic design principles for each area and their application to typical problems. Prerequisite: completion of or concurrent enrollment in 330.
- 340-3 Structures.** Loads. Types of structures. Structural materials. Safety. Analysis of statically determinate beams, trusses, and frames under static loads. Influence lines. Moving loads, Cables, Arches, Space trusses, Deflection of beams, trusses, and frames. Moment distribution for beams. Prerequisite: 101 or concurrent enrollment and 350.
- 350-3 (2 to 3,1) Mechanics of Materials. (a)** Introduction to the mechanics of deformable bodies. Stress and strain. Torsion. Stresses and deflections in beams and columns. Influence lines. Statically indeterminate beams. Lab fee: \$30. Prerequisite: 250, Mathematics 250. **(b)** Laboratory only. For transfer students who have satisfied the lecture but not the laboratory component of the 350a requirement. Lab fee: \$30. Prerequisite: consent of instructor.
- 361-3 Civil Engineering Surveying.** Surveying process and theory for Civil Engineering projects, topographic surveys, precise surveys, easements and related computations. Lab fee: \$30. Prerequisite: 263.
- 362-3 Land Surveying.** Survey process and theory of land surveying including development of the United States Rectangular System, boundary and retracement surveys, basic survey law, legal descriptions, title search, field monument search and related computations. Lab fee: \$30. Prerequisite: 263.
- 363-3 Control/Construction Surveying.** The surveying processes and theory of control surveying, geodesy, global positioning systems, geographic information systems, all types of construction surveying and related computations. Lab fee: \$30. Prerequisite: 263.
- 370-3 (2 to 3,1) Fluid Mechanics. (a)** Fluid properties; Fluid statics. Fluid flow; governing equations. Dimensional analysis and model-prototype relationships. Closed conduit flow. Open-channel flow. Introduction to numerical modeling. Lab fee: \$30. Prerequisite: Mechanical Engineering 261. **(b)** Laboratory only. For transfer students who have satisfied the lecture but not the laboratory component of the 370a requirement.
- 392-1 to 6 Civil Engineering Cooperative Education.** Supervised work experience in industry, government or professional organization. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Prerequisite: sophomore standing.
- 410-3 Solid Waste Engineering.** Engineering aspects of solid waste prevention, treatment, recycling and disposal. Design of recycling programs, solid waste treatment and disposal facilities. State and federal regulations. Problems, sources, and effects of solid waste. Design projects required. Prerequisite: 310.
- 412-3 Contaminant Flow, Transport and Remediation in Porous Media.** Theory of mass transport and flow in the saturated and vadose zones; stochastic transport theory; retardation and attenuation of dissolved solutes; flow of nonaqueous phase liquids; groundwater remediation. Prerequisite: 310 and 320.
- 413-3 Collection Systems Design.** Design of waste water and storm water collection systems including installation of buried pipes. Determination of design loads and flows, system layout and pipe size. Prerequisite: 310 and 370.
- 415-3 Wastewater Treatment.** A study of the design equations used in physical, chemical, and biological treatment processes and comparison to design by state standards. Basics of bacteria and their metabolic processes in the degradation of organic wastes. Treatment and disposal of sludges produced in wastewater treatment. Advanced waste treatment processes and reuse of wastewater. Prerequisite: 370 and Engineering 351.
- 418-3 Water and Wastewater Treatment.** A study of the theory and design of water and wastewater treatment systems, including physical, chemical, and biological processes. Topics include sedimentation, biological treatment, hardness removal, filtration, chlorination and residuals management. Prerequisite: 310, 370 and Engineering 351.
- 419-3 Advanced Water and Wastewater Treatment.** Advanced concepts in the analysis and design of water and wastewater treatment plants. Topics include advanced physical, chemical, and biological processes. Emphasis is on the treatment and disposal of sludges, design of facilities, advanced treatment principles, and toxics removal. Prerequisite: 418.

- 421-3 Foundation Design.** Application of soil mechanics to the design of the foundations of structures; bearing capacity and settlement analysis; design of shallow footings; stability of earth slopes; design of retaining walls, design of pile foundations, coffer dams. Prerequisite: 320.
- 422-3 Environmental Geotechnology.** Geotechnical aspects of land disposal of solid waste and remediation, solute transport in saturated soils, waste characterization and soil-waste interaction, engineering properties of municipal wastes, construction quality control of liners, slope stability and settlement considerations, use of geosynthetics and geotextiles, cap design, gas generation, migration and management. Prerequisite: 310, 320.
- 423-3 Geotechnical Engineering in Professional Practice.** Application of principles of geotechnical engineering in a real-world setting; planning, managing and executing geotechnical projects; developing proposals and geotechnical project reports; interpreting and using recommendations developed by geotechnical engineers; total quality management, professional liability and risk management. Prerequisite: 320, 421 or concurrent enrollment or consent of instructor.
- 431-3 Pavement Design.** Design of highway and airport systems: subgrades, subbases, and bases; soil stabilization; stresses in pavements; design of flexible and rigid pavements; cost analysis and pavement selection; and pavement evaluation and rehabilitation. Prerequisite: 320 and 330.
- 440-3 Statically Indeterminate Structures.** Analysis of trusses, beams, and frames. Approximate methods. Method of consistent deformations. Three-moment theorem. Slope deflection. Moment distribution. Column analogy. Plastic analysis. Matrix methods. Prerequisite: 340.
- 441-3 Matrix Methods of Structural Analysis.** Flexibility method and stiffness method applied to framed structures. Introduction to finite elements. Prerequisite: 340.
- 442-3 Structural Steel Design.** An introduction to structural steel design with an emphasis on buildings. Design of structural members and typical welded and bolted connections using Load and Resistance Factor Design (LRFD) methods. Design project and report required. Prerequisite: 340.
- 444-3 Reinforced Concrete Design.** Behavior and strength design of reinforced concrete beams, slabs, compression members, and footings. Prerequisite: 340.
- 445-3 Reinforced Masonry Design.** Materials. Loads. Walls. Columns and pilasters. Beams. Lateral-load resisting elements. Connections and joints. High-rise structures. Environmental features. Quality control. Design project and report required. Prerequisite: 444.
- 446-3 Prestressed Concrete Design.** Fundamental concepts of analysis and design. Materials. Flexure, shear, and torsions. Deflections. Prestress losses. Composite beams. Indeterminate structures. Slabs. Bridges. Prerequisite: 444.
- 447-3 Seismic Design of Structures.** Basic seismology, earthquake characteristics and effects of earthquakes on structures, vibration and diaphragm theories, seismic provisions of the Uniform Building Code, general structural design and seismic resistant concrete and steel structures. Prerequisite: 442 and 444 or consent of instructor.
- 461-3 Legal Aspects of Surveying.** Topics covered include common and statute law; unwritten rights in land and their relationship to land surveys; survey standards; restoration of lost corners; multiple corners; rules of evidence and rights, duties and liability of the surveyor. Not for graduate credit. Prerequisite: 362.
- 462-3 Survey Design and Land Development.** Subdivision and land development principles, theory, methods and procedures including laws relating to subdivision and land development. Scope will include rural and urban subdivisions, industrial parks and major recreational developments. Not for graduate credit. Lab fee: \$30. Prerequisite: 362.
- 463-3 Field Survey Problems.** Perform extensive field projects in the areas of engineering, hydrographic, topographic, land, and control surveying utilizing state-of-the-art equipment. To be held at Crab Orchard National Wildlife Refuge. Must be taken concurrently with 464. Enrollment limited to 12 students. Not for graduate credit. Prerequisite: 361 or 362 or 363.
- 464-3 Field Survey Planning and Computation.** Planning, organization, computations and drafting of field survey projects including the needed mapping utilizing calculators, computers, COGO and CAD. This course must be taken concurrently with 463. Enrollment limited to 12 students. Not for graduate credit. Prerequisite: 361 or 362 or 363.
- 465-3 Photogrammetry.** Process and theory of applications of photogrammetry with respect to engineering and surveying including flight planning, mathematical principles of aerial photographs, ground control methods, control extensions, stereoscopy and parallax, basic instrumentation and remote sensing with related computations. Not for graduate credit. Lab fee: \$30. Prerequisite: 263.
- 471-3 Groundwater Hydrology.** Analysis of groundwater flow and the transport of pollution by subsurface flow; applications to the design of production wells and remediation of polluted areas; finite difference methods for subsurface analyses. Prerequisite: 370 or consent of instructor.
- 472-3 Open Channel Hydraulics.** Open channel flow, energy and momentum, design of channels, gradually varied flow computations, practical problems, spatially varied flow, rapidly varied flow, unsteady flow, flood routing, method of characteristics. Prerequisite: 474 or consent of instructor.
- 473-3 Hydrologic Analysis and Design.** Hydrological cycle, stream-flow analysis, hydrograph generation, frequency analysis, flood routing, watershed analysis, urban hydrology, flood plain analysis. Application of hydrology to the design of small dams, spillways, drainage systems. Prerequisite: 370.
- 474-3 Hydraulic Engineering Design.** Hydrostatics, flow in pipes, open channels and porous media metering devices. Includes two- to three-week projects involving identification, modeling, analysis and design of hydraulic engineering systems. Prerequisite: 370 and Engineering 351.
- 492-1 to 4 Special Problems in Civil Engineering.** Selected engineering topics or problems in (a) structural engineering; (b) hydraulic engineering; (c) environmental engineering; (d) applied mechanics; (e)

geotechnical engineering; (f) computational mechanics (g) surveying engineering. Four hours maximum credit. Not for graduate credit. Prerequisite: consent of instructor.

495-6 (3,3) Civil Engineering Design. (a) Engineering ethics and professionalism. Project development skills, feasibility and cost estimation, project management, auto-cad applications in civil engineering. Selection of projects, formation of design teams, development of a design proposal. Written and oral presentations of the design proposal. Not for graduate credit. Prerequisite: Completion of or concurrent enrollment in 320, 418, 442 or 444, and 474. (b) A capstone design experience using a team approach for the preliminary and final design of a civil engineering project. Documentation of all stages of the design project. Written and oral presentation of the final design. Not for graduate credit. Prerequisite: 495a.

Civil Engineering Faculty

Bravo, Rolando, Associate Professor, Ph.D., University of Houston, 1990.

Butson, Gary J., Associate Professor, Ph.D., University of Illinois at Urbana-Champaign, 1981.

Chevalier, Lizette R., Associate Professor and Chair, Ph.D., Michigan State University, 1994.

Cook, Echol E., Professor, *Emeritus*, Ph.D., Oklahoma State University, 1970.

Craddock, James N., Associate Professor, *Emeritus*, Ph.D., University of Illinois at Urbana-Champaign, 1979.

Davis, Philip K., Professor, *Emeritus*, Ph.D., University of Michigan, 1963.

DeVantier, Bruce A., Associate Professor, Ph.D., University of California at Davis, 1983.

Eichfeld, William F., Assistant Professor, M.S., University of Wisconsin at Madison, 1973.

Evers, James L., Associate Professor, *Emeritus*, Ph.D., University of Alabama, 1969.

Frank, Roy R., Jr., Assistant Professor, M.S., Southern Illinois University Carbondale, 1983.

Hsiao, J. Kent, Assistant Professor, Ph.D., University of Utah, Salt Lake City, 2000.

Hu, Zhiqiang, Assistant Professor, Ph.D., University of Connecticut, 2002.

Kassimali, Aslam, Professor, Ph.D., University of Missouri at Columbia, 1976.

Kumar, Sanjeev, Professor, Ph.D., University of Missouri at Rolla, 1996.

Marikunte, Shashi S., Assistant Professor, Ph.D., Michigan State University, East Lansing, 1992.

Nicklow, John W., Associate Professor, Ph.D., Arizona State University, 1998.

Nowacki, C. Raymond, Associate Professor, *Emeritus*, Ph.D., University of Illinois at Urbana-Champaign, 1965.

Puri, Vijay K., Professor, Ph.D., University of Missouri at Rolla, 1984.

Ray, Bill T., Associate Professor, *Emeritus*, Ph.D., University of Missouri at Rolla, 1984.

Rubayi, Najim, Professor, *Emeritus*, Ph.D., University of Wisconsin, 1966.

Sami, Sedat, Professor, *Emeritus*, Ph.D., University of Iowa, 1966.

Tezcan, Jale, Assistant Professor, Ph.D., Rice University, 2005.

Yen, Shing-Chung, Professor and Director of Materials Technology Center, Ph.D., Virginia Polytechnic Institute and State University, 1984.

Coaching

(SEE KINESIOLOGY)

Commodity Prices

(SEE AGRIBUSINESS ECONOMICS)

Communication Disorders and Sciences Major,

Courses)

The major in Communication Disorders and Sciences is part of the Rehabilitation Institute.

The program in Communication Disorders and Sciences has as its objective the training of qualified personnel to aid people who have speech, language, or hearing impairment. The undergraduate curriculum is broad in scope and gives the student the necessary preprofessional background for the clinical-research program offered at the master's level. Both the state of Illinois and national certification require the master's degree. Students who complete the graduate program at the master's level and have certification are qualified for positions in public or private clinics, schools, hospitals, or rehabilitation agencies. In addition, the broad scope of the undergraduate program provides a solid foundation for many

graduate professional programs in rehabilitation, such as rehabilitation counseling, behavioral analysis and therapy, and rehabilitation administration.

Communication Disorders and Sciences are dedicated to preparing students for leadership roles in the profession. Students are expected to develop programs that will enhance their individual strengths in light of their professional goals. The undergraduate program permits students to develop significant concentration areas outside of the department while laying the foundation for graduate education.

The undergraduate program is designed to provide the student with sufficient information and experience to determine the advisability of pursuing a graduate degree in Communication Disorders and Sciences. Students choosing not to continue in the profession will find themselves well prepared to enter the job market with a broadly based education or to pursue graduate work in allied rehabilitation professions.

All students are encouraged to plan programs of study to meet the academic and practicum requirements for the Certificate of Clinical Competence of the American Speech-Language-Hearing Association, (10801 Rockville Pike, Rockville MD., 20852-3279) or the Standard Special Certificate in Speech and Language Impaired of the State of Illinois, or both. Programmatic planning at the undergraduate level will facilitate completion of certification requirements of American Speech-Language-Hearing Association and State of Illinois in conjunction with the master's degree program.

Bachelor of Science Degree in Communication Disorders and Sciences, College of Education and Human Services

COMMUNICATION DISORDERS AND SCIENCES — PREPROFESSIONAL PROGRAM

<i>University Core Curriculum Requirements</i>	41
To include: ENGL 101, 102; SPCM 101; MATH 110 or 113; PHYS 101, GEOL 110 or CHEM 106; PLB 115, 117, or ZOOL 115; FL 310i, PHIL 308i ¹ ; HIST 110; AD 101, HIST 201, MUS 103 or THEA 101; FL 101, HIST 101a ¹ , b, PHIL 103a,b; ENGL 121 or 204; POLS 114; PSYC 102; ANTH 202, HIST 202, 210 or SOC 215; HED 101 or PE 101.	
<i>Major Requirements</i>	46
Psychology 102, 211, 301	10
Sociology 108	3
Communication Disorders and Sciences 105, 300, 301, 302, 303, 314, 410, 419, 420, 492, 493	33
<i>Electives by Advisement</i>	33
<i>Total</i>	120

¹One course required to meet non-western civilization/third world culture requirement.

Students pursuing an Illinois Type-10 Teaching Certificate must include the following:

Mathematics and Science coursework to total 12 semester hours (including one laboratory course).

Humanities and Fine Arts coursework to total 15 semester hours.

A minimum of 3 semester hours in English literature.

And the following courses: Education 308, 310, 311, 314a, 315, History 110 and Political Science 114

A student in the College of Education and Human Services who plans to be a public school speech and language clinician in Illinois, thereby needing to meet the requirements for the Standard Special Certificate - Certificate in Speech and Language Impaired, should follow the program of course requirements listed above. To meet the University Core Curriculum Requirements for certification, the following UCC courses listed above must be taken. In addition, the requirements for the Teacher Education Program must be completed as part of the elec-

tives by advisement. Recommendation for admission to the Teacher Education Program for the speech-language impaired requires a minimum grade point average of 2.75 on a 4.0 scale. The student teaching requirement may not be undertaken at the undergraduate level. Students interested in the Teacher Education Program should contact the academic adviser for Communication Disorders and Sciences in the College of Education and Human Services for appropriate University Core Curriculum and Teacher Education coursework. See also Teacher Education Program above.

Courses (CDS)

100-0 to 1 Speech Clinic: Therapy. For students with speech and hearing deviations who need individual help. Prerequisite: consent of instructor.

104-3 Training the Speaking Voice. For those students who desire to improve their voice and articulation.

105-3 Introduction to Communication Disorders. A general survey course devoted to a discussion of the various problems considered to be speech and hearing disorders with special emphasis on basic etiological classification schemes and their incidence in the current population. Opportunities for directed observation.

300-3 Phonetics. Instruction in the use of phonetic symbols to record the speech sounds of midland American English, with emphasis on ear training, and a description of place and manner of production of these sounds.

301-3 Introduction to Speech-Language and Hearing Science. An introduction to the science of general speech including the history of research in the field and significant experimental trends. Open to all students.

302-3 Voice and Articulation. A general introduction to the phonological development in children on a normative basis. In addition to introducing the student to the classical studies in articulatory development, this course provides a general exposure to the implications of classical phonetic theory, coarticulatory theory and distinctive features theory as a framework for therapy and research. Physio-acoustic parameters of voice quality variables evidenced in verbal communication are also studied. Lectures and demonstrations emphasize basic information necessary to study for the treatment of voice disorders.

303-3 Language Development. Presentation of developmental language components including theoretical considerations and terminology related to traditional structural and transformational grammars. The effects of dialect and English as a second language will be expounded. Language research and analysis is related to the developmental processes.

307-3 Introduction to Organics. An introduction to the organic bases of communication disorders. An emphasis will be placed on the foundations of development and teratological events and influences which result in specific communication disorders, and overview of those disorders, and their implications for the individual. Observations as directed. Prerequisite: 314 or consent of instructor.

314-3 Anatomy and Physiology of the Speech and Hearing Mechanism. Structure and function of the speech and hearing mechanism.

328-3 Communication Disorders and Sciences and the Classroom Teacher. Basic information on communication disorders through exploring etiology, diagnostic, and treatment of school age children with common speech, language and hearing disorders. This course will also provide information on collaboration, and integration of speech-language programs into the school curriculum.

385-3 Computer Technology in Communication and Fine Arts. An introduction to the basic terminology, concepts and techniques being used in the various areas of education and rehabilitation. A foundation course to prepare students for the impact of computer technology in the professional lives of those who work in the occupational settings represented within the college.

408-3 Communicative Disorders: Craniofacial Anomalies. Development of cleft palate and related anomalies that cause communication disorders. Assessment and intervention of the communication disorders related to these impairments. Prerequisite: Coursework on the normal structure and function of the speech and hearing mechanism.

410-3 Multicultural Aspects of Communication Disorders. Students will explore different cultures and communication within these cultures. Emphasis will be placed on the relationship between cultural differences and communication disorders. Review of speech and language disorders in multicultural populations, as well as assessment and intervention strategies for use with this diverse group will be provided. Prerequisite: 302, 303 or consent of instructor.

420-3 Introduction to Audiological Disorders and Evaluation. Bases of professional field of audiology (orientation, anatomy, and physiology of the auditory system), major disease processes influencing hearing and their manifestations, measurement of hearing loss. Prerequisite: 301 and 314.

422-3 Communication Problems of the Hearing Impaired. Objectives and techniques for the teaching of lip reading, speech conservation, and auditory training. Prerequisite: 302, 303, and 420 or equivalents and consent of instructor.

450-3 Neuroanatomical Basis of Human Communication. Examination of the central nervous system (brain and spinal cord) as it relates to normal and disordered human communication. Presentation of basic neuroanatomy, common neuropathologies relevant to communication disorders, and strategies in neurogenic problem solving. Prerequisite: 314 or consent of instructor.

460-3 Augmentative and Alternative Communication Systems. An introduction to alternative and augmentative communication systems for non-vocal clients. Discussions include: use of aided and unaided augmentative systems, assessment procedures and training. Prerequisite: 301 or consent of instructor.

485-1 to 9 (1 to 3 per 700 section number) Special Topics in Communication Disorders and Sciences. Topical presentations of current information on special interests of the faculty not otherwise covered in the curriculum. Designed to promote better understanding of recent developments related to disorders of verbal communication. Open to advanced undergraduate and graduate students with consent of instructor.

491-1 to 9 (1 to 3 per semester) Individual Study. Activities involved shall be investigative, creative, or clinical in character. Must be arranged in advance with the instructor, with consent of the chair. Prerequisite: consent of chair.

492-3 Diagnostic Procedures in Communication Disorders. A course devoted to discussion of the role of the speech and hearing clinician as a differential diagnostician. Special emphasis is placed on correlating information obtained from the oral-peripheral examination, articulation and language evaluation, audiometric and case history information in constructing the initial evaluation report. Prerequisite: restricted to consent of instructor.

493-3 Basic Clinical Practice. Current information regarding diagnostic, treatment and documentation procedures in speech-language pathology will be presented through active observation in the clinical environment and classroom instruction. Prerequisite: restricted to consent of instructor.

Computer Engineering (Major)

(SEE ELECTRICAL AND COMPUTER ENGINEERING)

The Bachelor of Science degree program in Computer Engineering provides the students with a strong background in the basic Electrical and Computer Engineering sciences. Students have the option to choose among several advanced courses in the theory and applications of digital circuits and systems, computer architecture and design, computer networks and digital design automation.

Employment opportunities exist within a range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense and automotive companies, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

Computer Science (Department, Major, Courses, Faculty)

Computer Science encompasses the theory, tools and techniques by which information is derived, stored, manipulated, and communicated using computers. It deals particularly with the study of algorithms that are used to direct the computer and with the expression of these algorithms as programs. Of central concern is the study and further development of the computer systems, including both hardware and software that support the execution of these programs.

The department of Computer Science offers two-degree programs to undergraduate students. The Bachelor of Science and the Bachelor of Arts degree programs are both offered through the College of Science. The curriculum specified for the Bachelor of Science degree is more traditional and somewhat more flexible in that it prepares the student for a wide range of careers as well as for graduate degree programs in computer science. The Bachelor of Arts degree program is more specifically oriented toward the area of business applications and in particular, is designed to enable students to pursue a fifth year of studies leading to an MBA degree.

In support of these degree programs, the department offers courses covering all the major areas of computer science, including programming languages, operating systems, databases, computer networks, computer architecture, computer graphics, artificial intelligence, WEB application development, systems administration, software engineering, algorithms and parallel programming. In addition, the department offers an undergraduate minor and service courses for students from other fields that will use computer science as a tool in their areas.

Students interested in computer science will be advised with respect to computer science courses by the department so they may profitably pursue their academic and professional interests.

The department enforces the following retention policy: a computer science major will not be permitted to enter any of the courses, 220, 306, 320, and 330, unless that student has achieved a grade point average of at least 2.00 for all required precedent computer science courses. Any exceptions to this policy will require the written approval of the department.

Permission to enroll in departmental courses is subject to the restriction that a student who receives a grade of *F* or *WF* three times in the same course cannot take the course again. An exception to this policy may be granted by written approval of the department chair, but such exceptions will be rare.

The department also enforces the following restriction on students repeating its courses: a student cannot repeat a course or its equivalent, in which a grade of *B* or better was earned, without the consent of the department.

Bachelor of Science Degree in Computer Science, College of Science

University Core Curriculum Requirements ¹	41
College of Science Academic Requirements	10
Biological Sciences (6 hours completed in major) ¹	3
Mathematics (completed with Computer Science major)	
Physical Sciences (completed with Computer Science major)	
Supportive Skills	7
Mathematics 483 and one of English 290, 291 or 491	
Requirements for Major in Computer Science ²	57
Computer Science Core ⁴	20
Computer Science 202, 215, 220, 306, 320, 330, 399, each with a grade of <i>C</i> or better	
Computer Sciences Electives ^{4,5,6}	24
To build on the Core and to provide breadth and depth, two additional 300-level and six 400-level computer science courses must be chosen	
Mathematics 150 ^{1,3} , 250, 221	8
Laboratory Science Sequence ¹	5
Physics 205a,b and 255a,b or Chemistry 200, 201 and 210, 211	
Electives	12
Total	120

¹ A total of nine hours of biological science, mathematics and laboratory science course work are accounted for in the 41-hour Core Curriculum requirement.
² The supportive skills are also required for a major.
³ Prerequisite is Mathematics 111 or Mathematics 108 and 109. The elective hours are reduced by 3-6 hours for students who place into a course lower than calculus.
⁴ At least half of the computer science credit hours must be taken at SIUC.
⁵ 300, 301, and 393 cannot be used to fulfill the elective requirement. Use of 391 requires department approval.
⁶ Use of 490, 491, 492, or 493 requires departmental approval. At most one of 447, 449, 471, 472, 475a, and 475b can be used as an elective.

Bachelor of Science in Computer Science Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102.....	3	3	CS 220, 3XX	3	3
MATH 111 ¹ , 150.....	5	4	ENGL 290, Core Soc Sci.....	3	3
PHIL 105, CS 215.....	3	3	MATH 250, 221.....	4	3
SPCM 101.....	-	3	PHYS 205a, 255a.....	4	-
PHSL 201, CS 202.....	3	4	PHYS 205b, 255b.....	-	4
			Core Humanities	-	3
Total	14	17	Total	14	16

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
CS 306, CS 330	3	3	CS 399	1	-
CS 320	3	-	CS 4XX	3	3
Elective, MATH 483	3	4	CS 4XX	3	3
PLB 200 or ZOOL 118	-	4	CS 4XX	3	3
Core Fine Arts	3	-	Integrative Studies Core	3	3
Core Social Science, CS 3XX	3	3	Elective	3	3
<i>Total</i>	15	14	<i>Total</i>	16	15

¹ Students who place into calculus may substitute an elective for Mathematics 111.

Bachelor of Arts Degree in Computer Science, College of Science

<i>University Core Curriculum Requirements</i> ¹	41
<i>College of Science Academic Requirements</i>	12
Biological Sciences (6 hours completed in major, not UCC courses) ¹	3
Mathematics - completed with Computer Science major	
Physical Sciences (3 hours in major)	3
Supportive Skills	6
Mathematics 282 and one of English 290, 291 or 491	
<i>Requirements for Major in Computer Science</i> ²	63
Computer Science Core ⁴	23
Computer Science 201, 202, 215, 220, 306, 320, 330, 399, each with a grade of C or better	
Computer Science Electives ^{4,5,6}	18
To build on the core and to provide breadth and depth, two additional 300-level and four 400-level computer science courses must be chosen	
Mathematics 150 ^{1,3}	1
Secondary Concentration (MBA Foundation)	21
Accounting 220 and 230, Finance 270 and 330, Management 304 or Management 318 ⁷ , Marketing 304, and Economics 240 ¹ and 241	
<i>Electives</i>	4
<i>Total</i>	120

¹ A total of twelve hours of biological science, economic, mathematics and laboratory science course work are accounted for in the 41-hour Core Curriculum requirement.

² The supportive skills are also required for a major.

³ Prerequisite is Mathematics 111 or Mathematics 108 and 109. The hours are increased by 3-6 hours for students who place into a course lower than calculus.

⁴ At least half of the computer science credit hours must be taken at SIUC.

⁵ 300, 301, and 393 cannot be used to fulfill the elective requirement. Use of 391 requires department approval.

⁶ Use of 490, 491, 492, or 493 requires departmental approval. At most one of 447, 449, 471, 472, 475a, and 475b can be used as an elective.

⁷ Management 304 allows a student to earn a minor in Business Administration. Management 318 is required for entry into the Master in Business Administration degree program.

Bachelor of Arts in Computer Science Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
CS 201	3	-	ACCT 220, PHYS 203b	3	3
CS 215	-	3	CS 220, 3XX	3	3
ENGL 101, 102	3	3	ECON 240, 241	3	3
MATH 111 ¹ , 150	5	4	HED 101, ENGL 290	2	3
PHIL 105, CS 202	3	4	PHYS 203a, 253a	4	-
SPCM 101	-	3	Core Humanities	-	3
<i>Total</i>	14	17	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
CS 3XX, 306	3	3	CS 399, PHSL 201	1	3
CS 320, ACCT 230	3	3	CS 4XX	3	3
CS 330, CS 4XX	3	3	FIN 270, 330	3	3
MATH 282	-	3	MGMT 318, CS 4XX	3	3
PLB 200 or ZOOL 118	-	4	MKTG 304	3	-
Core Fine Arts, Social Science	6	-	Integrative Studies Core	3	3
<i>Total</i>	15	16	<i>Total</i>	16	15

¹ Students who place into calculus may substitute an elective for Mathematics 111.

Computer Science Minor

A minor consists of Computer Science 202, 215, 220 and at least nine hours of 300-level Computer Science course work. At least nine of these hours must be taken at SIUC.

Courses (CS)

105-3 Introduction to Application Software. This course is designed to provide participants with a detailed exposure to various computer applications software including word processing, database management, spreadsheet, presentation, Web design software, as well as a programming language. The hands-on approach is designed to help students to better use the computer as a tool in their own fields.

200B-3 Computer Concepts. The course is designed to provide participants with a broad overview of computer concepts including key terminology and components of computer hardware, software, and operating systems. Topics will include, but are not limited to computer architecture, peripheral devices, networking components, system software, information system analysis, application software including word processing, database management, spreadsheet, and presentation software. Discussion will also include the Internet and Web page development.

201-3 Problem Solving with Computers. This course provides an introduction to problem solving using computers. It goes beyond basic computer literacy and application software experiences, but is less intensive than a first course devoted solely to programming. The course focuses on problem solving in the context of an introduction to computer programming and includes coverage of topics from computer literacy, word processing, spreadsheet and database packages. A preliminary treatment of the Internet and World Wide Web is also included.

202-4 Introduction to Computer Science. An introduction to computers and programming using a high-level structured language including a discussion of programming constructs and data representation. Primary emphasis will be given to problem solving, algorithm design, and program development. Three one-hour lectures and one two-hour lab per week. Prerequisite: Mathematics 111 or equivalent with a grade of C or better.

215-3 Discrete Mathematics. [IAI Course: M1 905] Introduction to topics from discrete mathematics relevant to the study of computer science including: binary and hexadecimal number systems, sets, logic and truth tables, functions and relations, matrix operations, combinations, permutations, counting techniques, recurrence relations, boolean algebra, simple combinational circuits, simplification techniques. Prerequisite: Mathematics 111 or equivalent with a grade of C or better.

220-3 Programming with Data Structures. A course in advanced programming, data structures and algorithm design with an increased emphasis on structured design techniques and program development. Topics include advanced language features, data abstraction and object-oriented programming, classes and dynamic data, recursion, stacks, queues, linked lists, trees and graphs, sorting and searching. Prerequisite: 202 and 215 each with a grade of C or better.

300-3 Introduction to Linux. A gentle introduction to the Linux operating system. Computer programming experience is not required. Students will gain the knowledge and hands-on experience needed to install, configure, and use Linux. Emphasis will be placed on administration skills and security. Software for Linux will be surveyed, particularly to identify replacements for standard Windows applications. Prior experience with Windows or Macintosh operating systems is assumed.

301-3 Introduction to Visual Basic. This course is designed to introduce students to the fundamentals of programming in Visual Basic. The topics include, but are not limited to, design and development of the user interface, development of algorithms, and writing computer programs. The course will cover the history of programming languages, object oriented programming, data types, arrays, control structures, string manipulation and Web-based applications.

304-3 Advanced Object-Oriented Programming. Advanced features of object-oriented programming are covered in depth. The topics covered include, but are not limited to, the following: polymorphism, inheritance, overloading, generic programming, exception handling, file I/O, GUI development. A group project is an integral part of the course. Prerequisite: 220 with a grade of C or better.

306-3 Linux/UNIX Programming. This course will prepare students to develop software in and for Linux/UNIX environments. Topics to be covered include basic operating system concepts, effective command line usage, shell programming, the C language, programming development tools, system programming, network programming (client-server model and sockets), and GUI programming. Prerequisite: 220 with a grade of C or better.

311-3 Design and Implementation of Programming Languages. Study of object-oriented, functional, and logic programming languages. Emphasis on concepts abstracted from these languages. Specification of syntax and semantics, binding variables, data typing, static and dynamic scope, representation of data, abstraction, implementation of procedure calls and parameter passing, coroutines and concurrency, dynamic memory, memory management, pointers and references. Prerequisite: 220 with a grade of C or better.

315-3 Computer Logic and Digital Design. Introduction to switching algebra and its applications. Combinational logic and combinational circuit components. Sequential logic and sequential circuit components. Asynchronous sequential circuits. Prerequisite: 215 with a grade of C or better.

320-3 Computer Organization and Architecture. Overview of the basic logic circuits needed in constructing a computer. Fundamental computer operations: machine and assembly language instructions, stacks, procedures and macros. The translation process: assembly, linking and loading. Hardware elements

for processing, transferring, and storing information. Data path and control unit for a simple processor. Prerequisite: 220 with a grade of C or better.

330-3 Advanced Data Structures and Algorithms. An advanced course in data structures including a detailed treatment of the design, analysis, and complexity of algorithms. Covers B-trees, hash tables, heaps, and advanced sorting algorithms. Explores fundamental algorithm design techniques and basic graph algorithms. Prerequisite: 220 with a grade of C or better.

350-3 Web Application Development. A comprehensive introduction to languages and tools used to create client side and server side Web applications. Topics include, but are not limited to, markup languages, scripting languages, dynamic web pages, processing forms, server-side technologies, and database access. Prerequisite: 202 with a grade of C or better.

391-1 to 3 Current Topics in Computer Science. Selected current topics from various fields of computer science. Prerequisite: consent of instructor.

393-1 to 6 Internship in Computer Science. Credit for participation in a formalized internship program involving computer science related work. Hours do not count toward requirements for computer science major. Mandatory Pass/Fail. Prerequisite: Computer Science major and prior approval of the sponsoring agency and the Department of Computer Science.

399-1 Social, Ethical and Professional Issues in Computer Science. Issues facing computer professionals in society and industry. Social impact of information technology. Ethical responsibilities of the computer professional. Professional organizations: availability, membership, meetings, codes of conduct. Professional communications: written reports on case studies dealing with ethical decision making, term paper and an oral presentation. Prerequisite: 220 with a grade of C or better. Restricted to Computer Science majors.

401-3 Computer Architecture. Review of logical circuit design. Hardware description languages. Algorithms for high speed addition, multiplication and division. Pipelined arithmetic. Implementation and control issues using PLA's and microprogramming control. Cache and main memory design. Input/Output. Introduction to interconnection networks and multiprocessor organization. Prerequisite: 320 with a grade of C or better.

402-3 Theory and Applications of Computer Aided Design. A study of algorithmic techniques which solve high complexity design rules. Graph algorithms and formulations, randomized solutions, techniques from operations research and statistics, computational geometry algorithms and data structures are introduced. The techniques are mainly applied on the physical design/automation problem for integrated circuits and systems. Prerequisite: 315 and 330 each with a grade of C or better.

406-3 Basic Linux System Administration. This course will be an introduction to the administration of Linux systems, with emphasis on security for networked systems. Topics to be covered include: installation and configuration of Linux distributions, typical maintenance activities, and security measures for networked systems. Students will have access to lab machines for hands on practice. Prerequisite: 306 with a grade of C or better.

410-3 Computer Security. A broad overview of the principles, mechanisms, and implementations of computer security. Topics include cryptography, access control, software security and malicious code, trusted systems, network security and electronic commerce, audit and monitoring, risk management and disaster recovery, military security and information warfare, physical security, privacy and copyrights, and legal issues. Prerequisite: 306 with a grade of C or better.

412-3 Programming Distributed Applications. This course is designed to provide the fundamental concepts of network and distributed programming. The main goal of this course is that students gain practical experience in developing network and distributed applications. Prerequisite: 220 with a grade of C or better.

414-3 Operating Systems. An extended treatment of the components of operating systems including I/O programming, memory management, virtual memory, process management, concurrency, device management and file management. Prerequisite: 306, 320 and 330 each with a grade of C or better.

416-3 Compiler Construction. Introduction to compiler construction. Design of a simple complete compiler, including lexical analysis, syntactical analysis, type checking, and code generation. Prerequisite: 306 and 311 each with a grade of C or better.

420-3 Parallel and Distributed Computing. This course serves as an introduction to the areas of parallel and distributed computing. The major approaches to parallel programming, including shared-memory multiprocessing and message-passing multicomputing, will be covered in some detail. Students will have programming experience in each of these paradigms. Architectural considerations, algorithm design, and measures of performance will be covered. In addition, the course will provide an introduction to distributed computing on a network of computers. Parallel and distributed computing will be contrasted. Other approaches to parallelism including data parallelism (SIMD) and vector processing will be surveyed. Prerequisite: 306, 320 and 330 each with a grade of C or better.

430-3 Database Systems. The course concentrates on the relational model and includes several query languages. Topics covered include normalization, database design, catalogs, transaction support, concurrency control, integrity support, backup and recovery, and security. Projects involve the use of both personal and enterprise database systems. Prerequisite: 330 with a grade of C or better.

435-3 Software Design and Development. An exercise in the analysis, design, implementation, testing, and maintenance of a large modular application system. Team production of a system is the focal point for the course. Topics include the system life cycle, system specification, human interfaces, modular design, improved programming techniques, and program verification and validation. Prerequisite: 306 and 330 each with a grade of C or better.

436-3 Artificial Intelligence I. Search and heuristics, problem reduction. Predicate calculus, automated theorem proving. Knowledge representation. Applications of artificial intelligence. Parallel processing in artificial intelligence. Prerequisite: 311 and 330 each with a grade of C or better.

437-3 Expert Systems. This course is designed to provide students with an introduction to expert systems theory. Topics covered include knowledge representation, methods of inference, reasoning under uncertainty, and inexact reasoning (fuzzy logic). A practical introduction to expert systems programming serves to reinforce and clarify the theoretical concepts. Prerequisite: 330 with a grade of C or better, or consent of the instructor.

438-3 Bioinformatics Algorithms. This course is an introductory course on bioinformatics algorithms and the computational ideas that have driven them. The course includes discussions of different techniques that can be used to solve a large number of practical problems in biology. Prerequisite: 330 with a grade of C or better.

440-3 Computer Networks. Design and analysis of computer communication networks. Topics to be covered include queuing systems, data transmission, data link protocols, topological design, routing, flow control, security and privacy and network performance evaluation. Prerequisite: 306, 315 and 330 each with a grade of C or better.

441-3 Mobile and Wireless Computing. This course is an introduction to the concepts of pervasive information systems. It explains the wireless communications at all layers of networking protocol stack. It includes different protocols for Wireless Networks and Wireless LAN, Mobile IP, Routing Protocols for Mobile Ad-hoc and Sensor Networks, Wireless TCP, and Security in Wireless Networks. Prerequisite: 330 with a grade of C or better, or consent of the instructor.

447-3 Introduction to Graph Theory. (Same as Mathematics 447.) Graph theory is an area of mathematics which is fundamental to future problems such as computer security, parallel processing, the structure of the World Wide Web, traffic flow, and scheduling problems. It is also playing an increasingly important role within computer science. Topics covered include: trees, coverings, planarity, colorability, digraphs, depth-first and breadth-first searches. Prerequisite: Mathematics 349 or consent of instructor.

449-3 Introduction to Combinatorics. (Same as Mathematics 449.) This course will introduce the student to various basic topics in combinatorics that are widely used throughout applicable mathematics. Possible topics include: elementary counting techniques, pigeonhole principle, multinomial principle, inclusion and exclusion, recurrence relations, generating functions, partitions, designs, graphs, finite geometry, codes and cryptography. Prerequisite: Mathematics 349 or consent of instructor.

451-3 Theory of Computing. The fundamental concepts of the theory of computation including finite state acceptors, formal grammars, Turing machines, and recursive functions. The relationship between grammars and machines with emphasis on regular expressions and context-free languages. Prerequisite: 311 and 330 each with a grade of C or better or graduate standing.

455-3 Design and Analysis of Computer Algorithms. An extensive treatment of the design, analysis and complexity of algorithms. Lower bound arguments, divide-and-conquer techniques, greedy algorithms, dynamic programming, graph theoretic algorithms, PRAM algorithms and NP-completeness and approximation algorithms. Prerequisite: 330 with a grade of C or better or graduate standing.

471-3 Optimization Techniques. (Same as Mathematics 471.) An elementary introduction to algorithms for finding extreme values of nonlinear functions of several variables with and without constraints. Topics include: convex sets and functions; the arithmetic-geometric mean inequality; Taylor's theorem for functions of several variables; positive definite, negative definite, and indefinite matrices; iterative methods for unconstrained optimization such as the method of steepest descent; the Kuhn-Tucker algorithm; unconstrained and constrained geometric programming; Lagrange multipliers, and penalty function methods. Students will use a computer to study the numerical properties of these algorithms. Prerequisite: Mathematics 221 and 250.

472-3 Linear Programming. (Same as Mathematics 472.) An introduction to the theory for finding extreme values of linear functionals subject to linear constraints. Topics include: recognition, formulation, and solution of real problems via the simplex algorithm; development of the simplex algorithm; artificial variables; the dual problem and the duality theorem; complementary slackness; sensitivity analysis; and selected applications of linear programming to integer programming, cutting plane algorithms, the distribution problem, the transportation problem, and the assignment problem. Students will use a computer to study the numerical performance of these algorithms. Prerequisite: Mathematics 221.

475-6 (3,3) Numerical Analysis. (Same as Mathematics 475.) A practical introduction to the theory and techniques for computation with digital computers. Topics include: the solution of nonlinear equations; interpolation and approximation; solution of systems of linear equations; numerical integration, solution of ordinary differential equations; computation of eigenvalues and eigenvectors; and solution of partial differential equations. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisite: (a) Mathematics 221 and 250 (b) 475a and Mathematics 305.

484-3 User Interface Design and Development. Problems and processes in the design of highly usable systems. Understanding stakeholders, requirements, tasks, prototyping, evaluation, guidelines and design process and heuristics. Interactive software concepts and implementation considerations. A group project is an integral part of this course. Prerequisite: 306 with a grade of C or better.

485-3 Computer Graphics. Principles and techniques of computer graphics. Interactive graphics software development using a modern graphics standard. Topics include: primitives, transforms, clipping, modeling, viewing, rendering, texture, animation and ray tracing. A group project is an integral part of this course. Prerequisite: 306 with a grade of C or better; Mathematics 150 and 221 are recommended.

490-1 to 6 (1 to 3 per semester) Readings. Supervised readings in selected subjects. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: consent of instructor and department.

491-1 to 4 Special Topics. Selected advanced topics from the various fields of computer science. Prerequisite: consent of instructor.

492-1 to 6 (1 to 3 per semester) Special Problems. Individual projects involving independent work. Prerequisite: consent of department.

493-1 to 4 Seminar. Supervised study. Preparation and presentation of reports. Prerequisite: consent.

Computer Science Faculty

Akkaya, Kemal, Assistant Professor, Ph.D., University of Maryland, Baltimore County, 2005.

Carver, Norman F., III, Associate Professor, Ph.D., University of Massachusetts, 1990.

Che, Dunren, Assistant Professor, Ph.D., Beijing University of Aeronautics and Astronautics, 1994.

Danhof, Kenneth J., Professor, *Emeritus*, Ph.D., Purdue University, 1969.

Gupta, Bidyut, Professor, Ph.D., University of Calcutta, 1986.

Hexmoor, Henry, Assistant Professor, Ph.D., University at Buffalo, 1996.

Hou, Wen-Chi, Associate Professor, Ph.D., Case Western Reserve University, 1989.

Mark, Abraham M., Professor, *Emeritus*, Ph.D., Cornell University, 1947.

McGlinn, Robert, Associate Professor, Ph.D., Southern Illinois University Carbondale, 1976.

Mogharreban, Namdar, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 1989.

Phillips, Nicholas C. K., Associate Professor, *Emeritus*, Ph.D., University of Natal, 1967.

Rahimi, Shahram, Assistant Professor, Ph.D., University of Southern Mississippi, 2002.

Wainer, Michael S., Associate Professor, Ph.D., University of Alabama-Birmingham, 1987.

Wright, William E., Professor, *Emeritus*, D.Sc., Washington University, 1972.

Zargham, Mehdi R., Professor and *Chair*, Ph.D., Michigan State University, 1983.

Zhu, Mengxia, Assistant Professor, Ph.D., Louisiana State University, 2005.

Conservation

(SEE FORESTRY)

Construction

(SEE TECHNICAL RESOURCE MANAGEMENT)

Students who have completed a construction management or construction technology Associate of Applied Sciences (AAS) degree or its equivalent may be admitted to the Bachelor of Science in Technical Resource Management (TRM). TRM is designed specifically for the student who entered a career path for which a traditional baccalaureate degree is not available. TRM students develop individualized learning contracts at the 300- and 400-level that build upon the student's educational and occupational experiences through courses selected to meet technical career objectives.

Crop Science

(SEE PLANT AND SOIL SCIENCE)

Curriculum and Instruction (Department, Major, Minor

[Child and Family Services], Courses, Faculty)

The Department of Curriculum and Instruction offers three majors in its undergraduate program: early childhood with specializations in preschool/primary and child and family services; elementary education; and social science. A minor in child and family services is also available, as well as courses for those students pursuing the standard high school certification program. The department offers programs to prepare students to qualify for the following Illinois teaching certificates: Early Childhood Certificate (for teaching ages 0-8); Standard Elementary Certificate (for teaching in grades K-9); or Standard High School Certificate (for teaching in grades 6-12). Students may enter the department (1) directly from

within the College of Education and Human Services, (2) from the Pre-major program, (3) from other academic units, or (4) from other institutions of higher education.

Students also may wish to seek State of Illinois endorsement for middle level education. The academic adviser should be consulted about the Curriculum and Instruction courses, which lead to middle level endorsement. Endorsement is arranged through the state and determined by a transcript analysis.

The Secondary Education, Early Childhood Preschool-Primary, Elementary Education, and Social Science programs in Curriculum and Instruction are accredited by the National Council for Accreditation of Teacher Education, 2010 Massachusetts Avenue, NW, Suite 500, Washington, DC, 20036-1023.

Early Childhood Major

This program encompasses the professional training needed to assume a variety of roles such as infant development specialists; early childhood teachers and administrators; teacher and parent educators; family service workers; and teachers of young children in elementary schools.

EARLY CHILDHOOD MAJOR—PRESCHOOL/PRIMARY SPECIALIZATION

Students interested in teaching children 0-8 years of age in private or state-approved settings may elect to participate in the early childhood major leading to early childhood certification. Specifically designed to prepare future teachers of children up to the age of 8, this program will lead to the State of Illinois Early Childhood Certificate.

There are sequential steps for advancement in the Preschool/Primary specialization of the Early Childhood major. Such advancement is based not only on continued satisfactory academic performance, but also on acceptable professional behaviors and competencies as reflected in the state standards for certification (Illinois Core Professional Teaching Standards, Early Childhood Content Area Standards, and Core Technology, Language Arts, and Special Education Standards for all teachers). Students are required to demonstrate their mastery of these standards through their performance in their courses and in the field.

Students must satisfactorily complete the requirements for admission to the Teacher Education Program in order to begin their fieldwork in this major. Curriculum and Instruction 318 and 405 may not be taken more than two times, and students must have the consent of the department to repeat these courses.

To be eligible for student teaching, a student must have attained a minimum grade point average of 2.75 in the major; a minimum overall grade point average of 2.75; have completed the following courses with a grade of C or better: Curriculum and Instruction 227, 237, 245, 313, 317, 318a,b, 319, 320, 324, 325, 337, 404, 405a,b, 413, 418, 419, Education 312 and Special Education 405 and 412; have made preliminary application for student teaching; and be approved by the coordinator of the early childhood major based on performance in the above courses. Applications for student teaching must be submitted within the first two weeks of the semester during which the student is enrolled in Curriculum and Instruction 324.

<i>University Core Curriculum Requirements</i>	41
To include Mathematics 220; Science 210a,b; Political Science 114 or History 110; Psychology 102; one interdisciplinary science course.	
<i>Preschool/Primary Specialization Requirements</i>	54
Curriculum and Instruction 227, 237, 245, 313, 317, 318a,b, 319, 320, 324, 325, 337, 404, 405a,b, 413, 418, 419, 435	
<i>Additional Requirements</i>	30
Education 312, 401	15
Health Education 351	3
Mathematics 120	3

Special Education 300, 405, 412	9
<i>Electives</i>	3
<i>Total</i>	128

EARLY CHILDHOOD MAJOR — CHILD AND FAMILY SERVICES SPECIALIZATION

The child and family services specialization offers preparation leading to a variety of positions involving work with children and families in early childhood programs and social services agencies. Such positions may include: administrator and/or teacher in non-public school programs, including child care centers; child development specialist; infant-toddler teacher; family life specialist in social service agencies; specialist in parent education and family literacy; and parent liaison and family advocate.

There are sequential steps for advancement in the Child and Family Services specialization of the Early Childhood major. Such advancement is based not only on continued satisfactory academic performance, but also on acceptable professional behaviors that the faculty deem essential for competent and effective work with children and families. In order to assess mastery of these behaviors, students are evaluated on their performance in their courses and in the field.

An overall minimum gpa of 2.5 is required to register for the following major courses: Curriculum and Instruction 318, 405, 417, 418, and 419. Curriculum and Instruction 318, 395, 405, and 495 may not be taken more than two times, and students must have the consent of the department to repeat these courses.

To be eligible for the internship, the student must have attained a minimum gpa of 2.5 in the major, an overall gpa of 2.5, have completed Curriculum and Instruction 227, 237, 245, 317, 318a,b 327, 395, 404, and 405 with a grade of C or better, and have consent of the field experience instructor. A minimum of nine semester hours of course work from one of the recommended elective areas is also required prior to enrollment in the internship.

<i>University Core Curriculum Requirements</i>	41
To include: Sociology 108; Psychology 102; Science 210a, b,	
<i>Child and Family Specialization Requirements</i>	51
Curriculum and Curriculum 227, 237, 245, 317, 318, 327, 395, 402, 404, 405, 417, 418, 419, 495	45
Health Education 351	3
Special Education 300	3
<i>Electives</i>	28

Recommended for Early Childhood Program Directors: The following 21 hours are required for the Illinois Director Credential: Curriculum and Instruction 337, 487; Accounting 210; English 291, Finance 270; Management 350; Social Work 383. Other recommended electives include Curriculum and Instruction 325, 403, 413, 421, 498h, 498q, Psychology 303; Social Work 275.

Recommended for Family Literacy Specialists: Curriculum and Instruction 313, 413, 421, 498h, 498q; Health Education 312; Linguistics 201, 320i, Psychology 303, 351; Sociology 321; Social Work 383 or Speech Communication 383; Workforce Education and Development 384.

Recommended for Infant-Toddler Teachers/Child Development Specialists: Curriculum and Instruction 325, 337, 403, 413, 421, 498h; Rehabilitation 407; Social Work 275, 291; Special Education 405, 412.

Recommended for Parent Liaison/Advocacy Specialists: Curriculum and Instruction 403, 421, 498h, 498q; Black American Studies 333; Health Education 312; Psychology 303; Sociology 302, 321; Social Work 275, 291, 421; Workforce Education and Development 384, 468

Recommended for Social Service Agency Personnel: Curriculum and Instruction 337, 403, 421, 498h; Black American Studies 333; Psychology 303; Rehabilitation 407, 461; Sociology 321, 423; Social Work 275, 291; Women's Studies 201.

<i>Total</i>	120
--------------------	-----

Elementary Education Major

A Bachelor of Science degree with a major in elementary education entitles the student to apply for the State of Illinois Standard Elementary Certificate, which will allow the holder to teach in kindergarten through grade nine.

Admission. All students who plan to major in Elementary Education must apply to the Teacher Education Program in the College of Education and Human Services. To be eligible for the Curriculum and Instruction methods courses and the Professional Education Sequence, elementary education majors must (1) be admitted to the Teacher Education Program; (2) have completed 45 semester hours with an overall grade point average of 2.75 (4.0 scale); and (3) have obtained a satisfactory score on the Illinois Test of Basic Skills. In addition, elementary education majors entering the methods/professional sequence must have successfully completed the following University Core Curriculum courses: (a) two of the following: Political Science 114, Psychology 102, History 110 and (b) English 101, 102, Speech Communication 101, Science 210 a and b, and Mathematics 220, or equivalent.

Advancement. Advancement in the major is based not only on continued satisfactory academic performance (grade of C or better for methods and professional sequence courses), but also on acceptable professional behaviors and competencies as reflected in the state standards for certification: the Illinois Core Professional Teaching Standards; Elementary Education Standards; and Technology, Language Arts, and Special Education Standards for all teachers. These standards are deemed essential for competent and effective educators. Students are required to demonstrate their achievement of these standards through their performance in their courses and in the field.

To continue in the elementary education program, a student must maintain a 2.75 gpa in the major, earn a C or better in the elementary and professional core courses, and demonstrate appropriate progress toward meeting the Illinois Professional Teaching and Content standards. Students in the elementary education major may repeat the same Curriculum and Instruction course only once. Students must have the consent of the department to register for a repeat course.

To be eligible for the professional semester (student teaching), the student must have attained a minimum overall grade point average 2.75; completed Curriculum and Instruction 321, 322, 422, 423, 424, 426, 427 and 435 with a grade of C or better; have made application for the professional semester; and be approved by the department based on performance in all major courses.

Completion of the major requires: completion of Curriculum and Instruction 321, 322, 422, 423, 424, 426, 427 and 435 with a grade of C or better, a minimum grade point average of 2.75 in the major, and an overall grade point average of 2.75. In addition, the student must choose a concentration by taking eighteen hours of electives in a discipline in one of the following areas: mathematics, science, language arts (English), social science, foreign language, art, music, theater.

ELEMENTARY EDUCATION MAJOR

<i>University Core Curriculum Requirements</i>	41
--	----

To include MATH/CI 220; AD 101; HED 101; ENGL 121 or 204; SCI 210a, b; PLB 301i, PLB 303i, ENGR 301i, 303i, GEOG 303i, GEOL 328i, GEOL 330i or ZOOL 312i; POLS 114; PSYC 102; FL 301i or HIST 101a,b¹.

<i>Elementary Education Major Requirements</i>	43
Curriculum and Instruction 321, 322, 422, 423, 424, 426, 427, 435	25
Concentration	18
To be selected from one of the following areas: mathematics, science, language arts (English), social science, foreign language, art, music, theater.	
<i>Professional Education Sequence</i>	28
See Teacher Education Program.	
<i>Additional Elementary Education Program Requirements</i>	15
To include Health Education 450, Mathematics or Curriculum and Instruction 120; Music 101 or 103; Kinesiology 202; HIST 110.	
<i>Electives</i> (to be taken in Curriculum and Instruction)	1
<i>Total</i>	128

¹Required to meet non-western civilization/third world culture requirements.

Majors to Prepare for Secondary School Teaching

Students who elect to pursue a Bachelor of Science degree in the College of Education and Human Services for purposes of preparing to teach in junior or senior high schools should select academic majors and minors from the areas included in the listing below. Included in the column headed Major is those areas for which Southern Illinois University Carbondale has approval from the State of Illinois Office of Education and from the State Teacher Certification Board.

TEACHING AREA	MAJOR	MINOR ¹	TEACHING AREA	MAJOR OR MINOR ¹
Agriculture, General ²	X		Philosophy	X
Art	X		Physical Education	X X
Biological Sciences	X	X	Physiology	X
Black American Studies		X	Political Science	X
Economics		X	Psychology	X
English	X	X	Social Science	X
Foreign Languages ⁴	X	X	Sociology	X
Health Education	X		Theater	X
History	X	X	Workforce Ed and Dev	X X
Mathematics	X	X	Business Education Specialization	
Microbiology		X	Family and Consumer Sciences	
Music	X	X	Education Specialization	

¹All minors used for certification purposes must meet the minimum number of hours specified in State Board Document I.

²Requirements for the major in Agricultural Systems may be found in the catalog section titled Agricultural Systems.

³A student with a major in zoology should have a minor in plant biology in order to meet certification standards for teaching biology at the high school level.

⁴Majors and minors are offered in the specific languages. The student should consult the academic adviser for information concerning the majors and minors available.

Each student who wishes to apply for the Initial Secondary Certificate through the certification entitlement process at Southern Illinois University Carbondale must fulfill the following requirements:

1. Successful completion of one of the baccalaureate majors listed above (including at least 32 semester hours in the area of specialization).
2. Completion of the specialization methods course with a grade of C or better.
3. Completion of Curriculum and Instruction 360, Teaching Reading and Writing in the Secondary Content Area, with a grade of C or better.
4. Completion of the Teacher Education Program professional sequence courses with a grade of C or better. See Teacher Education Program.
5. Demonstration of achievement of the Illinois Professional Teaching Standards, the appropriate Illinois Content Standards, the Language Arts Standards for All Illinois Teachers and the Technology Standards for All Illinois Teachers.
6. Successful completion of all required Illinois Certification Tests.

Students who wish to prepare to teach in middle school or junior high schools should inform their advisers of this interest early so they can include in their programs those courses which will prepare them for teaching in that area and meet Illinois State Board of Education requirements for middle level endorsement.

Social Science Major

This program is designed to meet the needs of students who wish to teach social science in the middle/junior high school or the senior high school. The graduate of this program will be qualified to teach at least five social science subject matter areas, based on the requirements of the Illinois State Teacher Certification Board.

The complex nature of our competitive, pluralistic society mandates social science curricula, which prepares future citizens to comprehend and adjust to a changing social environment. The goal of the social science program is to prepare prospective social science teachers for the role of leadership in guiding middle school, junior, and senior high school students to live as effective citizens in a democratic society.

Content and professional course work provides the foundation used in the social science methods course, where teaching methods and strategies are explored and experienced. A series of clinical experiences provide the social science major an opportunity to use the knowledge and skills acquired in the program. A cooperative teaching and university supervisor will assist the student to blend knowledge and skills with the adolescent behavior and curriculum needs.

The Social Science major meets the Illinois Middle School endorsement requirements as well as the Illinois Social Science core and content teaching standards.

University Core Curriculum Requirements	41
To include ECON 240 or 241; SPCM 101, HIST 101a, b or HIST 207a, b, PSYC 102 and POLS 114; ANTH 202; ECON 202	
Requirements for Major in Social Studies	51
History 300, 301, 367	9
Anthropology 104	3
Economics 113	3
Geography and Environmental Resources 103, 300, 302	9
Political Science 170	3
Psychology 303	3
Sociology 108, 215, 303	9
Curriculum and Instruction 360, 462, 469, 473	12
Professional Education Requirements (See Teacher Education Program)	28
Total	120

Child and Family Services Minor

The minor in child and family services is designed to provide students with basic knowledge in early childhood and family studies. The selection of coursework is flexible so that courses can be adapted to the special interests of students with diverse backgrounds and goals. Students are expected to honor all prerequisites in their selection of courses. A minimum of 18 hours of coursework is required as follows:

Curriculum and Instruction 227, 237	6
Electives to be chosen from the following: CI 245, 317, 327, 337, 390h, 390q, 403, 404, 413, 419, 498h, 498q	12

Courses (CI)

120-3 Mathematics Content and Methods for the Elementary School I. (Same as Mathematics 120)
Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes

problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and two hours laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry.

199-1 The Library as an Information Source. Designed to expose undergraduate students to the basic concepts and structures of the library. This would enable students to use their knowledge in completing reading and term paper assignments as well as in gaining confidence for independent work in the library.

209-2 Philosophy of Creativity. The creative process in developing child. Emphasis will be upon the levels, dimensions and individuality of creativity as it is manifested, observed and nurtured in preschool children.

212-2 Reading College Texts. Textbooks, supplementary materials, and evaluative instruments will be analyzed. Attention will be given to determining usability, feasibility, learnability, and teachability of instructional materials. The following factors will be investigated: content structure and organization, concept density, conceptualization levels, readability, and format.

213-2 Understanding the Elementary School Child. Child development concepts necessary for understanding the elementary child, with information provided on preschool, primary, and intermediate grade levels.

220-3 Mathematics Content and Methods for the Elementary School II. (Same as Mathematics 220) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on rational and irrational numbers. Ordering of numbers. Decimal representations. Percents. Ratio and Proportion. Perimeter and area concepts. Pythagorean Theorem. Concept of square root and n^{th} root. Exponent notation. Elementary geometry. Triangles, quadrilaterals, polygons, angles associated with a polygon. Reflectional and rotational symmetry. Congruence and Similarity. Tessellations. Transformations: translations, rotations, reflections. Measurement of perimeter, area, surface area, volume, mass, temperature. Conversion of measurements. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and two hours lab per week. Prerequisite: C or better in 120, Mathematics 120 or equivalent.

227-3 Marriage and Family Living. (Same as Women's Studies 286) [IAI Course: S7 902] A study of relationships and adjustments in family living, designed largely to help the individual. To help student better understand the recent changes that have occurred in marriage and the family in the United States.

237-3 Early Child Development I. This introductory course in child development surveys major milestone in children's social, emotional, physical, and intellectual development. Students are exposed to current developmental theories, as well as practices recommended for parents and teachers to support healthy development in children from infancy through the primary grades.

245-3 Professional Development Seminar. Introduction to early childhood with an emphasis on personal and professional development as preparation for work with children, parents, and professional peers. Acquaints students with the varied career options, approaches to programming, and professional personnel in working with children under eight. Some field trips will be taken.

258-1 to 4 Credit for Work Experience. This course includes work experiences relevant to the student's major program, such as work in child care centers, teacher's aid in public school, or with federal, state, or local agencies or programs that deal with children. Prerequisite: 12 semester hours completed with a grade of B or better in the student's major area of concentration in the Curriculum and Instruction department and consent of Curriculum and Instruction Academic Affairs Committee.

313-4 Early Literacy Methods. This course focuses on the examination of factors and conditions that affect early and beginning reading from birth to eight years of age. Emphasis will be placed on the method, materials, organizational procedures, and assessment techniques in early literacy learning. In addition, students will participate in field experiences to apply the new knowledge they gain throughout the course. Prerequisite: 318, 435 or concurrent enrollment.

317-3 Guiding Play as a Learning Medium. Focuses on play as an integral part of child's learning. Covers play theory and design of the learning environment. Emphasis on appropriate ways to guide children in their play activities and routines, and ways to develop creativity in children. Requires several independently scheduled observations of children's play in the campus Child Development Laboratories.

318A-3 Instructional Methods for the Preschool Child. This class will prepare students to plan optimal learning environments for preschool children. Emphasis is placed on integrated learning and appropriate instructional methods in language, literacy, social studies, math and science. Students are required to have concurrent enrollment in 318b. Child and Family Services specialization students must enroll for an additional one-hour of 395 field experience to provide practical experiences one-half day per week in a community preschool setting. Prerequisite: 237, 245, 317; consent of the instructor required for non-early childhood majors or graduate students.

318B-1 Practicum in Instructional Methods for the Preschool Child. This practicum will prepare students to work in optimal learning environments for preschool children. Participation is one-half day per week for the semester at the SIU Child Development Laboratories. Students are required to have concurrent enrollment in 318a. Prerequisite: 237, 245, 317; consent of instructor non-early childhood majors or graduate students.

319-3 Instructional Strategies for the Primary Child I. The purpose of this course is to plan the optimum learning environment for kindergarten and the primary grades one through three. Emphasis will be placed on planning for instruction, models of teaching, integrated learning and appropriate instructional methods in the content areas of science and social studies. Early childhood certification students must have

concurrent enrollment in one hour of Education 312 to provide practical experience one half-day per week for the semester in a primary setting. Prerequisite: 318, 324, concurrent enrollment in 320 and Education 312; consent of the instructor required for non-early childhood majors, and/or graduate students.

320-3 Instructional Strategies for the Primary Child II. The purpose of this class is to plan the optimum learning environment for kindergarten and the primary grades one through three. Emphasis will be placed on integrated learning and appropriate instructional methods in the content area of mathematics. Early childhood certification students must have concurrent enrollment in one hour of Education 312 to provide practical experience one-half day per week for the semester in a primary setting. Prerequisite: 318, 324, concurrent enrollment in 319; consent of the instructor required for non-early childhood majors and/or graduate students.

321-3 Mathematics Content and Methods for the Elementary School III. (Same as Mathematics 321) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass construction. Justification and proof of geometric properties. Three dimensional geometry. Coordinate geometry. Transformations expressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and two hours lab per week. Prerequisite: C or better in 220, Mathematics 220 or equivalent.

322-3 Mathematics Content and Methods for the Elementary School IV. (Same as Mathematics 322.) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and laboratory per week. Prerequisite: C or better in 321 or Mathematics 321.

324-3 Teaching Tools for the Early Childhood Classroom. In this course, students will learn to use multimedia technology and group management strategies appropriate for Kindergarten through third grade classrooms. They will develop professional leadership and collaboration skills and apply professional standards to analyze and reflect on their work. Prerequisite: admission to the Teacher Education Program, 318 or concurrent enrollment in 318, concurrent enrollment in one hour Education 312 with placement one-half day per week in a kindergarten classroom.

325-3 Young Children and the Arts. The development of creativity in young children. Methods and curriculum that foster creativity in graphic expression, music and creative movement among preschool and primary school children.

327-3 Family Studies. Study of changing patterns in family living throughout the family life cycle. Insights into common current family problems typical of each stage of the family life cycle. Prerequisite: 227.

337-3 Early Child Development II. An in-depth look at theories of early childhood development, ages 3 to 8 years, with an introduction to assessment and observation of children ages 3 to 8 years. Prerequisite: 237.

360-3 Teaching Reading and Writing in the Secondary Content Areas. State and national standards for teachers require that teachers know and demonstrate a wide range of literacy methods and skills to promote effective and appropriate classroom communication. This course provides teachers with the knowledge and skills to teach reading and writing in the secondary content areas. Prerequisite: admission to the Teacher Education Program or consent of instructor.

390-1 to 3 Readings. In-depth reading in various areas of education as related to the fields of (a) curriculum, (b) supervision for instructional improvement, (c) language arts, (d) science, (e) mathematics, (f) reading, (g) social studies, (h) early childhood education, (i) elementary education, (j) middle school, (m) instruction, (n) educational media, (o) environmental education (p) children's literature (q) family studies. Prerequisite: consent of instructor.

393-1 to 6 Individual Research in Education. The selection, investigation, and writing of a research topic under the personal supervision of a member of the departmental staff in one of the following areas: (a) curriculum, (b) supervision for instructional improvement, (c) language arts, (d) science, (e) mathematics, (f) reading, (g) social studies, (h) early childhood education, (i) elementary education, (j) the middle school – junior high school, (m) instruction, (n) educational media, and (o) environmental education, (q) family studies. Maximum of 6 hours to be counted toward a bachelor's degree. Prerequisite: consent of instructor.

395-1 to 3 Field Observation. Students will participate in practical experiences for young children in community settings.

400-3 Simulation and Gaming. Analyzes the role of simulation and gaming in instruction, the availability of commercial games, board games, simulation devices, and computer games, and preparation of teacher-make games and simulations.

402-3 The Study of Cultural Diversity in Education and Family Services. The student examines origins, characteristics of behavior, learning patterns, family constellations, and lifestyles of the diverse cultural groups in our community, state, and nation. Students will identify their own cultural background and biases; recognize diversity resulting from ethnic origin, gender, age, or disability; and experience ways of learning about cultures other than their own that promote constructive communication and integration into all aspects of schooling, teaching, and family services.

- 403-3 Child Abuse and Neglect.** Examines the many facets of child abuse and neglect. Emphasis is on current research in the field, as well as the roles and responsibilities of various professionals who work with children and their families.
- 404-3 Infant Development.** Current theories and knowledge concerning growth and development of infants with related laboratory field observations. Prerequisite: 237 or Psychology 301 or equivalent.
- 405A-2 Methodologies For Group Care of Infants and Toddlers.** Students will develop competencies and skills needed by early childhood professionals for work with children up the age of three in an inclusive group care situation. Emphasis is on planning developmentally appropriate curriculum and assessment and stimulating environments for infants and toddlers. Students are required to have concurrent enrollment in 405b. Prerequisite: 318a, 318b, 404.
- 405B-2 Practicum in Methodologies for Group Care of Infants and Toddlers.** This practicum will prepare students to work in optimal learning environments for infants and toddlers. Participation is four hours per week (fall and spring) and eight hours per week (summer) at the SIU Child Development Laboratories. Students are required to have concurrent enrollment in 405a. Prerequisite: 318a, 318b, 404.
- 407-3 to 9 (3 per topic) Diagnostic Teaching Strategies for Classroom Teachers.** Diagnostic instruments and teaching techniques with an emphasis on understanding and teaching students under-achieving in the areas of: (c) language arts, (e) mathematics, and (f) reading. Prerequisite: 312, 315, 423, and/or consent.
- 409-3 Creative Teaching.** To assist pre- and in-service teachers in acquiring methods and materials that will improve instruction in the public school classroom, with special attention to the characteristics and needs of students. Prerequisite: Education 315.
- 410-2 Creative Writing in the Public School.** Techniques of encouraging creative writings in the schools.
- 412-3 to 15 (3 per topic) Improvement of Instruction in Early Childhood Education (Preschool-Grade 3).** Examines recent findings, current practices, and materials used in early childhood education in the fields of (c) language arts, (d) science, (e) mathematics, (f) reading, and (g) social studies. Prerequisite: specialized methods course for the field of study selected by the student.
- 413-3 Language Development of the Young Child, 0-8.** The normal language development and communication skills of the young child will be the focus of this course; attention will be given to an integrated, holistic philosophy toward development and learning in young children ages 0-8. Specifically focusing upon social and environmental influences on the development of language and literacy, students will observe, listen, record, and analyze samples of young children's communication. Prerequisite: 237 or Psychology 301 or graduate standing.
- 415-3 Modern Approaches to Teaching Middle School Mathematics (Grades 4-8).** Examines current mathematics materials and teaching approaches. Hands-on experience with a multitude of teaching aids including microcomputers and problem solving materials. Student exchange of ideas and discussion of activities for classroom use. Prerequisite: 315 or consent of instructor and overall gpa of 2.5.
- 417-3 Administration of Early Childhood and Family Programs.** This course introduces students to the planning, organizing and daily management of programs serving young children and their families. Topics will include funding/budgeting, staffing, programming, and evaluation. Prerequisite: 318.
- 418-3 History and Philosophy of Early Childhood Education.** A survey of the history and philosophies of early childhood education with implications for current program practices. Students' analysis of their personal philosophy of early childhood education. Prerequisite: senior or graduate standing; 318; or consent of instructor for graduate students.
- 419-3 Child, Family and Community Involvement.** This course is designed to provide students with the knowledge and skills needed to work successfully with parents and parent groups in individual and community settings. The focus will be on strengthening adult-child relationships and parent-staff relationships in home, school and community settings. Parent involvement in early childhood programs and parent education will be stressed. Prerequisite: 227 and 318 or concurrent enrollment in 318; or consent of instructor for non-early childhood majors or graduate students.
- 420-3 Adult Literacy Strategies.** The focus is on understanding the problems of the individual whose literacy level does not permit full participation in economic, social, family and civic opportunities. Emphasis is placed on developing strategies to support and strengthen adult literacy skills.
- 421-3 Building Family Literacy Programs.** This course will provide an in-depth look at family literacy. Emphasis is on the history and foundations of family literacy, related research, program models, programming, evaluation and funding. Designed for both the experienced and developing family literacy professional. Prerequisite: 419.
- 422-3 Teaching Reading in the Elementary School.** (Same as Special Education 312) Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis also on the formulation of a philosophy of reading and its implications in relation to methods, materials, organizational procedures, and evaluation techniques. Prerequisite: for Elementary Education majors, grade C or better in 321, 435 and Education 310 or consent of instructor, for Special Education majors, admission to the Teacher Education Program.
- 423-3 Teaching Elementary School English Language Arts.** Oral and written communication processes with emphasis on the structure and process of the English language arts in the elementary school. Specific attention to the fundamentals of speaking English, writing, spelling, and listening. Study of learning materials, specialized equipment and resources. Prerequisite: Speech Communication 101 or equivalent, C or better in Curriculum and Instruction 321 and 435, or consent of the instructor.
- 424-3 Teaching Elementary School Social Science.** Emphasis on the structure and process of teaching social science in the elementary school setting. Specific attention to the fundamentals of developing social science objectives, planning units, developing a general teaching model, organizing the curriculum, and

evaluating behavioral change. Study also study learning materials, specialized equipment and resources. Prerequisite: grade of C or better in 312, 423 and 426, or consent of instructor.

426-3 An Introduction to Teaching Elementary School Science. Content and methods of elementary school sciences, grades K-8. Emphasis on the materials and strategies for using both traditional and modern techniques of science education. One or more field trips. Prerequisite: grade of C or better in Curriculum and Instruction 315, 435 and Education 315 or consent of the instructor.

427-4 Science Process and Concepts for Teachers of Grades N-8. (Same as Botany 462) Specifically designed to develop those cognitive processes and concepts needed by elementary school teachers in the teaching of modern science programs. Lecture three hours per week, laboratory two hours per week. One or two additional field trips required. Prerequisite: grade of C or better in Curriculum and Instruction 312, 423 and 426 or consent of instructor.

428-3 Inquiry Skills for Teaching Junior and Senior High School Science. The major focus will be the application of inquiry skills as used in all areas of science instruction at the junior and senior high school levels; students will be expected to demonstrate mastery of basic and integrated science process skills through conducting and reporting results of science investigations.

435-3 Literature for Children and Early Adolescents. Studies types of literature; analysis of literary qualities; selection and presentation of books and other media for children and early adolescents; and integration of literature in preschool, elementary and middle school and library settings. Lab fee: \$10. Prerequisite: admission to the Teacher Education Program, C or better in English 101 and 102, and overall gpa of 2.75; or consent of instructor.

437-3 Instructional Technology in Training Programs in Business and Industry. Examines the role that performance and instructional technology plays in current training practices in business and industry. The organization, staffing, budgeting, and evaluation of training and development departments is presented. The kinds of performance problems typically encountered by corporate training departments are addressed. Field trips are expected.

441-3 Multicultural Literature for Children. Identification, selection and evaluation of books and audio-visual materials dealing with various cultural groups such as African Americans, Asian Americans, Native Americans, Hispanic Americans and European Americans. Prerequisite: 435 or consent.

445-3 Literature for Young Adults. The selection and use of books and other educational media for students in the junior high and senior high school.

452-3 Small Format Video Production in Education. An introduction to small format black-and-white and color video equipment in educational settings. Emphasis is on understanding the role of video as an instructional and informational tool and on the principles of design that determine instructional video's effectiveness. Lab fee: \$20

455-3 Design and Development of Self-Instruction Systems. Introduction to the theory and practice of self-instruction systems with a particular emphasis on the creation of instruction for mastery. Various self-instruction systems are reviewed and procedures for designing, developing, and evaluating these systems are discussed. Includes planning a teaching unit and creating a self-instruction package for the unit. Lab fee: \$20.

458-3 Classroom Teaching with Television. Classroom utilization of open and closed circuit television. Emphasis is placed on the changed role of the classroom teacher who uses television. Evaluation of programming, technicalities of ETV, and definition of responsibilities are included. Demonstration and a tour of production facilities are provided.

460-3 Teaching Reading and Writing in the Middle Grades. Familiarizes prospective middle grades' teachers with issues relevant to instruction in literacy and communication processes and skills essential to learning in any subject area. Students in this course will be expected to demonstrate personal competency relevant to these skills. In addition they will demonstrate skill in and understanding of strategies for identifying problems and developing literacy competencies in young adolescents. Intended as a foundation course in innovative literacy pedagogy. This course will introduce students to numerous concepts and practices, many of which will be revisited in the context of later courses. Prerequisite: 312 (for elementary majors), 360 (for secondary majors), or consent of instructor.

461-3 Content Literacy Strategies. For middle grade teachers who desire strategies for helping students comprehend content encountered in narrative and expository text. Materials, lesson plans, and teaching strategies to help middle grade students move from basic to more advanced reading, writing, studying, and learning skills are featured.

462-3 Middle and Junior High School Programs. Focuses on the development of middle and junior high school curriculum and the identification of instructional activities which relate to the early adolescent. Emphasis is placed on development of advisory activities, developmentally appropriate teaching strategies, inter-disciplinary unit planning, teaming and technologies and materials appropriate for teaching early adolescents, ages 10-14. Prerequisite: Education 310 or consent of instructor.

463-3 Meeting the Social and Emotional Needs of Gifted Children. Deals with strategies for meeting the social and emotional needs of gifted children in the classroom. This course focuses on low-incidence gifted students, including underachievers, minorities and females. The course will cover particular curriculum and instruction strategies designed for this population and will emphasize strategies for teachers to be more facilitative in assisting these students to accept and realize their potential. Prerequisite: 467 or consent of instructor.

464-2 Student Activities. Analysis of extra-class activities and programs in public schools with a focus on the status, trends, organization, administration, and problems.

465-3 Advanced Teaching Methods. The focus is on a variety of teaching methods and strategies which are appropriate for secondary and/or post-secondary educators. Individual and group methods are emphasized.

466-3 Documenting Accomplished Teaching. This course will help teachers understand and gain requisite skills for participation in the National Board for Professional Teaching Standards (NBPTS) certification process. As a part of learning to understand and document NBPTS standards, teachers will describe, analyze and reflect on drafts of written commentaries, videotapes of small and large group lessons, and student work.

467-3 Methods and Materials in the Education of the Gifted. Content focuses on the most appropriate instructional strategies and materials to be utilized with the gifted. Time spent practicing teaching models, designing materials and developing teaching units. Emphasis placed on techniques for individualizing instruction for the gifted and talented students.

468-3 Science Methods for Junior and Senior High Schools. A performance-based approach to instructional skills common to teaching natural science at the junior and senior high school levels. Three class hours and one micro teaching laboratory hour per week. Prerequisite: Education 315 or consent.

469-3 Teaching Social Science in the Secondary School. Emphasis is placed upon instructional strategies, curricular designs, and analysis and evaluation of the social sciences, which include the behavioral sciences, economics, geography, history and political science. Prerequisite: admission to the Teacher Education Program or consent of instructor.

473-3 Teaching in Middle Level Schools. This course is designed to acquaint students with the issues of teaching young adolescents and the unique role teachers must play as interdisciplinary team members and resource persons to connect schools and communities. Information from current research area specialists and exemplary practitioners will be used to extend appropriate teaching strategies and supplement background knowledge on special topics related to social, emotional and physical development as it relates to the curricula. Lab fee: \$10. Prerequisite: 462, Education 310 or consent of the instructor.

482-3 Instructional Internet Applications. An introduction to using the Internet to deliver instructional materials and activities. Includes using the Internet to enhance classroom learning through research, communication, and instructional activities. Also covers evaluation, design, and development of Internet-delivered instructional materials. The emphasis is on lesson and workshop level instruction rather than delivering complete courses on the Internet. Laboratory fee: \$20.

483-6 (3,3) Instructional Applications for Microcomputers. A study of the development and use of microcomputers systems in educational settings. Emphasis is upon the characteristics, capabilities, applications, and implications of microcomputers and microcomputer lessons, with case studies of their integration into the teaching, learning process.

484-3 Multimedia for Learning. An introduction to the evaluation, design, and development of interactive instructional multimedia programs. The instructional methods of Tutorial, Drill and Practice, Simulation, Games, and Open-Ended Learning Environments are covered. Projects include designing, developing, and use-testing an interactive instructional multimedia program. Lab fee: \$20.

486-6 (3,3) Instructional Authoring Systems. Designed to give students experience using authoring systems, languages and utilities for the design, development, production, and integration of WEB-based technology into educational settings. Tools will include various commercial and consortium authoring tools, such as the Macromedia Studio. Laboratory fee: \$20. Prerequisite: consent of instructor.

487-3 Web-based Applications for Teachers and Instructors. Survey of trends and developments and laboratory instruction in the use of Web-based applications representative of those used by teachers, education specialists, or instruction in educational settings. An emphasis is placed upon developing skills used by teachers, education specialists, or instructors which enhance and facilitate the education processes within a Web-based learning environment. Laboratory fee: \$20.

495-2 to 8 Field Experience. Supervised learning experiences in settings for children and families and public agencies. Prerequisite: 318, 405 and consent of instructor.

496-2 to 6 (2 to 4 per semester) Field Study Abroad. Orientation and study before travel, readings, reports, and planned travel. Includes visits to cultural and educational institutions. Maximum credit hours in any term is 4.

498-1 to 15 (1 to 3 per topic) Workshops in Education. Critical evaluation of innovative programs and practices. Acquaints teachers within a single school system or in a closely associated cluster of school systems with the philosophical and psychological considerations and methods of implementation of new programs and practices in each of the following areas: (a) curriculum, (b) supervision for instructional improvement, (c) language arts, (d) science, (e) mathematics, (f) reading, (g) social studies, (h) early childhood education, (i) elementary education, (j) the middle school, (k) secondary education, (l) school library media, (m) instruction, (n) educational technology, (o) environmental education, (p) children's literature, (q) family studies, (r) computer based education, (s) gifted and talented education, and (t) teacher education. Maximum of six hours toward a master's degree. Prerequisite: consent of instructor.

Curriculum and Instruction Faculty

Aikman, Arthur L., Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1965.

Alston, Melvin O., Professor, *Emeritus*, Ed.D., Columbia University, 1945.

Appleby, Bruce C., Professor, *Emeritus*, Ph.D., University of Iowa, 1967.

Barrette, Pierre, Associate Professor, *Emeritus*, Ed.D., University of Massachusetts, 1971.

Bauner, Ruth E., Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1978.

Becker, Jerry P., Professor, Ph.D., Stanford University, 1967.

Bedient, Douglas, Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1971.

- Bluhm, William J.**, Lecturer, Ph.D., Southern Illinois University Carbondale, 1978.
- Boykin, Arsene O.**, Associate Professor, *Emeritus*, Ed.D., University of Illinois, 1964.
- Bradfield, Joyce M.**, Instructor, *Emerita*, M.A., George Peabody College for Teachers, 1946.
- Brown, Lisa**, Instructor, M.Ed., Southern Illinois University, 1993.
- Buser, Margaret**, Assistant Professor, *Emerita*, M.S.Ed., Indiana University, 1966.
- Campbell, James A.**, Associate Professor, Ph.D., Ohio State University, 1978.
- Casey, John P.**, Professor, *Emeritus*, Ed.D., Indiana University, 1963.
- Copenhaver, Ron W.**, Associate Professor, *Emeritus*, Ed.D., Indiana University, 1978.
- Coscarelli, William**, Professor, Ph.D., Indiana University, 1977.
- Dale, Doris C.**, Professor, *Emerita*, D.L.S., Columbia University, 1968.
- Delaney, Carol J.**, Assistant Professor, Ph.D., Syracuse University, 2004.
- DeWeese, Jewel V.**, Instructor, *Emerita*, M.S.Ed., Southern Illinois University Carbondale, 1971.
- Dixon, Billy G.**, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1967.
- Eddleman, E. Jacqueline**, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1970.
- Edwards, Troy W.**, Professor, *Emeritus*, Ed.D., Indiana University, 1954.
- Eichholz, Barbara**, Lecturer, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1986.
- Erickson, Lawrence**, Professor, *Emeritus*, Ph.D., University of Wisconsin, 1972.
- Fadde, Peter J.**, Assistant Professor, Ph.D., Purdue University, 2002.
- Gilbert, Sharon**, Associate Professor, Ph.D., Ohio State University, 1988.
- Grace, Barbara E.**, Instructor, M.S., Southern Illinois University Carbondale, 1985.
- Grounds, Elizabeth**, Instructor, M.Ed., Southern Illinois University, 1995.
- Hobbs, Tamara**, Instructor, M.S.Ed., Vanderbilt University, 2002.
- Hungerford, Harold R.**, Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1970.
- Jackson, James**, Associate Professor, *Emeritus*, Ph.D., University of Wisconsin, 1976.
- Jackson, Michael**, Associate Professor, *Emeritus*, Ed.D., University of Florida, 1971.
- Johnson, Margaret**, Lecturer, Ph.D., Southern Illinois University, 1998.
- Jones, Dan R.**, Associate Professor, *Emeritus*, Ed.D., Indiana University, 1978.
- Jones, Jennie Y.**, Assistant Professor, *Emerita*, A.M., University of Illinois, 1949.
- Karmos, Ann**, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1975.
- Killian, Joyce E.**, Professor, Ph.D., Pennsylvania State University, 1980.
- Lamb, Morris L.**, Associate Professor, *Emeritus*, Ed.D., University of Oklahoma, 1970.
- Lin, Cheng-Yao**, Assistant Professor, Ph.D., University of Illinois, 2003.
- Loh, Sebastian**, Assistant Professor, Ph.D., University of Georgia, 2004.
- Mallette, Marla H.**, Associate Professor, Ph.D., University of Nevada, 1999.
- Matthias, Margaret**, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1972.
- McIntyre, D. John**, Professor, Ed.D., Syracuse University, 1977.
- Meyer, Edra T.**, Instructor, *Emerita*, M.S., Southern Illinois University Carbondale, 1956.
- Mogharrehban, Catherine N.**, Associate Professor, Ph.D., Southern Illinois University Carbondale, 1990.
- Moore, Eryn E.**, Assistant Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1976.
- Nelson, JoAnn**, Assistant Professor, *Emerita*, Ph.D., University of Illinois, 1980.
- Norris, William**, Associate Professor, *Emeritus*, Ed.D., Indiana University, 1973.
- Pearlman, Susan F.**, Associate Professor, Ph.D., University of Missouri, 1987.
- Post, Donna M.**, Associate Professor, Ph.D., Pennsylvania State University, 1990.
- Pultorak, Edward, Jr.**, Associate Professor, Ph.D., Indiana State University, 1988.
- Quisenberry, James D.**, Associate Professor, *Emeritus*, Ph.D., Indiana University, 1972.
- Quisenberry, Nancy L.**, Professor, *Emerita*, Ed.D., Indiana University, 1971.
- Randolph, Victor**, Professor, *Emeritus*, Ph.D., George Peabody College for Teachers, 1942.
- Seifert, Berniece B.**, Professor, *Emerita*, Ed.D., University of Missouri, 1955.
- Shepherd, Terry R.**, Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1971.
- Shrock, Sharon A.**, Professor, Ph.D., Indiana University, 1979.
- Sloan, Fred A.**, Professor, *Emeritus*, Ed.D., George Peabody College of Vanderbilt University, 1959.
- Smith, Lynn C.**, Associate Professor, Ph.D., University of Georgia, 1984.
- Solliday, Michael**, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1975.
- Spigle, Irving S.**, Associate Professor, *Emeritus*, Ed.D., Indiana University, 1955.
- Stearns, Louise**, Instructor, M.Ed., Southern Illinois University, 1985.
- Test, Joan**, Assistant Professor, Ed.D., Harvard University, 1988.
- Van Horn, Lori**, Instructor, M.Ed., Southern Illinois University Carbondale, 1997.
- Viernow, Melissa R.**, Instructor, M.Ed., Southern Illinois University Carbondale, 1999.
- Volk, Gertrude L.**, Professor, Ph.D., Southern Illinois University Carbondale, 1983.
- Waggoner, Jan**, Associate Professor, Ed.D., Memphis State University, 1990.

Walton, Cheryl, Instructor, M.Ed., Southern Illinois University, 1995.

Willhite, Gary L., Assistant Professor, Ph.D., Kansas State University, 1992.

Wise, Kevin C., Associate Professor, Ed.D., University of Georgia, 1983.

Wood, Ruth B., Instructor, *Emerita*, M.S., University of Illinois, 1948.

Zobairi, Nillofur, Lecturer, Ph.D., Southern Illinois University, 1993.

Criminal Justice

(SEE ADMINISTRATION OF JUSTICE)

Dental Hygiene (Major, Courses)

The program leading to a baccalaureate degree in dental hygiene is designed to prepare the graduate to successfully enter the oral health profession of dental hygiene in any one of the six designated roles of the dental hygienist as defined by the American Dental Hygienists' Association: clinician, educator/health promoter, manager, researcher, consumer advocate and change agent. In addition, the graduates are prepared to continue their education in graduate or professional programs. The curriculum is designed to assist students in the development of knowledge, skills, attitudes and values that will enable them to adapt to a complex and changing health care delivery system. Special emphasis is placed on the development of skills related to periodontal disease, skills and attitudes to meet the needs of the geriatric population, and access to care for those persons unable to attain care, especially the underserved rural segment of the population. A minimum grade of *C* for all dental hygiene courses is required to maintain enrollment in the Dental Hygiene professional sequence. Dental hygiene courses typically are taught one time in an academic year. A student who fails a course (or drops out of the dental hygiene sequence) must reapply to the dental hygiene program and will be required to take necessary clinic courses for further integration into the professional sequence.

Dental hygiene is a licensed profession. In order to meet licensure requirements, the student must graduate from an accredited program and successfully pass a written National Board Examination, as well as the appropriate State/Regional Practical (clinical) Board Examination.

Admission requirements are the same as for all the baccalaureate entrance requirements at SIUC. Once accepted into the University, the student must submit a separate application to the dental hygiene program. All applicants who apply to the dental hygiene program are evaluated on high school mathematics and science grades, ACT scores, college mathematics and science grades, overall grade point average and earned credits according to SIUC calculations, and previous experience as a dental assistant or experience in any health related field. In order to be considered for admission into the professional sequence, you must be accepted into Southern Illinois University Carbondale and have completed a minimum of 35 semester hours of college credit. These hours must include the following courses or approved substitutions: English 101, English 102, Mathematics 108 or 113, Psychology 102, Sociology 108, Microbiology 201, Allied Health 241 and Chemistry 140a. Prospective students may complete the University Core Curriculum and the basic science courses at other colleges or universities as well as at SIUC. Thirty-six students begin the professional sequence in fall semester. In addition to textbooks and tuition, other expenses are required to cover the cost of instruments; uniforms and other professional supplies contact the Dental Hygiene Program for specifics.

The dental hygiene program offers an on-site clinic to provide the student with practical clinical instruction. Students perform dental hygiene services in the clinic under the direct supervision of dental hygiene faculty composed of licensed dental hygienists and licensed dentists. Students also are involved in the provision of care and education through a variety of community projects. An advisory

committee composed of representatives from community dental practices, dental education and dental industry serves the program.

The program also is designed to serve as a degree completion program for dental hygienists who have completed an associate degree in dental hygiene from any accredited dental hygiene program. The Capstone Option is available to students who have obtained an Associate of Applied Science with a 2.25 (4.0 scale) or higher gpa.

The Dental Hygiene program has a Linkage Agreement with Southeastern Illinois College, Kaskaskia College and Shawnee College. If you have questions about this agreement, contact the community college advisor or SIUC School of Allied Health at (618) 453-7287.

The program in dental hygiene is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Commission on Recognition of Post-secondary Accreditation and by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or 440-2500 at 211 East Chicago Avenue, Chicago, IL 60611.

Bachelor of Science Degree in Dental Hygiene, College of Applied Sciences and Arts

<i>University Core Curriculum</i>	41
Including: CHEM 140a, ¹ ENGL 101 and 102, MATH 108 or 113 SPCM 101, PSYC 102, SOC 108, AH 241 and FN 101.	
<i>Requirements for Major in Dental Hygiene</i>	79
Including: DH 200, 206, 207, 210, 212, 218, 219, 220, 226, 233, 247, 248, 310, 320, 322, 340, 341, 347, 355, 401, 410, 416, 417, 440, 441, 442 and 448, EPSY 307, HCM 365, MICR 201	
<i>Total</i>	120

¹These two courses are required for a major in dental hygiene and are approved substitutions for the University Core Curriculum requirements in science. The additional hours will be included in the total hours required for the degree.

Dental Hygiene Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
ENGL 101, 102	3	3	DH 200, 212	2	1
MATH 108 or 113, MICR 201..	3	4	DH 206, 219	2	3
SOC 108, PSYC 102	3	3	DH 207, 220	3	3
CHEM 140a, AH 241.....	4	4	DH 210, 233	3	2
FN 101, SPCM 101.....	2	3	DH 218, 247	3	3
			DH 226, 248	2	4
<i>Total</i>	15	17	<i>Total</i>	15	16
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
DH 310, 307	2	3	DH 440, 401	2	3
DH 320, 322	3	2	DH 441, 410	4	2
DH 340, 347	3	2	DH 442, 416	1	2
DH 341, 355	3	3	DH 448, 417	2	5
HCM 365, Humanities	3	3	Humanities, Fine Art	3	3
			Interdisciplinary	3	-
<i>Total</i>	14	13	<i>Total</i>	15	15

Courses (DH)

- 199-1 to 10 Individual Study.** Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member. Prerequisite: consent of school.
- 200-2 Orientation to Dental Hygiene.** The student will be introduced to the dental hygiene profession. Issues including patients' rights, professional ethics, the state practice act, health promotion, and communication will be presented. Learning styles, test-taking strategies, research applications, using resources, and writing styles will be included. Prerequisite: Acceptance into professional sequence or consent of school.
- 206-2 Oral Anatomy and Tooth Morphology.** The student will learn to recognize and identify the structures within the oral cavity. These will include the tongue, salivary glands, lips and cheeks and teeth (both permanent and primary). Laboratory emphasis will be placed on tooth identification and tooth/root morphology to enhance the application of instrumentation techniques. 16 weeks, one hour of lecture weekly; two hours of lab weekly. Prerequisite: acceptance into professional sequence or consent of school.

207-3 Instrumentation Techniques. Fundamentals of dental hygiene instrumentation and infection control are taught to prepare students for clinical hygiene practice. Laboratory fee \$35. Lecture one hour. Lab four hours. 16 weeks. Prerequisite: acceptance into the professional sequence.

210-3 Patient Assessment Techniques. Assessment theory and techniques are taught to prepare the student to successfully recognize and record normal and abnormal intraoral and extraoral conditions. These assessment skills will be incorporated into treatment planning for individualized patient care. Lecture two hours. Lab two hours. Lab fee: \$35. Prerequisite: Acceptance into the professional sequence or consent of school.

212-1 Medical Emergencies in the Dental Office. The student will learn about medical conditions which may affect or alter the provision of oral care. Emphasis is on acquiring and evaluating the medical, dental and drug history. Modification of treatment plans will be discussed. Lecture one hour. 16 weeks. Prerequisite: Microbiology 201.

218-3 Dental Radiology I. The student is introduced to principles of radiation biology and protection, x-ray production, image formation, and intraoral radiographic techniques. Lecture two hours. Laboratory two hours. Lab fee: \$35. Prerequisite: acceptance into the professional sequence or consent of school.

219-3 Dental Radiology II. The student will learn special dental survey techniques including paralleling, digital, occlusal and special views. The student will also identify anatomical landmarks and recognize pathological conditions that appear on dentals x-ray receptors. In the laboratory, the student will receive individual assistance in radiographing patients and in learning special survey techniques. Lecture two hours. Laboratory two hours. Prerequisite: 218, 226 or consent of school.

220-3 Dental Hygiene Clinic I. This is the first in a series of three clinical courses that lead to the achievement of integrated objectives for clinical dental hygiene practice. The student will apply knowledge and utilize techniques learned in various dental hygiene courses in order to assess the oral health status, plan and implement treatment, and evaluate outcomes related to improved oral health. The student will provide preventive, therapeutic, and educational services to clinical patients for the treatment and prevention of oral disease. Lecture one hour. Clinic eight hours. Laboratory fee: \$50. Prerequisite: 201, 206, 207, 210, 218 and 226 or consent of school.

226-2 Anatomy of the Head and Neck. The goal of this course is for the dental hygiene student to acquire clinical problem solving skills through a basic understanding of the gross anatomy of the head and neck region of the human body. Through a regional approach to the head and neck, the student will be able to synthesize solutions to clinical problems by understanding the morphological and functional interrelationships of anatomical structures. 16 weeks. two credit hours. Prerequisite: acceptance into the professional sequence.

233-2 Histology and Embryology. The goal of this course is to enable the dental hygiene student to develop a basic understanding of the microscopic structure of the primary and dental tissue groups of the human body. This course also enables the student to relate embryonic development to the normal and abnormal structures of the head and oral cavity. This background will prepare the student to differentiate between normal and abnormal clinical manifestations in subsequent courses. 16 weeks. two credit hours. Prerequisite: acceptance into the professional sequence.

247-3 Preventive Oral Care. The student will prepare for the role of oral health educator and consumer advocate. The dental hygiene process of assessment, planning, implementation and evaluation is applied for the prevention of oral disease. Laboratory techniques for assessing disease processes will be applied. Lecture two hours. Laboratory two hours. 16 weeks. Lab fee: \$35. Prerequisite: 126, 226 and Microbiology 201.

248-4 General and Oral Pathology. This course has been designed to integrate oral pathology and general pathology. Students will study principles of general pathology with emphasis on the relationship to oral disease. Pathologic physiology is included such as tissue regeneration, the inflammatory process, immunology and wound healing. Clinical features, significance, cause, locations, oral manifestations and treatment of general system diseases are presented. Special attention will be placed on common pathological conditions of the oral cavity and early recognition of the conditions. Prerequisite: 210, 226, 233 or consent of school.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: consent of school.

310-2 Infection Control/Safety and Health. This course is designed to provide students with basic information on infection control and occupational health and safety from a theoretical basis to practical application utilizing case based problem solving when applicable. Occupational hazards found in the dental environment, including infectious agents, chemical hazards and ergonomic issues will be discussed and explored. Practical experience developing and managing a safety and health program will be gained with hands-on experience in various clinical settings. Lecture two hours. Prerequisite: 220, or consent of school.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

320-3 Dental Hygiene Clinic and Radiology II. The student will utilize previous and concurrent information and skills in the treatment of clinical patients. Instrumentation, patient assessment, prevention, radiology and care of special populations will be stressed. Adjunctive treatment methodologies will be introduced. Laboratory fee \$50. Lecture one hour. Clinic eight hours. 16 weeks. Prerequisite: 210, 218, 220, 247, and 318,

322-2 Operative Oral Care and Adjunctive Procedures. This course includes an overview of various materials and procedures used in operative, endodontic, orthodontic and prosthetic dentistry. Emphasis is placed on the role of dental hygienists in explaining these procedures to clients/patients and in adapting dental hygiene services. Adjunctive procedures which augment operative care are taught in laboratory. Lecture two hours. Lab two hours. 16 weeks. Lab fee: \$50. Prerequisite: 320.

340-3 Dental Pharmacology and Pain. This course is designed to teach the student about different drugs used in dentistry, the biochemical activity of each, appropriate use, interactions with other drugs or systemic conditions, and some basic pharmacology terminology. Pharmacotherapeutics will be presented to the dental hygiene student in a meaningful, practical manner. Emphasis will be placed on clinical efforts, dosages, adverse effects and contraindications of drugs commonly prescribed in dentistry or which patients may be taking under direction of other health care providers or under self-direction. Information will be presented from a perspective to include pharmacological basis for drugs, the need for and use of a medical history, legal aspects related to these subjects. Prerequisite: 212, 220 or consent of school.

341-3 Periodontics and Local Anesthesia Practicum. The student will be introduced to identification, treatment and prevention of pathological conditions that affect the periodontium. Emphasis will be placed on anatomy and histology of the periodontium, current advances in periodontics, and soft tissue management. This course will also provide a working knowledge of local anesthesia as applied to the practice of dental hygiene. Students will be provided with the knowledge and skills necessary to administer both maxillary (infiltration) and mandibular (block) injections proficiently and safely. Lecture two hours. Laboratory two hours. Laboratory fee: \$50. Prerequisite: 212, 226, and concurrent enrollment in 340, or consent of school.

347-2 Community Oral Health. The student is introduced to the general principles of dental public health, community dentistry and epidemiology. Also presented is an overview of current community based oral health programs and roles of a community based dental hygienist. Lecture two hours. 16 weeks. Prerequisite: 247, Sociology 108, Health Care Management 365 or concurrent enrollment.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Prerequisite: consent.

355-3 Dental Hygiene Clinic and Radiology III. The student will provide comprehensive individualized treatment using all aspects of dental hygiene care in the clinical setting. Emphasis is on mastery of skills and techniques previously introduced. Lecture one hour. Clinic eight hours. Laboratory fee: \$75. Prerequisite: 320, 340, 341 or consent of school.

401-3 Dental Hygiene Clinical Practicum. The student will learn curriculum development, evaluation methods, theories of learning, and instructional strategies. The student will participate in laboratory and clinical sessions emphasizing psychomotor development, feedback, and identification of cognitive, psychomotor, and affective behaviors, and faculty calibration. Not for graduate credit. Lecture one hour, practicum four hours. Prerequisite: 355, Educational Psychology 307 or consent of school.

410-2 Ethics and Jurisprudence for Dental Hygienists. Ethical and legal issues related to the practice of dentistry and dental hygiene are studied. Case situations are evaluated to determine appropriate man agreement in accordance with the principles of dental ethics and jurisprudence. Review and interpretation of dental practice acts and licensure requirements are included. Not for graduate credit. Prerequisite: 355 or consent of school.

416-2 Four Year Seminar. The intent of the course is to provide students with a systematic approach to board preparation and dental hygiene curricula review. This course is designed to assist senior dental hygiene students in preparing for the credentialing examinations and the other procedures required for obtaining a dental hygiene license. Explicit guidance if offered to students who are preparing for the National Dental Hygiene Board Examination, the Northeast Regional Board Examination and the Central Regional Board Examination. Not for graduate credit. Prerequisite or corequisite: 441.

417-5 Multicultural Applied Experience in Dental Hygiene. This course presents a comprehensive approach to special needs patients and diverse populations. The oral health needs of rural, geriatric, minority, low income, medically comprised, disabled and other special needs populations will be addressed. Students will be introduced to a variety of settings in which they will provide oral health care and/or oral health education. It will provide an opportunity to plan, implement and evaluate programs and patient treatment in an interdisciplinary approach. Lecture one hour. Internship eight hours. Not for graduate credit. Laboratory fee: \$50. Prerequisite: 355, 448 or concurrent enrollment or consent of school.

440-2 Research Methodology. The course introduces the fundamental principles of research methodology with an emphasis on how these principles are systematically applied for conducting research in the field of dental hygiene and related disciplines. A brief overview of the scientific method will be presented with a concentration on research planning, research designs, data collection, descriptive statistics, inferential statistics, and dissemination of research. Students will apply these fundamental research principles to critically evaluate published research articles. Not for graduate credit. Prerequisite: 355, HCM 365, or consent of school.

441-4 Advanced Periodontics and Clinic. Interdisciplinary treatment of the complex periodontal patient by the dentist and the dental hygienist will be practiced with development of appropriate evidenced based therapies for specific case types. Emphasis will be placed on comprehensive evaluation, risk assessment, treatment planning, pain control, adjunctive antibiotic therapy, instrumentation, soft tissue management, evaluation and maintenance utilizing the traditional and case based problem solving model. Lecture two hours. Clinic eight hours. Not for graduate credit. Laboratory fee: \$75. Prerequisite: 320, 355, or consent of school.

442-1 Dental Office Procedure. The student will integrate current knowledge of the dental hygiene field with additional information on communication, staff relationships, conflict resolution, dental insurance and financial planning. Resumes, interviewing and employment issues will be discussed. Emphasis will be placed on facilitating the transition from practice in the University clinical setting to the private practice setting. Not for graduate credit. Prerequisite: 355 or consent of the school.

448-2 Community Oral Health Practicum. Principles of community oral health are applied through practical experience. Programming phases of assessment, planning, implementation, and evaluation are studied in detail. The student will develop and present dental health education programs according to these principles. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Lecture one hour. Practicum two hours. 16 weeks. 2 credit hours. Not for graduate credit. Laboratory fee: \$35. Prerequisite: 347, SPCM 101, ENGL 101 and 102, or consent of school.

Dental Technology (Major, Courses)

The dental technology program prepares the student to be a competent dental technician in the commercial laboratory, an educational institution, a dental manufacturing company, or the private dental office. To implement the goal, the prospective student must satisfactorily meet the requirements of courses in both the dental technology area and in the science, business, and humanities area.

Persons interested in careers in dental technology should have a sincere interest in working with their hands and find satisfaction in their creative work.

Enrollment of beginning students is limited by size of faculty and physical facilities. Admission to the University qualifies the applicant for admission to the Dental Technology program. Students must meet baccalaureate entry requirements.

An advisory committee made up of practicing dentists, dental laboratory owners, dental technicians, dental sales representatives, and a second year dental technology student serves the program.

Graduates of the two-year dental technology program find that career opportunities are excellent. The trained dental technician not only has a wide choice of geographic location for the pursuit of a career, but can also choose working conditions. Graduates are employed by commercial dental laboratories, dental schools, dental supply companies, private dental offices, or are self-employed in their own dental laboratories. The program is a good preparation for those interested in becoming practicing dentists.

The student should expect to spend about \$1200 for a dental kit, laboratory jacket, Delta Tau Club, and recognized graduate exam fee over the two-year period.

This associate degree program can be completed in two academic years at Southern Illinois University Carbondale or in combination with community college or other acceptable extra-institutional educational experience.

Associate in Applied Science in Dental Technology Degree, College of Applied Sciences and Arts

Requirements for Major in Dental Technology

English 101, Speech Communication 101	6
Physics 101, Chemistry 106	6
Information Systems and Applied Technologies 120, 229	6
Dental Technology 102, 103a,b, 104a,b, 110, 113a,b, 128, 143, 202, 204a,b, 205, 206a,b, 210	61
<i>Total</i>	79

Dental Technology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
DT 102, 110.....	4.5	4.5	DT 202.....	4.5	-
DT 103a,b.....	4.5	4.5	DT 204a, 206a, DT		
DT 104a,b.....	4.5	4.5	204b, 206b	9	9
DT 143, 128.....	1	1	DT 205, SPCM 101	1	3
ENGL 101, DT 113a.....	3	2	DT 113b, DT 210.....	2	4.5
CHEM 106, PHYS 101	3	3	ISAT 120, 229	3	3
Total	20.5	19.5	Total	19.5	19.5

Courses (DT)

102-4.5 Tooth Anatomy. The student will be able to write definitions of the nomenclature of teeth; draw five different peripheral views of maxillary and mandibular teeth; carve maxillary and mandibular teeth in plaster, three times natural size and in wax, natural size; wax maxillary and mandibular teeth on dentof orm models. Lecture one hour. Laboratory five hours.

103A-4.5 Complete Dentures I. The student will be able to write the steps of denture construction; identify and use lab stone, lab plaster and acrylic resins; construct edentulous casts, custom trays, base plates, occlusal rims, mount casts on non-adjustable articulators; and set up, contour, invest, and process and finish a complete denture. Lecture one hour. Laboratory five hours.

103B-4.5 Complete Dentures II. The student will be able to describe the theory inherent in all phases of full denture construction; bead and box an impression, set up anatomical, semi-anatomical, and non-anatomical teeth on non-adjustable and semi-adjustable articulators; select and set up teeth for different classes of arch forms; contour, flask, process, and finish complete dentures; rel ine, rebase, and repair full dentures; set up and process immediate denture and fabricate a surgical tray. Lecture one hour. Lab five hours. Prerequisite: 103a.

104A-4.5 Removable Partial Dentures I. The student will be able to write the basic steps of partial denture construction, identify and use impression materials, gypsum products, surveyors, dental waxes, clasp designs, partial denture alloys; mount master casts, survey, design, cast frameworks. Lecture one hour. Lab five hours.

104B-4.5 Removable Partial Dentures II. The student will be able to describe and do the planning, designing, and surveying of partial dentures; construct refractory casts, wax, invest, and finish several partial denture frameworks; articulate, set up denture teeth on partial frameworks, wax, invest, process, and finish acrylic bases; and repair broken frameworks. Lecture one hour. Laboratory five hours. Prerequisite: 104a.

110-4.5 Dental Occlusion. The student will be able to write and identify the basic anatomy of the oral facial structure, and the theory inherent to occlusion. The theory will include the physiology of occlusion, the determinants of occlusion, and popular occlusion theories and techniques. The laboratory aspect will include building wax occlusions such as cusp/marginal ridge and cusp/fossa occlusal contacts, including waxing of natural dentition. Lecture one hour. Laboratory five hours.

113A-2 Science of Dental Materials. The student will be able to: identify orally, as well as written, the physical and mechanical properties of dental materials, the uses and composition of dental gypsum products, namely, plaster, stones, and investments; impression materials, dental resins, dental cements, and pit and fissure sealants. Lecture two hours.

113B-2 Science of Dental Materials. The student will be able to identify orally, as well as written, the physical and mechanical properties of metals and alloys, namely, dental golds, chrome cobalt and nickel cobalt alloys; the control of their physical properties, namely, strain hardening, alloying and heat treatment, the chemistry of tarnish and corrosion, dental waxes, casting and soldering techniques, dental porcelains and polishing agents and abrasives. Lecture two hours.

128-1 Oral Anatomy. The student will be able to identify the anatomical features of the head and oral cavity; identify the blood and nerve supply to the oral cavity and surrounding area; be able to list the muscles of mastication, and know the origin and insertion of each muscle; identify the anatomical parts of the maxilla and mandible; differentiate the movements of the mandible; and be able to identify the temporo-mandibular articulations. Lecture one hour.

143-1 Orientation to Dental Technology. The student will be able to identify pertinent dates and contributions made by people in the history of dentistry and the dental laboratory industry; identify specialties of dentistry and dental technology; identify organizations affiliated with the dental laboratory industry; identify ethics and laws regulating the dental profession; identify laboratory safety procedures, equipment maintenance, infection control, areas of possible cross contamination in the dental laboratory, and identify current issues impacting dentistry.

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor, program supervisor, and school.

202-4.5 Orthodontics and Pedodontics. The student will be able to pour and trim orthodontic models, fabricate a maxillary Hawley, mandibular Hawley, holding arch, space maintainer, arch expander, tongue thrust and thumb habit appliances, occlusal palatal splint, biteplanes, operate welding machine, orthodontic model trimmer, orthodontic blowpipe, write the gauges of wire that are used for the orthodontic appliances, identify the functional appliances and their clinical applications, and write the theory associated with the use of the appliance. Lecture one hour. Laboratory five hours. Prerequisite: 110.

204A-4.5 Crown and Bridge I. The student will be able to write definitions of the nomenclature for crown and bridge I prosthetics; communicate orally and in writing the theory necessary for successful completion of

the laboratory projects; construct working models, full cast crowns, inlays and veneer crowns. Lecture one hour. Laboratory five hours.

204B-4.5 Crown and Bridge II. The student will be able to write definitions of the nomenclature for crown and bridge II prosthetics; communicate orally and in writing the theory necessary for completion of the laboratory projects; construct working models, multiple unit bridgework, broken stress bridgework, veneered crowns and soldering procedures. Lecture one hour. Laboratory five hours. Prerequisite: 204a.

205-1 Dental Laboratory Management. Upon completion of the course the student will be able to identify how the following areas of management relate to the dental laboratory technician and the dental laboratory industry: principles and practices of management, marketing management, financial management, human resource management and production management. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. This course includes several written assignments and a class laboratory design project. Prerequisite: English 101 or consent of school.

206A-4.5 Dental Ceramics I. The student will be able to construct porcelain jackets and porcelain-to-ceramic alloy restorations. Included will be cast preparation, waxing for porcelain bonded to ceramic alloy, casting, finishing, and porcelain firing techniques. Related theoretical concepts will be presented. The correct use and function of finishing and casting equipment and porcelain furnaces will be included. Lecture one hour. Laboratory five hours. Prerequisite: 110.

206B-4.5 Dental Ceramics II. The student will be able to construct porcelain bonded to ceramic alloy restorations. Included will be veneer and full coverage porcelain restorations and bridges using modern methods and techniques. Fabrication of porcelain laminates will be included. Also, the theory involved in conventional and new techniques for porcelain-to-metal restorations will be included as well as color control, and staining procedures. Lecture one hour. Laboratory five hours. Prerequisite: 206a.

210-4.5 Applied Prosthodontics. The student will be able to complete removable prosthodontic cases per directions of the dentist's prescription. Emphasis is on fabricating removable dental prosthesis on practical laboratory models. Lecture one hour. Laboratory five hours. Prerequisite: 103a, b, 104a, b, 202.

299-1 to 16 Individual Study. Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: consent of school.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Prerequisite: consent of school.

Design

(SEE ART AND DESIGN)

Early Childhood

(SEE CURRICULUM AND INSTRUCTION)

East Asian Civilization

(SEE FOREIGN LANGUAGES AND LITERATURES)

Economics (Department, Major, Courses, Faculty)

The study of economics examines how entities from individuals to nations allocate resources to achieve objectives congruent with their desires and interests. A strong economics background can help one better predict movements in stock markets, achieve a balance between economic policy and environmental goals, recognize the costs and benefits of increased globalization including international trade, and predict how different government policies influence the business cycle.

Economics forces have had powerful effects throughout world history and so a strong background within economics can greatly increase one's understanding of the world today. Moreover, economics helps develop analytical abilities and skills such as forecasting market trends and managing financial portfolios that are attractive to a wide range of employers in both the private and public sectors. Ob-

taining an economics major is also beneficial to those who enter graduate programs in business, law, or any of the social sciences.

Within the major, students can specialize in different fields, including international economics and financial economics. Both areas are rapidly increasing in importance as the world becomes more interdependent and as more people hold financial portfolios. Students specializing in general economics can also tailor a program to meet their specific interests through consultation with one of the undergraduate advisors in the department.

After meeting the requirements of the economics major and those of the College of Liberal Arts, students still have 35 hours of electives outside the department. This flexibility allows students to augment their economic training with courses that meet particular interests in areas such as business, political science, or journalism. Students can thus combine their economics degree with other disciplines so as to pursue a wide range of careers and interests.

The requirements for an economics major are given below. Economics courses at the 300-level generally require only introductory economics (ECON 240 or 241) whereas those at the 400-level are more sophisticated treatments building upon Economics 340 or 341. Courses taken for a pass/fail grade will not be counted toward the major without the written consent of the director of undergraduate studies within the economics department. Transfer students can receive credit towards the major from equivalent economics courses at other institutions. However, at least five economics courses must be taken at Southern Illinois University Carbondale.

Students are highly encouraged to discuss their major programs and career goals with a professor within the department. Undergraduates considering graduate economics programs should meet with a professor as soon as possible in order to adequately prepare for the economics and mathematical rigor of these graduate programs.

Bachelor of Arts Degree in Economics, College of Liberal Arts

ECONOMICS MAJOR – GENERAL

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Economics Requirements</i>	30
Foundation courses: Economics 240, 241, 308, 340, 341	15
Five electives: chosen in consultation with major advisors	15
<i>Electives</i>	35
<i>Total</i>	120

ECONOMICS MAJOR – FINANCIAL ECONOMICS SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Financial Economics Specialization Requirements</i>	30
Foundational courses: ECON 240, 241, 308, 340, 341	15
Specialized courses: ECON 315 or FIN 330, and ECON 416	6
Three electives: chosen in consultation with major advisor	9
<i>Electives</i>	35
<i>Total</i>	120

ECONOMICS MAJOR – INTERNATIONAL ECONOMICS SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>International Economics Specialization Requirements</i>	30
Foundational courses: ECON 240, 241, 308, 340, 341	15
Specialized courses: ECON 329 and ECON 429	6
Three electives: chosen in consultation with major advisors	9

<i>Electives</i>	35
<i>Total</i>	120

Honors Program

Juniors and seniors who are economics majors and working toward a Bachelor of Arts degree in the College of Liberal Arts may choose to enter the Honor Program if they maintain a grade point average of 3.25 or better, overall and in the major. Honors students must complete six hours of 443, Honors Research in Economics, with a grade of *B* or better; these six hours will be counted towards the major. Successful completion of the department's honors program is noted on the diploma and the transcript. Students receiving credit for Economics 443 may not apply Economics 301 hours toward the major.

Economics Minor

For students majoring in other departments, a minor in economics is useful for employment in business or government and for graduate work in any of the social sciences, law, or business. A minor requires 15 hours of economics courses, including both Economics 240 and 241. Economics 301 cannot be counted towards the minor. Students must obtain at least a 2.0 grade point average in the 15 hours of coursework counted towards the minor. Transfer students must take at least three economics courses at Southern Illinois University Carbondale.

Economics Suggested Curricular Guide

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
English 101,102	3	3		Core Speech Communication...	3	-	
Core Science	3	3		Core Multicultural, Health	3	2	
Core Mathematics	3	-		Core Interdisciplinary	3	-	
Core Humanities	3	3		Foreign Language.....	4	4	
Core Social Science	3	3		Science with Lab, Elective	3	3	
Core Fine Arts	-	3		ECON 240	-	3	
				English Composition	-	3	
<i>Total</i>	15	15		<i>Total</i>	16	15	
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
ECON 241, ECON XXX	3	3		ECON XXX	6	-	
ECON 308, ECON XXX	3	3		ECON XXX	-	3	
ECON 340,341.....	3	3		Electives.....	9	12	
Electives.....	6	6					
<i>Total</i>	15	15		<i>Total</i>	15	15	

Courses (ECON)

113-3 Economics of Contemporary Social Issues. (University Core Curriculum) An examination of the basic economic problems confronting United States society and the world today. The analysis is undertaken utilizing fundamental economic concepts with emphasis on alternative economic policies. Topics as diverse as health care, the national debt, crime, pollution and international trade are addressed.

240-3 Introduction to Microeconomics. (Advanced University Core Curriculum course) [IAI Course: S3 902] Study of businesses, consumers, and the government and their effects on prices, output and income distribution. Current economic problems will be used as illustrative examples. Prerequisite: satisfaction of the University Core Curriculum mathematics requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113.

241-3 Introduction to Macroeconomics. (Advanced University Core Curriculum course) [IAI Course: S3 901] Determination of income, employment, output and price levels in the national economy; government taxation, expenditure, and monetary policies to solve problems such as inflation and unemployment. Prerequisite: satisfaction of the University Core Curriculum mathematics requirement. Satisfies the University Core Curriculum Social Science requirement in lieu of Economics 113.

301-1 to 6 Economic Readings. Readings in books and periodicals in a defined field, under direction of one or more faculty members. Periodic written and oral reports. No more than three credit hours of 301 may be counted as part of the 30 credit hour economics requirements for economics majors. Prerequisite: consent of instructor and department chair.

3021-3 History and Philosophy of the World's Economic Systems. (University Core Curriculum) An investigation into how economic systems coexist with, and determine, or are determined by, the political and social structures in internationally diverse countries. Utilizing both economic concepts and an institutional approach the evolution of systems in nations such as Russia, Japan, the United States, China and others will be explored.

303-3 Poverty and the Economy. Poverty as a study of income inequality. Economic determinants of income inequality are isolated and related to current policy proposals.

308-3 Research Methods in Economics. An examination of the research methods and data analysis techniques used by economists in their analysis of economics questions and problems including the principal statistical methods used in economic and business decision making. This course satisfies the CoLA Writing Across the Curriculum requirement.

310-3 Labor Problems. A comprehensive overview of the relation of labor to the United States economy. Included are the history of labor in the United States; analysis of institutions affecting labor; the theory of wage and employment determination; as well as analyses of unions and collective bargaining, discrimination, unemployment, and the distribution of income. Prerequisite: 240 or consent of instructor.

315-3 Money and Banking. Study of the operation of the money and banking system in the United States. Stresses Federal Reserve control of the money supply and credit conditions to combat inflation and unemployment and the operation of the commercial bank operating as a firm within the Federal Reserve System. Policy issues are examined for the regulation of the banking industry as well as for the control of the domestic money supply. Prerequisite: 241 or consent of instructor.

322-3 Introduction to Economic Development. An analysis of the preconditions, processes, and problems involved in economic development. Both the theory and policy relevant to development, with special emphasis on the developing or emerging economies, are stressed. Prerequisite: 240 and 241 or consent of instructor.

325-3 Economics of Transition. This course is a survey of the problems confronting former socialist economies making a transition to a market economy. We focus primarily on the case of countries in Eastern Europe and on Russia. Students will learn to apply economic principles to understand the costs and benefits of policies including gradual versus rapid reform, price liberalization, privatization, federalist arrangements and stabilization. Prerequisite: 240 and 241 or consent of instructor.

329-3 Introduction to International Economics. Introduction to the principles of international economics. Stresses the relationship between the balance of payments and the United States economy, the determinants of deficits and surpluses, and policy options to correct an imbalance. Prerequisite: 240 and 241 or consent of instructor.

330-3 Public Finance. Effects of government spending and taxing activities on the rest of the economy. Analysis of government debt, the federal budgetary process, and various taxes used in the United States. Prerequisite: 240 or consent of instructor.

333-3 Economics of the Environment. Factors which lead to physical and human deterioration in a market economy. Consideration of solutions to such problems as urban decay, overpopulation, and pollution. Prerequisite: 240, 241 or consent of instructor.

334-3 Health Economics. Factors underlying the demand for and supply of health and medical care services. Included are the market, voluntary nonprofit, and governmental sectors of the industry. Special topics are the regional coordination of hospital facilities and services, the consumer price index and the measurement and costs of control programs.

340-3 Intermediate Microeconomics. A survey of theories of household, firm, and government economic behavior in the determination of competitive and non-competitive market prices. Emphasis is on understanding the United States economic system and on evaluating existing and proposed government microeconomic policies designed to improve the system. Not open to students who have had Economics 440. Prerequisite: 240 or consent of instructor.

341-3 Intermediate Macroeconomics. The determinants of fluctuations in aggregate economic activity, unemployment and inflation. An analysis of the behavior of consumption and investment, the impact of government monetary and fiscal policies, and factors affecting the rate of economic growth. Not open to students who have had Economics 441. Prerequisite: 241 or consent of instructor.

350-3 Law and Economics. The application of economics to the study of legal rules and institutions with an emphasis on how legal rules influence individual behavior and a discussion of whether such rules and resulting behavior are efficient and/or equitable. Applications from property, contract, tort, and criminal law will be used. Prerequisite: 240 or consent of instructor.

370-3 Pacific Rim Economies. This course offers an overview of the development process, and the associated successes and failures of Pacific Rim economies during the latter half of the Twentieth Century. The course explores the forces underlying the causes and consequences of these changes, with particular emphasis on the role of the state, along with the interdependence of the financial and the real sectors, as evidenced by recent financial crises in East Asia. Prerequisite: 240 and 241, or consent of instructor.

374-3 Industrial Organization. A survey of economic theories and empirical studies on the nature and consequences of business rivalry in imperfectly competitive markets. Includes such topics as oligopoly, economics of scale, natural monopoly, introductory game theory, advertising, imperfect information, spatial competition, patents, and innovation. Prerequisite: 240.

399-3 Internship in Economics. Internship constitutes paid or unpaid work in a firm, organization, or government office applying economic principles learned in class to real world experiences. Only one internship counted towards the economics major. Grades determined by periodic written reports. Prerequisite: successful completion of 240, 241 and six additional credit hours of economics at SIUC; declared major in economics; and written approval from the Economics department.

400-3 Contemporary Economic Problems. A study of one or more contemporary economic problems. Problems chosen vary from semester to semester. Topics will be announced in advance. Not for graduate credit. Prerequisite: senior status and economics major.

408-3 Economics and Business Statistics. A continuation of 308 which includes the construction, interpretation, and use of economic data. Topics include correlation, regression, decision making, index numbers,

time series analysis, forecasting, and other statistical techniques used in analyzing economic and business data. This course will not count as graduate credit for economics majors. Not for graduate credit. Prerequisite: 308 or equivalent.

416-3 Financial Economics. Study the role of money within the financial system, and the role of the financial system itself in providing risk-sharing, liquidity and information services. An examination of the bond market, interest rates and the concepts of risk, liquidity, information costs, taxation and investment maturity. A detailed examination of financial markets, e.g., the markets for stocks, foreign exchange, and market for financial derivatives. Finally, a more detailed account of why and how financial institutions and instruments evolve. Prerequisite: 241 or consent of instructor.

419-3 Latin American Economic Development. Special attention to contemporary policy issues and alternative strategies for development. Among the topics included are inflation and financial reform, international trade and economic integration, foreign investment, and agrarian reform. Prerequisite: 322, or 340, or 341, or consent of instructor.

429-3 International Trade and Finance. Analysis of the pattern and volume of world trade and capital flows; effects of trade and payments on the domestic economy; problems and methods of adjusting to change in the balance of payments. Prerequisite: 340 and 341 or consent of instructor.

431-3 Public Finance II. State and local. Analysis of the economic effects, problems, and alternative solutions concerning state and local government expenditures, revenues, and debt. Prerequisite: 330 or 340 or 341 or consent of instructor.

440-3 Price, Output, and Allocation Theories. A systematic survey of theories of product prices, wage rates, rates of production and resource utilization under conditions of competition, monopolistic competition, oligopoly and monopoly markets. Emphasis is on developing analytical tools useful in the social sciences. Not open to students who have had Economics 340. Prerequisite: 240 or consent of instructor.

441-3 Contemporary Macroeconomic Theory. An examination in the causes of inflation, unemployment, and fluctuations in aggregate economic activity, factors affecting consumption and investment, and the sources of economic growth. Emphasis is on understanding contemporary United States macroeconomic problems and the options for fiscal, monetary and income policies facing the United States government. Not open to students who have had 341. Prerequisite: 241 or consent of instructor.

443-3 Honors Research in Economics. Individual research for honors students in economics; student must be a junior or senior with a grade point average of 3.25 or better, overall and in the major. For undergraduate credit only. Not for graduate credit. Prerequisite: approval of departmental chair and a faculty supervisor and Mathematics 140, 150 or equivalent.

450-3 History of Economic Thought. An analytical study of the development of economic ideas, with special reference to historical and societal context, central thrust, and impact. Such benchmark figures as Smith, Marx, Marshall, Veblen, and Keynes are highlighted and major schools of economic thought are identified. Prerequisite: 240 and 241; or 113; or consent of instructor.

463-3 Introduction to Applied Econometrics. Applications of statistical tools to specific economic problems. Numerous examples will be examined in order to achieve this goal. Emphasis will be given to model misspecification, non-classical estimation techniques, data analysis, and simultaneous equations. Prerequisite: 408 or consent of instructor.

465-4 Mathematical Economics I. A systematic survey of mathematical economics. Application of basic mathematical tools to economic analysis, and a restatement of economic theory in mathematical terms. Prerequisite: 340 or 440, and Mathematics 140 or consent of instructor.

474-3 Antitrust and Regulation. The theory and practice of government policy toward imperfectly competitive markets. Includes such topics as merger policy, unfair trade practices, regulation of natural monopolies, peak load pricing, safety and environmental regulation, and consumer protection. Prerequisite: 340 or 374.

479-3 Problems in Business and Economics. Application of economic theory and tools of analysis to practical business problems. Cost and demand functions, and forecasting are analyzed from a policy standpoint. Prerequisite: 240, 308 or consent of instructor.

Economics Faculty

Becsi, Zsolt, Assistant Professor, Ph.D., University of Wisconsin-Madison, 1991.

Dai, Chifeng, Assistant Professor, Ph.D., University of Florida, 2003.

Edelman, Milton T., Professor, *Emeritus*, Ph.D., University of Illinois, 1951.

Ellis, Robert J., Jr., Associate Professor, *Emeritus*, Ph.D., University of Virginia, 1966.

Fare, Rolf, Professor, *Emeritus*, Docent., University of Lund, 1976.

Gilbert, Scott, Associate Professor, Ph.D., University of California at San Diego, 1996.

Grabowski, Richard, Professor and *Chair*, Ph.D., University of Utah, 1977.

Laumas, G. S., Professor, *Emeritus*, Ph.D., Wayne State University, 1966.

Layer, Robert G., Professor, *Emeritus*, Ph.D., Harvard University, 1952.

Mitchell, Thomas, Associate Professor, Ph.D., Brown University, 1984.

Morshed, Akm, Assistant Professor, Ph.D., University of Washington, 2001.

Myers, John G., Professor, *Emeritus*, Ph.D., Columbia University, 1961.

Pitafi, Basharat, Assistant Professor, Ph.D., University of Hawaii, Honolulu, 2004.

Primont, Daniel A., Professor, Ph.D., University of California at Santa Barbara, 1970.

Sharma, Subhash C., Professor, Ph.D., University of Kentucky, 1983.

Sylwester, Kevin, Associate Professor, Ph.D., University of Wisconsin-Madison, 1997.

Trescott, Paul B., Professor, *Emeritus*, Ph.D., Princeton University, 1954.

Watts, Alison, Associate Professor, Ph.D., Duke University, 1993.

Education and Human Services (College, Courses)

Courses (EDUC)

100-1 Academic and Personal Success Skills. Allows students to investigate university resources available to assist with the completion of their degree programs. Helps to prepare students for their future academic endeavors. Course limited to College of Education and Human Services students on academic probation.

210-2 Introduction to Education. Provides an introduction to teaching. Explores teaching as a profession as well as historical, philosophical, social, legal and ethical issues. Includes organizational structure, school governance, learning standards, dispositions, and introduction to LiveText. A grade of C or better is required for admission to Teacher Education Program. A clinical (field-based) component is required.

258-1 to 4 Credit for Work Experience. Credit granted for prior work experience relevant to the student's major program in which specific experiences with children or youth can be documented. Prerequisite: 313 and consent of Associate Dean for Academics.

259-1 to 60 Occupational Education Credit. Credit for educational experiences in training schools and institutes relevant to the particular departmental program. Credit hours to be determined by the Associate Dean for Academics.

300-1 to 10 Experimental Education. Offered for purposes of testing new and experimental courses and series of courses within the College of Education and Human Services. Prerequisite: consent.

308-3 Characteristics and Methods for Teaching Exceptional Children. For pre-service teachers and school personnel who serve directly and indirectly children with disabilities and youth. The course focuses on providing the essential characteristic information and skills to appropriately educate students with disabilities in a variety of settings. Prerequisite: 313, 314.

311-3 Schooling in a Diverse Society. Schooling in a diverse society. A requirement in the professional education sequence. Fulfills the minimum state certification requirement in the history and philosophy of education. Assists students in developing an understanding of organization, function, role and diversity in schools in the United States.

312-1 to 8 Field Observation and Participation. Allows the pre-service teacher education student to observe and participate in activities and experiences relating to the offerings of their major department. These experiences will be correlated with the offerings of the student's major department, and the experiences will be designed to meet the needs of the individual student. Enrollment in this course will be coordinated by the student's major department. Placement in public school settings will be coordinated by the College of Education and Human Services Student Services, Office of Student Services, Wham 135. Prerequisite: 311, 313, 314 or concurrent enrollment.

313-3 Introduction to Reflective Teaching Practice. Requirement in professional education sequence that cannot be waived. Major roles of classroom teacher are introduced. Orientation to the Teacher Education Program's Reflective Teaching Model. Techniques and procedures applicable for effective teaching including planning for instruction and general teaching strategies will be introduced. In addition to on-campus, classroom instruction, students will participate in public schools for one full-day a week or two half days for fourteen weeks. Placement in the public schools is coordinated by College of Education and Human Services Office of Student Services, Wham 135. Prerequisite: 210 and admission to the Teacher Education Program. The student may not enroll in this class more than two times.

314-2 Human Growth, Development, and Learning. A requirement in the professional education sequence. This course deals with factors involved in the teaching-learning process including cognitive development, socio-personal characteristics, socio-cultural characteristics, motivation for learning, and principles of school learning. Prerequisite: Psychology 102 or equivalent.

315-3 Organizing and Directing Instruction. A requirement in the professional education sequence. Techniques and procedures applicable to effective teaching including planning for instruction, instructional design, and general teaching strategies. Teaching skills will be demonstrated by the students and evaluated by the instructor on a regular basis in the Teaching Skills Lab. 12 lab hours. Laboratory work also required in media production laboratory and microcomputer laboratory. A \$20 lab fee is required. Prerequisite: 310 or concurrent enrollment, 314 and admission to the Teacher Education Program.

316-3 Classroom Planning, Organization and Management. Covers techniques and procedures intended to provide teachers with skills for effectively managing a classroom. Course will focus on classroom planning, organization, management techniques, discipline models, child abuse identification and reporting, and field observation in the public schools. The course will require one full day in a K-12 classroom for a minimum of twelve weeks. The College of Education and Human Services, Office of Student Services, Wham 135 coordinates placement in the schools. All sections require a restricted class card. Prerequisite: 313, 314 and admission to the Teacher Education Program.

317-2 Evaluation of Learning and Teaching. Covers construction and use of teacher-made tests of classroom learning; interpretation and use of standardized tests of achievement, aptitude, and scholastic ability; procedures for determining and reporting grades; and procedures for measuring and evaluating instructional effectiveness. Prerequisite: 313, 314, admission to the Teacher Education Program.

400-1 to 6 Student Teaching. A requirement in the undergraduate professional education sequence, 400 represents preliminary student teaching experiences necessary for certification by entitlement, for under-

graduate students who are majoring in special education. Enrollment in this course must be arranged through the College of Education and Human Services, Office of Student Services, Wham 135. Not for graduate credit. Prerequisite: admission to the Teacher Education Program and acceptance for student teaching.

401-1 to 12 Student Teaching. A requirement in the undergraduate professional education sequence, 401 concludes the student teaching experience necessary for certification by entitlement. For undergraduate credit only. A \$100 laboratory fee is required. Prerequisite: completion of prior professional education sequence courses and all required methods course with a grade of C or better, required major gpa, departmental approval, and required certification tests.

402-5 to 8 Student Teaching for Provisionally Certified Teachers. Offered for purposes of converting a provisional teaching certificate to a standard teaching certificate. The student teaching experience may occur in a position of employment, without pay, under the supervision of a University supervisor. Enrollment in this course must be arranged with the coordinator of field-based experiences in the College of Education and Human Services, Office of Student Services, Wham 135. Not for graduate credit. Prerequisite: consent of instructor, provisional certificate, and teaching experience.

450-1 to 10 Experimental Education. Offered for purposes of testing new and experimental courses and series of courses within the College of Education and Human Services. Prerequisite: consent.

460-3 (1,1,1) Conflict Resolution: Prevention and Intervention Strategies. Preventive interventions for teachers, administrators, and related school personnel to teach students strategies for interrupting or decreasing violence in schools and classrooms will be covered in each section of the course. Those taking the course will gain knowledge and skills needed to help students learn anger management skills, consequently equipping them with alternatives to resorting to violence or other destructive behavior. Specific violence prevention interventions will be covered in the following areas: (a) anger management, (b) peer mediation, (c) bullying.

Educational Psychology (Major, [Graduate only], Courses)

Courses (EPSY)

100-2 Decision Making for Career Development. Examination of factors relating to career decision making. Emphasis on the continuous use of learned processes and information in vocational development. Supplementary group guidance and counseling sessions required. Charges may be assessed to cover the cost of administering and scoring occupational interest surveys to be given during the course. These charges should be less than \$10.

307-3 Educational Psychology. The basic factors involved in the teaching-learning process including student characteristics, motivation, learning, and teacher-student relationships. The course activities are intended to prepare the student with a basic foundation in educational psychology for the purpose of teaching.

380-1 to 4 Practicum in Instructional Roles. One semester hour of credit for every three modules selected. Application of educational psychology in a practical teacher-learner situation. Class members conduct actual instructional activities with individuals or groups of students. Field activities are required and student may be required to purchase additional materials not to exceed \$20. Prerequisite: consent of instructor.

402-3 Basic Statistics. A master's level terminal statistics course. Emphasis on descriptive statistics, graphical representation of data, correlation, and simple regression. Includes an introduction to hypothesis testing procedures and analysis of variance.

412-3 Human Behavior and Mental Health. This course is designed to provide an overview of the factors and conditions in life that tend to affect mental health and the community resources available to address mental health needs. Social, political, economic and professional resources will be examined as they relate to the development, implementation and coordination of mental health services and systems.

418-3 Psychology of the Classroom. An examination of the main factors that affect learning in classroom settings. Includes an analysis of theory and research on cognitive development, personality development, individual differences, cultural and socioeconomic diversity, learning processes, motivation, and assessment, as well as the implications of research findings for classroom instruction.

422-3 Introduction to Individual and Group Assessment. The student will be introduced to the basic testing process and the problems related to individual group assessment and will be expected to choose a project for study and investigation. The project must be related in some way to the role and function of the counselor in different settings. The various types of assessment instruments and the manner in which the data derived there from can be employed in consultation.

430-3 Conflict Resolution Skills for Education Environments. The purpose of the course is to help educators and others to develop the understanding and skills necessary to promote peaceable means for resolving conflict with and among children and adolescents in an educational environment. The course will focus on participants developing personal techniques and approaches to assist children and adolescents to develop age-appropriate conflict resolution skills.

481-1 to 12 Seminar. Conducted by staff members and distinguished guest lecturers on pertinent topics. Prerequisite: consent of instructor and department.

491-1 to 6 Special Research Problem—Individual Study. For majors. Formulating, investigating, and reporting on a problem in the area of applied psychology. Prerequisite: advanced standing, consent of department.

493-3 Counseling Skill Development. Through simulated counseling situations and extensive examination of counseling case studies, counseling skills are examined and practiced.

Electrical and Computer Engineering (Department,

Majors [Electrical Engineering, Computer Engineering], Courses, Faculty)

MISSION STATEMENT

The mission of the Department of Electrical and Computer Engineering is to serve society as a center for learning and innovation in all major areas of electrical and computer engineering. The department accomplishes its mission by disseminating existing knowledge through teaching, by creating new knowledge through research and publications, and by converting original ideas and concepts into new technologies. Through integration of education and research, the department creates the academic environment necessary for training innovators and leaders for the future.

The department offers Bachelor of Science degrees in Electrical Engineering, in Computer Engineering and in Electrical Engineering with Specialization in Computer Engineering, as well as the option for dual Degree in Electrical Engineering and in Computer Engineering. The department also offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees.

Bachelor of Science Degree in Electrical Engineering

The fundamental goal of the undergraduate program in Electrical Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

EDUCATIONAL OBJECTIVES

1. To provide Electrical Engineering majors with the knowledge, the skills and the attributes necessary to successfully compete for quality jobs in all functions of Electrical Engineering employment, ranging from research and development to sales and customer support.

2. To provide all Electrical Engineering majors with communication skills, extensive design experiences, familiarity with modern computer-aided design tools and the ability to work effectively in a team environment.

3. To provide all Electrical Engineering majors with the broad education necessary to understand the impact of engineering solutions in a global and societal context.

4. To equip all Electrical Engineering majors with lifelong learning skills, which will allow them to successfully adapt to the evolving technologies throughout their professional careers.

5. To provide all Electrical Engineering majors with a solid foundation in Mathematics, Basic Sciences and Electrical Engineering Science, which will allow them to successfully pursue graduate studies in Electrical and Computer Engineering, or other professional degrees, such as Business, Law and Medicine.

6. To provide all Electrical Engineering majors with high-quality laboratory training and experiences in all major areas of electrical and computer engineering. The heavy emphasis on laboratory training is a feature characteristic of program, designed to provide the graduates with a unique advantage in this area.

The flexibility of the electrical engineering curriculum allows the students to choose among advanced courses in the theory and applications of circuits, systems, control, signal processing, communications, digital systems, power systems, electronics, gaseous electronics, optics, electro-optics, electromagnetics, antennas and propagation.

Employment opportunities exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and develop-

ment, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

The Bachelor of Science programs in Electrical Engineering and in Electrical Engineering with Specialization in Computer Engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology EAC/ABET, 111 Market Place, Suite 1050, Baltimore, MD. 21202.

Bachelor of Science Degree in Electrical Engineering, College of Engineering

ELECTRICAL ENGINEERING MAJOR

<i>University Core Curriculum Requirements</i>	41 ¹
Foundation Skills	12
English 101, 102	6
Speech Communication 101	3
Mathematics (see major)	3
Disciplinary Studies	23
Economics 240 ² , Social Science Elective ³	6
Fine Arts Elective ³	3
Natural Sciences (see major)	6
Biology 202 ⁴	2
Philosophy 102, 105	6
Integrative Studies	6
Economics 302i	3
Multicultural Elective ³	3
<i>Requirements for Major in Electrical Engineering</i>	(9) + 87
Basic Sciences	6
Physics 205a, 205b, 255a, 255b	(6) + 2
Science Elective (with lab) ⁵	4
Mathematics	11
Mathematics 150, 250, 251, 305	(3) + 11
Restricted Elective	3
Programming ⁶	3
Electrical and Computer Engineering	43
Electrical and Computer Engineering 101, 225, 235, 315, 327, 345, 355, 356, 375, 385, 495a, 495b	43
Technical Electives ⁷	24
<i>Total</i>	128

¹Hours in parentheses (required for major) will apply toward nine hours of core curriculum, making a total of 41 hours.

²Can be substituted with Economics 241.

³University Core Electives must be selected from the respective approved lists, or from approved substitutions within the restrictions imposed by the Department.

⁴Can be substituted with Physiology 201.

⁵Select from a list of Science Electives approved by the department.

⁶Select one from ECE 222 and CS 202.

⁷At least 21 hours of Electrical and Computer Engineering Electives including at least nine hours of Engineering Design. A maximum of six hours of approved electives from other Engineering disciplines, Science, Business or Medicine.

Electrical Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MATH 150, 250	4	4	MATH 251, 305	3	3
ENGL 101, 102	3	3	PHYS 205a, 255a	4	-
Fine Arts, SPCM	3	3	PHYS 205b, 255b	-	4
PHIL 102, 105	3	3	BIOL 202	2	-
ECE 101, Programming	3	3	Multicultural Elective	-	3
			ECON 240, 302i	3	3
			ECE 225, 235	4	4
<i>Total</i>	16	16	<i>Total</i>	16	17

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
ECE 315, Science Elective	4	4	ECE 495a,b	2	3
ECE 355, 345	4	4	Technical Electives	12	12
ECE 327, 356	4	4	Social Science Elective	3	-
ECE 375, ECE 385	3	4			
Total	15	16	Total	17	15

ELECTRICAL ENGINEERING MAJOR – COMPUTER ENGINEERING SPECIALIZATION

University Core Curriculum Requirements	41 ¹
Foundation Skills	12
English 101, 102	6
Speech Communication 101	3
Mathematics (see major)	3
Disciplinary Studies	23
Economics 240 ² , Social Science Elective ³	6
Fine Arts Elective ³	3
Natural Sciences (see major)	6
Biology 202 ⁴	2
Philosophy 102, 105	6
Integrative Studies	6
Economics 302i	3
Multicultural Elective ³	3

Requirements for Electrical Engineering with a Computer

Engineering Specialization	(9) + 87
Basic Sciences	6
Physics 205a, 205b, 255a, 255b	(6) + 2
Science Elective (with lab) ⁵	4
Mathematics	11
Mathematics 150, 250, 251, 305	(3) + 11
Restricted Electives	6
Programming ⁶ , Advanced Programming ⁷	6
Electrical and Computer Engineering	44
Electrical and Computer Engineering 101, 225, 235, 315, 327, 329, 345, 355, 356, 385, 495a, 495b	44
Technical Electives ⁸	20
Total	128

¹Hours in parentheses required for major will apply toward nine hours of core curriculum, making a total of 41 hours.
²Can be substituted with Economics 241.
³University Core Electives must be selected from the respective approved lists, or from approved substitutions, and within the restrictions imposed by the department.
⁴Can be substituted with Physiology 201.
⁵Selected from a list of Science Electives approved by the department..
⁶Selected from ECE 222 and CS 202.
⁷Selected from ECE 321 and CS 220.
⁸At least 16 hours from ECE 421, 422, 423, 424, 425, 428 429, CS 306. A maximum of four hours may be taken from the list of approved Technical Electives.

Electrical Engineering - Computer Engineering Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MATH 150, 250	4	4	MATH 251, 305.....	3	3
ENGL 101, 102	3	3	PHYS 205a, 255a	4	-
Fine Arts, SPCM 101	3	3	PHYS 205b, 255b	-	4
PHIL 102, 105	3	3	BIOL 202, Multicultural Elec	2	3
ECE 101, Programming	1	3	ECON 240, Advanced Pro- gramming	3	3
			ECE 225, 235	4	4
Total	16	16	Total	16	17

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
ECE 315, ECE 329	4	4	ECE 495a,b	2	3
ECE 355, 345	4	4	ECON 302i	3	-
ECE 327, 356	4	4	Social Science Elective	3	-
ECE 385, Science Elective	4	4	Technical Electives	8	12
<i>Total</i>	16	16	<i>Total</i>	16	15

Bachelor of Science Degree in Computer Engineering

The fundamental goal of the undergraduate program in Computer Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

EDUCATIONAL OBJECTIVES

1. To provide Computer Engineering majors with the knowledge, the skills and the attributes necessary to successfully compete for quality jobs in all functions of computer engineering employment, ranging from research and development to sales and customer support.
2. To provide all Computer Engineering majors with communication skills, extensive design experiences, familiarity with modern computer-aided design tools and the ability to work effectively in a team environment.
3. Provides Computer Engineering majors with the broad education necessary to understand the impact of engineering solutions in a global and societal context.
4. To equip all Computer Engineering majors with lifelong learning skills, which will allow them to successfully adapt to the evolving technologies throughout their professional careers.
5. Provide Computer Engineering majors with a solid foundation in Mathematics, Basic Sciences, Electrical and Computer Engineering Sciences, which will allow them to successfully pursue graduate studies in Electrical and Computer Engineering, or other professional degrees, such as Business, Law and Medicine.
6. Provide Computer Engineering majors with high-quality laboratory training and experiences in all major areas of Electrical and Computer Engineering. The heavy emphasis on laboratory training is a feature characteristic of program, designed to provide the graduates with a unique advantage in this area.

The Computer Engineering curriculum provides the students with a strong background in the basic Electrical and Computer Engineering sciences. The students have the option to choose among advanced courses in the theory and applications of digital circuits and systems, computer architecture and design, computer networks and digital design automation.

Employment opportunities exist within a wide range of organizations, such as computer, semiconductor, aviation, electronics, microelectronics, broadcasting, telecommunications, defense, automotive, manufacturing and electric power companies, state and federal agencies and laboratories. Employment opportunities cover the spectrum of engineering activities, ranging from research and development, to systems analysis, automation, manufacturing, customer service and support, marketing and sales.

The Bachelor of Science program in Computer Engineering is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology EAC/ABET, 111 Market Place, Suite 1050, Baltimore, MD. 21202.

Bachelor of Science Degree in Computer Engineering, College of Engineering

COMPUTER ENGINEERING MAJOR

<i>University Core Curriculum Requirements</i>	41 ¹
Foundation Skills	12
English 101, 102	6
Speech Communication 101	3

Mathematics (see major)	3
Disciplinary Studies	23
Economics 240 ² , Social Science Elective ³	6
Fine Arts Elective ³	3
Natural Sciences (see major)	6
Biology 202 ⁴	2
Philosophy 102, 105	6
Integrative Studies	6
Economics 302i	3
Multicultural Elective ³	3
Requirements for Major in Computer Engineering	(9) + 87
Basic Sciences	6
Physics 205a, 205b, 255a, 255b	(6) + 2
Science Elective (with lab) ⁵	4
Mathematics	11
Mathematics 150, 250, 251, 305	(3) + 11
Restricted Elective	6
Programming ⁶ , Advanced Programming ⁷	6
Electrical and Computer Engineering	36
Electrical and Computer Engineering 101, 225, 235, 315, 327, 329, 345, 355, 495a, 495b	36
Technical Electives ⁸	28
Total	128

¹Hours in parentheses (required for major) will apply toward nine hours of core curriculum, making a total of 41 hours.
²Can be substituted with Economics 241.
³University Core Electives must be selected from the respective approved lists, or from approved substitutions within the restrictions imposed by the Department.
⁴Can be substituted with Physiology 201.
⁵Select from a list of Science Electives approved by the department.
⁶Select one from ECE 222 and CS 202.
⁷Selected from ECE 321 and CS 220.
⁸At least 20 hours from ECE 421, 422, 423, 424, 425, 428, 429 and CS 306, 414, 416, 435, 484, 485. A maximum of eight hours may be taken from all other ECE courses.

Computer Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MATH 150, 250	4	4	MATH 251, 305.....	3	3
ENGL 101, 102	3	3	PHYS 205a, 255a	4	-
Fine Arts, SPCM 101	3	3	PHYS 205b, 255b	-	4
PHIL 102, 105	3	3	BIOL 202	2	-
ECE 101, Programming	3	3	Multicultural Elective	-	3
			ECON 240.....	3	-
			Advanced Programming	-	3
			ECE 225, 235	4	4
Total	16	16	Total	16	17
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
ECE 315, Science Elective	4	4	ECE 495a,b	2	3
ECE 355, 329	4	4	Technical Electives	12	12
ECE 327, 345	4	4	Social Science Elective	3	-
Econ 302i, Technical Elective ..	3	4			
Total	15	16	Total	17	15

Dual B.S. Degree in Electrical and Computer Engineering

COMPUTER AND ELECTRICAL ENGINEERING DUAL DEGREE

University Core Curriculum Requirements	41 ¹
Foundation Skills	12
English 101, 102	6
Speech Communication 101	3
Mathematics (see major)	3
Disciplinary Studies	23
Economics 240 ² , Social Science Elective ³	6
Fine Arts Elective ³	3

Natural Sciences (see major)	6
Biology 202 ⁴	2
Philosophy 102, 105	6
Integrative Studies	6
Economics 302i	3
Multicultural Elective ³	3
<i>Requirements for the Majors in Electrical and Computer Engineering</i>	(9) + 109
Basic Sciences	6
Physics 205a, 205b, 255a, 255b	(6) + 2
Science Elective (with lab) ⁵	4
Mathematics	11
Mathematics 150, 250, 251, 305	(3) + 11
Restricted Electives	6
Programming ⁶ , Advance Programming ⁷	6
Electrical and Computer Engineering	47
ECE 101, 225, 235, 315, 327, 329, 345, 355, 356, 375, 385, 495a, 495b	47
Technical Electives ⁸	39
<i>Total</i>	150

¹ Hours in parentheses required for the major will apply toward nine hours of the core curriculum, making a total of 41 hours.

² Can be substituted with Economics 241.

³ University Core Electives must be selected from the respective approved lists, or from approved substitutions, and within the restrictions imposed by the Department.

⁴ Can be substituted with Physiology 201.

⁵ Selected from a list of Science Electives approved by the Department.

⁶ Select one from ECE 222 or CS 202.

⁷ Select one from ECE 321 and CS 220.

⁸ At least 21 hours from Electrical and Computer Engineering 421, 422, 423, 424, 425, 428, 429 and Computer Science 306 414, 416, 435, 484, 485. A maximum of 16 hours must be taken from the other Electrical and Computer Engineering courses.

Dual Degree in Electrical and Computer Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MATH 150, 250	4	4	MATH 251, 305	3	3
ENGL 101, 102	3	3	PHYS 205a, 255a, 205b, 255b ..	4	4
Fine Arts, SPCM 101	3	3	BIOL 202, Multicultural Elec ...	2	3
PHIL 102, 105	3	3	ECON 240, Advanced Prog	3	3
ECE 101, Programming	1	3	ECE 225, 235	4	4
<i>Total</i>	16	16	<i>Total</i>	16	17
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
ECE 315, 329	4	4	Technical Electives	12	12
ECE 355, 345	4	4	ECON 302i, ECE 495a	3	2
ECE 327, 356	4	4	Social Science Elective	3	-
ECE 375, 385	3	4	Science Elective	-	4
<i>Total</i>	15	16	<i>Total</i>	18	18
FIFTH YEAR	FALL	SPRING			
ECE 495b	3	-			
Technical Electives	15	-			
<i>Total</i>	18				

Second Bachelor's Degree

A student already holding one of the degrees may earn the other bachelor's degree upon completion of at least 22 hours (making a total of 150 hours minimum), provided that the student fulfills the Department requirements for both the degrees and the University Core Curriculum requirements.

Courses (ECE)

101-3 Introduction to Electrical and Computer Engineering. This course introduces the students to the different areas of the electrical and computer engineering professions, and it addresses all the functions of engineering employment, ranging from research and development to design and customer support. The course provides the students with the necessary guidance regarding their course of study, and it helps them to increase their academic and personal success skills. Mandatory Pass/Fail.

- 222-3 Introduction to Digital Computation.** Digital computation to solve basic problems in electrical and computer engineering. Analyzing problems, flowcharting, coding, diagnosing, executing and verifying solutions. Programming in C language. Prerequisite: Mathematics 111.
- 225-4 Introduction to Discrete Logic and Digital Systems.** Discrete objects and counting. Induction and sums of integers. Number systems. Expressions in propositional logic. Boolean algebra. Combinational circuits. Gate minimization. Combinational modules. Modular design. Prerequisite: 222 and Mathematics 150.
- 235-4 Electric Circuits.** Basic circuit elements and concepts. Introduction to Pspice and MATLAB. Methods of circuits analysis. Mesh and nodal methods. Circuit theorems. Superposition principle. Energy storage elements. Transient analysis of first-order circuits. Introduction to second-order circuits. Sinusoidal steady-state analysis. Phasors and phasor diagrams. Basic electrical measurements and instrumentation. Lecture, laboratory and tutorial. Prerequisite: Mathematics 250.
- 315-4 Mathematical Methods in Engineering.** A three-part course designed to introduce all Electrical and Computer Engineering students to advanced mathematical methods, through applications to engineering problems. Part A: applications of complex variables to electrical circuits, systems and electromagnetic fields. Part B: applications of linear algebra and matrix methods to electric circuits, systems and electromagnetic fields. Part C: applications of probability and statistics to electrical engineering problems. Lectures and tutorials. Prerequisite: Mathematics 251.
- 321-3 Introduction to Software Engineering.** Introduction to the tools, concepts and techniques to develop complex software projects. The tools include: object oriented languages, data structures, algorithm analysis, tree structures, searching and sorting, graph structures and queues. Concepts and techniques include: life cycle, requirements specifications, design methodology, and testing. Prerequisite: 222, 225.
- 327-4 Digital Circuit Design.** Modular combinational design. Arithmetic circuits. Programmable logic. Synchronous and asynchronous sequential circuits. Flip-flops, memory, shifters, counters. Finite State Machine Design. Lecture and lab. Lab fee: \$10 to help defray costs of consumable items. Prerequisite: 225.
- 329-4 Computer Organization and Design.** Introduction to the design and organization of digital computers: data-path and control, hardwired and microprogrammed control, interrupts, memory organization concepts. An introduction to optimization issues. Design and implementation of simple computers with hardwired and microprogrammed control. Prerequisite: 327.
- 345-4 Electronics.** Fundamental electronics and basic signal processing. Characteristics and typical applications of analog and digital electronics modules. Operational amplifiers. Fundamentals of transistors. Lecture and lab. Lab fee: \$10 to help defray cost of consumable items. Prerequisite: 235 and Physics 205b.
- 355-4 Signals and Systems.** Signal and system classification, operations on signals, time-domain analysis, impulse response and stability, Fourier series and transform, application to communications, Laplace transform, application to linear circuits and systems, frequency response techniques, introduction to discrete-time signals and systems, sampling, discrete and fast Fourier transforms. Lecture and laboratory. Prerequisite: 235 and Mathematics 305.
- 356-4 Systems and Control.** Modeling of dynamic systems and circuits, dynamic response, basic properties of feedback, PID control, root-locus design method, frequency-response design method, introduction to state-space modeling and design method. Lecture and laboratory. Prerequisite: 315 and 355.
- 375-3 Introduction to Electromagnetic Fields.** Elementary electromagnetic field theory, vectors and fields, fields and materials, Maxwell's equations in integral and differential forms, static and quasi-static fields, time-domain analysis of waves, engineering applications. Prerequisite: 235, Mathematics 251 and Physics 205b.
- 385-4 Electromechanical Energy Conversion.** AC Steady-State Power. Three-Phase Circuits. Principles of electromechanical energy conversion. Energy conversion and dynamic circuits. Magnetic circuits. Transformers. DC machines. Synchronous machines. Single phase and poly-phase machines. Poly-phase machines. Lecture and laboratory. Prerequisite: 235 with a grade of C or better and Physics 205b.
- 392-1 to 6 Electrical Engineering Cooperative Education.** Supervised work experience in industry, government or in a professional organization. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Prerequisite: sophomore standing.
- 421-4 Synthesis with Hardware Description Languages.** Fundamental concepts, techniques and tools for computer-aided design of digital systems. Modeling and simulation of digital systems using hardware description languages. Behavioral, data-flow and structural modeling. Synthesis, optimization and verification. Lecture and laboratory. Prerequisite: 327.
- 422-4 Introduction to Data Communications Networks.** Protocol architecture. Signaling and data encoding techniques. Circuit and packet switching technologies. Data link layer, routing, internet and transport protocols. Medium access control (MAC) sublayer and local area network (LAN) technologies. Cryptography. Prerequisite: 315, 355.
- 423-4 Digital VLSI Design.** Principles of the design and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. MOS transistor theory and the CMOS technology. Characterization and performance estimation of CMOS gates. CMOS gate and circuit design. Layout and simulation using CAD tools. CMOS design of datapath subsystems. Design of finite state machines. Examples of CMOS system designs. Laboratory experience in CMOS VLSI design. Lecture and laboratory (VLSI design). Prerequisite: 327 and 345.
- 424-4 Microprocessor-Based Systems.** Microprocessor technology. Design, construction, and programming of microprocessor-based systems. Lecture and laboratory. Cost of parts for microprocessor-based system, approximately \$80. Prerequisite: 329 or concurrent enrollment, or consent of instructor.

425-4 VLSI Design and Test Automation. Principles of the automated synthesis, verification, testing and layout of Very Large Scale Integrated (VLSI) circuits concentrating on the CMOS technology. Resource allocation and scheduling in high-level synthesis. Automation of the logic synthesis for combinational and sequential logic. The physical design automation cycle and CMOS technology considerations. Fault modeling and testing. Timing analysis. Laboratory experience using commercial tools for synthesis and layout. Prerequisite: 329, 345.

428-4 Programmable ASICs Design. Introduction to theoretical concepts and experimental design and construction of Application-Specific Integrated Circuits (ASICs). Rapid prototyping of data path and control in computer systems. Field Programmable Gate Arrays (FPGAs) and similar logic. Lecture and Laboratory. Fee of \$10 to help defray costs of consumable items. Prerequisite: 329 or consent.

429-4 Computer Systems Architecture. Advanced computer arithmetic, principles of performance evaluation, instruction set principles, pipeline considerations and instruction level parallelism, vector processors, memory hierarchy design. Prerequisite: 329.

440-4 CMOS Radio-Frequency Integrated Circuit Design I. The basics of CMOS RFIC design, including basic concepts in RFIC design, CMOS (active and passive) microwave devices, matching networks and signal flow graph, scattering parameter microwave circuit design and analysis methods. Lecture and Laboratory. Prerequisite: 375, 345; or equivalent

441-4 Photonics I. Ray optics, wave optics, beam optics, polarization of light, statistical optics, photons and atoms. Prerequisite: 375 with a grade of C or better.

446-4 Electronic Circuit Design. Analysis and design of electronic circuits, both discrete and integrated. Computer-aided circuit design and analysis. Consideration of wideband, power, and tuned amplifiers; switching circuits; feedback; and oscillators. Design projects. Lecture and laboratory. Laboratory fee of \$10 to defray cost of consumable items. Prerequisite: 345, and 355 or concurrent enrollment.

447-4 Electronic Devices. Fundamental principles of semiconductor carrier statistics, band diagrams, p-n junction diodes, Schottky diodes, BJTs, MOS capacitors and MOSFETs for advanced VLSI technology. Lecture and laboratory. Prerequisite: 375, 345; or equivalent.

448-4 Photonics II. Fourier optics, fiber optics, electro-optics, nonlinear optical media, acousto-optics, photonic switching, optical and interconnections and optical storage. Prerequisite: 441 or consent of instructor.

456-4 Embedded Control and Mechatronics. Introduction to mechatronic systems, systems modeling and simulation, sensors and actuators, real-time interfacing, DSPs and microcontrollers, analysis of sampled-data systems, z-transform, digital control design techniques, emulation method, direct method, industrial applications. Lecture and laboratory. Prerequisite: 315 and 356.

459-4 MEMS and Micro-Engineering. Introduction to micro electro-mechanical systems (MEMS), manufacturing techniques, microsensors, microactuators, microelectronics and micro-controllers. Lecture and laboratory. Prerequisite: 315 and 356.

468-4 Digital Signal Processing. Discrete-time signals and systems: z-transform; discrete Fourier transform, fast Fourier transform algorithms; digital filter design; digital filter realizations. Lecture and laboratory. Prerequisite: 355.

471-3 Wireless and Personal Communication Systems. Overview of wireless technologies, access technologies and cellular systems. Fundamentals of radio and cellular communications. Digital modulation techniques. Antennas and diversity systems. Concepts of packet radio systems. North American Cellular and PCS systems. Prerequisite: 315 and 355.

472-4 Antennas I. Analysis design, fabrication, measurement and CAD applied to basic antenna types. Fundamental parameters. Friis transmission equation. Impedance and pattern measurements. Resonant micro strip and wire antennas. Arrays and line source. Lecture and Laboratory. Prerequisite 375.

476-4 Introduction to Broadband Communication Systems. Digital transmission fundamentals. Satellite, microwave, video coding and optical transmission. Prerequisite: 315, 355 and 375.

477-3 Fields and Waves I. Transmission lines for communications. Guided wave principles and resonators. Applications in electronics, optoelectronics and photonics. Principles of radiation. Solution techniques for Laplace's equation and one-dimensional wave equation. Prerequisite: 375.

478-4 Analog and Digital Communication. Amplitude, frequency, and phase modulation. Sampling theorem. Pulse code modulation. Baseband binary communication. Digital carrier systems. Optimum signal detection. Lectures and laboratory. Projects. Prerequisite: 315, 355.

479-4 Microwave Engineering I. Electromagnetic theory, analysis design, fabrication, measurement and CAD applied to passive networks at microwave frequencies. Topic include: Transmission lines, Waveguides, Impedance matching, Tuning, Resonators, Scattering parameters, the Smith Chart. Lecture and Laboratory. Prerequisite: 375.

483-4 Power Electronics. Power semiconductor devices. Line commutation; diode and thyristors rectifiers, DC choppers. Switching-mode power supplies. Forced commutation; voltage-source inverters. DC Drives. AC Drives. Prerequisite: 385.

484-4 Computer-Aided Circuit Analysis. Network topology. Analysis of linear and nonlinear networks. Standard form of state equations. Numerical solution of state equations. Frequency domain sensitivity calculations. Lecture and projects. Prerequisite: 355.

486-3 Electric Energy Sources. Electric Power Generators – Fossil fuel, Nuclear and Solar. Principles of Design, Operation and Utilization. Direct Energy Conversion. Energy Storage Devices and Systems. Cost Analysis of Power Generation. Prerequisite: 385 or consent.

487-4 Power Systems Analysis. Introduction to analysis of electric power systems. Modeling of power system components. Transmission line calculations and modeling. Power system configuration. Per-unit

quantities. Power system modeling. Introduction to load-flow analysis. Lecture and laboratory. Prerequisite: 315, 385.

488-4 Power Systems Engineering. Power flow control. Voltage control. Economic operation of power systems. Symmetrical faults. Symmetrical components. Analysis of asymmetrical faults. Power system stability. Lecture and laboratory. Prerequisite: 356, 487.

489-3 Electric Power Distribution. Design of primary and secondary distribution networks. Load characteristics. Voltage regulation. Metering techniques and systems. Protection of distribution systems. Technical and legal aspects, related to power distribution. Prerequisite: 385.

492-1 to 6 Special Studies in Electrical Engineering. Individual projects and problems selected by student or instructor. Open to seniors only. Not for graduate credit. Prerequisite: consent of instructor.

493-1 to 4 Special Topics in Electrical Engineering. Lectures on topics of special interest to students in various areas of electrical engineering. Designed to test new and experimental courses in electrical engineering. Prerequisite: consent of instructor.

495A-2 Electrical and Computer Engineering Design. Team approach in engineering projects. Understanding and analyzing a request for proposals. Identification of tasks, assignment of tasks and team organization. Work plan and time scheduling. Feasibility analysis and cost-benefit analysis. Ethics and professionalism issues related to engineering projects in general and to the specific project assigned. Team coordination and documentation of team member efforts. Not for graduate credit. Prerequisite: senior standing in Electrical and Computer Engineering.

495B-3 Electrical and Computer Engineering Design. Team approach in engineering projects. Identification of tasks, assignment of tasks and team organization. Work plan and time scheduling. Design options and cost-benefit analysis. Documentation of design stages. Development of the final decision. Team coordination and documentation of team member efforts. Documentation of team communications and the team decision making processes. Implementation of the design (if the project warrants). Evaluation of the final product. Written, oral and poster presentation of the final design. Not for graduate credit. Prerequisite: 495a.

Electrical and Computer Engineering Faculty

Botros, Nazeih, Professor, Ph.D., University of Oklahoma, 1985.

Brown, David P., Professor, *Emeritus*, Ph.D., Michigan State University, 1961.

Daneshdoost, Morteza, Professor, Ph.D., Drexel University, 1984.

Feiste, Vernold K., Associate Professor, *Emeritus*, Ph.D., University of Missouri at Columbia, 1966.

Galanos, Glafkos, Professor and *Chair*, University of Manchester, England, 1970.

Gupta, Lalit, Professor, Ph.D., Southern Methodist University, 1986.

Haniotakis, Themistoklas, Assistant Professor Ph.D., University of Athens, 1998.

Harackiewicz, Frances J., Associate Professor, University of Massachusetts at Amherst, 1990.

Hatziaodoniu, C., Professor, Ph.D., West Virginia University, 1988.

Hu, C. J., Professor, *Emeritus*, Ph.D., University of Colorado-Boulder, 1966.

Kagaris, Dimitrios N., Associate Professor, Ph.D., Dartmouth College, 1994.

Pourboghrat, Farzad, Professor, Ph.D., University of Iowa, 1984.

Rawlings, Charles A., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1974.

Sayeh, Mohammad, Professor, Ph.D., Oklahoma State University, 1985.

Schoen, Alan, Professor, *Emeritus*, Ph.D., University of Illinois, 1958.

Smith, James G., Professor, *Emeritus*, Ph.D., University of Missouri at Rolla, 1967.

Tragoudas, Spyros, Professor, Ph.D., University of Texas, Dallas, 1991.

Viswanathan, R., Professor, Ph.D., Southern Methodist University, 1983.

Wang, Haibo, Assistant Professor, Ph.D., University of Arizona, 2002.

Wang, Xingwei, Assistant Professor, Ph.D., Virginia Polytechnic Institute and State University 2006.

Zhang, Wei, Assistant Professor, Ph.D., Pennsylvania State University, 2003.

Electronic Systems Technologies (Major, Courses)

The Electronic Systems Technologies (EST) major provides an essential foundation in basic electronics and offers a blend of advanced technical and managerial course work for students pursuing careers in the electronics industry. The program allows students the flexibility to choose a curriculum that will complement their career goals and work experience. Graduates with an Electronic Systems Technologies degree possess the skills required of the technologist entering areas such as biomedical equipment technology, communication technology, industrial electronics, or telecommunications and networking technology.

The 120-semester hour EST curriculum consists of two areas: A 41-semester hour University Core Curriculum and a 79-semester hour major in Electronic Systems Technologies. The University Core Curriculum provides a foundation for

students to be successful in their major and life beyond the university. Students entering the program as freshman are not required to have a background in electronics. Requirements for the major provide a sequential program in electronics and allow students to select classes, which lead toward various careers in the electronics industry. Students enrolled in laboratory courses are required to purchase electronic components for the purpose of constructing, analyzing and evaluating electronic circuits. The total cost for these components is estimated to be at least \$200.

A student in Electronic Systems Technologies may choose the Electronics Management Specialization. This specialization offers the student curricula focused on the skills necessary to manage within a technical environment.

The EST program is well suited for individuals possessing an AS or AAS degree, electronics training through the military or civilian agencies, or work experience in the electronics industry. Credit for post secondary course work, military training and work experience is evaluated on an individual basis. Students with an approved AAS degree in Electronics Technology or its equivalent may be able to transfer up to 36 hours of approved career electives. In addition, transfer credit for University Core Curriculum requirements varies depending on previous course work. An individual who has earned an AAS degree also may qualify for the Southern Illinois University Carbondale Capstone Option. Capstone is a two-year option that gives maximum credit for previous academic and work experience in the student's occupational field. More information about the Capstone Option can be found in Chapter 3.

The Electronic Systems Technologies program has signed a number of "Program Articulation Agreements" with electronics-related community college degree programs in order to facilitate the transfer of community college students to SIUC. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Electronic Systems Technologies. The colleges with which SIUC has signed such an agreement include: Elgin Community College (IL), Heartland Community College (IL), John A. Logan College (IL), John Wood Community College (IL), Kaskaskia College (IL), Lake Land College (IL), Lewis and Clark Community College (IL), McHenry County College (IL), Parkland College (IL), Ranken Technical College (MO), Rend Lake College (IL), Richland Community College (IL), Shawnee Community College (IL), Southwestern Illinois College, (IL), Wabash Valley College (IL) and William Rainey Harper College (IL). Other schools are pending. If you have questions about how these agreements apply to your personal situation, contact the community college program representative or the academic advisor in Electronic Systems Technologies at (618) 453-7200 or <http://www.siu.edu/~isat/>.

Bachelor of Science Degree in Electronic Systems Technologies, College of Applied Sciences and Arts

ELECTRONIC SYSTEMS TECHNOLOGIES MAJOR

The Electronic Systems Technologies (EST) major will take course work designed to provide an effective school-to-work transition for specific careers in the electronics industry. It is the intent of the program faculty that the students sit for the Certified Electronics Technician examination (CET) after the second year in the program. A mandatory internship ensures that students receive field experience within their chosen career field. The curriculum places emphasis on skills necessary to achieve long-term career goals within one of the following segments of the electronics industry:

1. Biomedical Equipment Technology
2. Communications Technology
3. Industrial Electronics Technology
4. Telecommunications and Networking Technology

Completion of this degree provides graduates with advanced skills required by electronic technologists. Technical skills include: the evaluation of current technologies, the planning and implementation of preventive maintenance programs and the testing, troubleshooting and calibration of electronic equipment and systems. In addition, the degree will include skills in writing, interpreting and presenting technical documentation.

University Core Curriculum 41

Suggested Courses: MATH 125, PHYS 101

Requirements for the Major in Electronic Systems Technologies 79

Approved Career Electives..... 36

Electronic Systems Technologies 101, 102, 111, 112, 121, 201, 202, 211, 212, 221, and Information Systems and Applied Technologies 121, 224 and Information Systems Technologies 209 (or approved equivalents)

Core Requirements 27-30

Select one Option¹:

Biomedical Equipment Technology 30

Electronic Systems Technologies 301, 305, 311, 319a, 340, 341, 411, 451, and Information Systems and Applied Technologies 335, 366.

Communication Technology 27

Electronic Systems Technologies 302, 304, 305, 319b, 340, 341, 414, 451 and Information Systems and Applied Technologies 366

Industrial Electronic Technology 30

Electronic Systems Technologies 307, 317, 305, 319d, 337, 340, 341, 407, 451 and Information Systems and Applied Technologies 366

Telecommunications and Networking Technology 27

Electronic Systems Technologies 305, 319c, 451, Information Systems and Applied Technologies 316, 335, 366, 415, and 416 , IST 360,

Technical Electives² 6-9³

Select from the following: Electronic Systems Technologies 306, 342, 343, 365, 441, Independent study or approved equivalent.

Total 120

¹ All courses in the selected option must be passed with a grade of C or better.

² Courses not used as core option may be used for electives.

³ As approved by the school.

Electronic Systems Technologies Suggested Curricular Guide

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
EST 101, 102		3	3	EST 201, 202		3	3
EST 111, 112		3	3	EST 211, 212		3	3
ENGL 101, 102 ¹		3	3	EST 221, ISAT 224		3	3
Mathematic, Science		3	3	IST 209, Fine Arts		3	3
Humanities, ISAT 121		3	3	SPCM 101, Science		3	3
Total		15	15	Total		15	15
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
EST Electives/Option Core		6	9	EST Electives/Option Core		9	9
ISAT 366		3	-	EST 415, 319		3	4
Humanities ¹ , Interdisciplinary ¹		3	3	Human Health ¹		-	2
Social Science		3	3	Multicultural		3	-
Total		15	15	Total		15	15

¹ Eliminated with Capstone Option

ELECTRONIC SYSTEMS TECHNOLOGIES MAJOR WITH AN ELECTRONICS MANAGEMENT SPECIALIZATION

An Electronic Systems Technologies major who chooses the Electronic Management Specialization is provided a curriculum focused on the skills and knowledge necessary to effectively integrate technology into the work place. Graduates will possess the technical, managerial and supervisory skill needed for entry-level positions in the electronics field with the increased potential for vertical mobility in today's workforce.

The process of evaluating and acquiring new and existing technologies, maintaining and managing technological systems and effectively utilizing human resources will be studied. The graduate from this specialization will be able to communicate effectively and coordinate the efforts of skilled technicians in managing complex systems. Skills acquired will allow the graduate to train people in the use and maintenance of complex systems, plan and prioritize efforts to maximize the use of technological resources, and explain technical ideas to non-technical personnel.

University Core Curriculum Requirements 41

Math 125 should be taken as the University Core Curriculum foundation math course.

Physics 203a, 253a, should be taken as a University Core Curriculum science course.

Requirements for Major in Electronic Systems Technologies with a specialization in Electronics Management 79

Approved Career Electives 31-36¹

Electronic Systems Technologies 101, 102, 111, 112, 121, 201, 202, 211, 212, 221, and Information Systems and Applied Technologies 121 (or approved equivalents)

Core Requirements 12

Information Systems and Applied Technologies 366 3

Electronic Systems Technologies 340, 341, and 451 9

Management and Technical Requirements 27-30

Electronic Systems Technologies 302, 303 or 342, 313 or 343, 365, 385, 387 and/or 388, 404, and 441 27-30

Internship, independent study or approved equivalent 4-12¹

Total 120

¹As approved by the program.

Electronic Systems Technologies with a specialization in Electronics Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
EST 101, 102	3	3	EST 201, 202	3	3
EST 111, 112	3	3	EST 211, 212	3	3
EST 121	-	3	EST 221	3	-
ENGL 101, 102	3	3	ISAT 121, IST 209 or Ind	-	6
Mathematics	3	-	Stdy	-	6
University Core	3	3	SPCM 101	3	-
Total	15	15	University Core	3	3
			Total	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
ISAT 366	3	-	EST 340, 441	3	3
EST 302, 365	3	3	EST 341, 451	3	3
EST 385, 387 or 388	3	3	EST 303 or 342	3	-
University Core	6	6	EST 313 or 343, EST 404	3	3
Independent Study, Internship	-	-	University Core	3	2
or approved equivalent	-	3	Independent Study, Internship	-	-
Total	15	15	or approved equivalent	-	4
			Total	15	15

Courses (EST)

100-3 Introduction to Electronics. This course is an introduction to the field of electronics technology designed for students who are not majoring in Electronic systems technologies. It examines the role of the electronics technician and teaches the fundamental concepts of electronics.

101-3 DC-AC Circuit Analysis. This course covers the theory and application of passive DC and AC circuits presented in a comprehensive manner using qualitative and quantitative methods. Theoretical topics such as Ohm's Law and Kirchhoff's Law are applied to analyze DC and AC circuits. Prerequisite: concurrent enrollment in 111 or equivalent, concurrent enrollment in Mathematics 125 or equivalent, or consent of department.

102-3 Electronic Circuits Theory. This course presents the use and analysis of active and passive devices in electronic circuits. Semiconductor diodes, bipolar junction transistors and field effect transistors are discussed in circuit applications which include power supplies, amplifiers and switching circuits. Prerequisite: 101 and concurrent enrollment in 112 or consent of school.

111-3 DC-AC Circuit Analysis Laboratory. This course introduces fundamental skills required by the electronics technician. The fundamental laws and theories of passive DC-AC circuits will be verified through experimentation. Hand tools and electronic test equipment will be used to construct, analyze and troubleshoot electronic circuits. The measurement and analysis of electronic circuits will require the use of the oscilloscope, multimeter, power supply and signal generator. Six contact hours. Prerequisite: concurrent enrollment in 101 or consent of department

112-3 Electronics Circuits Laboratory. This course introduces the fundamental operation, application and troubleshooting techniques associated with semiconductor devices. Formulas and theories associated with the operation of semiconductor circuits will be verified using the oscilloscope, multimeter, power supply and signal generator. Experiments demonstrate the application of diode, transistor amplifier and transistor switching circuits. Six contact hours. Prerequisite: 111 and concurrent enrollment in 102 or consent of department.

121-3 Advanced Analysis and Digital Fundamentals. This course is divided into two distinct subject areas. The first subject area includes advanced laws and theories of DC-AC circuits, circuit theorems and AC circuit analysis using complex numbers. The second subject area encompasses digital fundamentals which include numbering systems, logic gates, combination logic, Boolean algebra, multivibrator circuits and their applications. Prerequisite: concurrent enrollment in 102 or consent of department.

199-1 to 10 Individual Study. This course provides the first-year student with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor, program supervisor and department chair.

201-3 Digital Circuits Theory. This course presents the concepts of digital circuits that make up systems such as numeric control, computers and communications networks. The application and analysis of counters, registers, arithmetic logic circuits, analog conversion circuits, memory circuits and basic microprocessor systems are presented. Prerequisite: 102 or consent of the school.

202-3 Industrial Process Control Theory. This course introduces the principles of acquisition, signal conditioning, and application of measurements and data in industrial and commercial systems. The course also emphasizes the theory and application of solid state and electro-mechanical devices used in industrial control. Principles of operation of digital and analog process control are introduced. Prerequisite: 102 and concurrent enrollment in 212 or consent of school.

211-3 Digital Circuits Laboratory. This course provides practical experience assembling, testing, and troubleshooting counters, registers, arithmetic logic circuits, analog conversion circuits, memory circuits and basic microprocessor systems. An emphasis is placed on the use of data books, safety and troubleshooting. Six contact hours. Prerequisite: 112 or consent of school.

212-3 Industrial Process Control Laboratory. This course demonstrates the principles of measurement, signal conditioning, and utilization of data found in industrial systems. Experiments and projects develop skills in assembling, testing and trouble-shooting of transducer, control, and power electronic circuits. An emphasis is placed on the safe procedures for test and measurement of high power and control systems found in the industrial environment. Six contact hours. Prerequisite: 112 and concurrent enrollment in 202 or consent of school.

221-3 Introduction to Electronic Communications. This course serves as an introduction to modern electronic communication systems. Fundamental concepts and methods of modulation/demodulation, transmission/reception, and signal multiplexing, conversion, processing and propagation are introduced to the student through lecture, software simulation and graphical analysis. Applied communications technologies are investigated through systems-level functional analysis of current communication systems, ranging from broadcast radio and television to wireless digital data networks. Prerequisite: 102 or consent of the school.

223-1 to 3 Electronics Certification Test Preparation. This course will provide the student an opportunity to prepare for industry recognized certification tests. This is an individualized self-paced course. Certification tests are in the areas of communications technology, biomedical technology, industrial electronics technology and computer technology. The student will be responsible for all fees associated with taking the certification tests and purchasing reference materials that are not provided by the program. Prerequisite: consent of department.

258-1 to 30 Electronics Work Experience. Credit granted for prior job skills, management-worker relations and supervisory experience while employed in the electronics industry. Credit will be established by departmental evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the department chair. Prerequisite: electronic systems technologies major.

259-1 to 60 Electronics Occupational Education. A designation for credit granted for past occupational educational experiences related to electronic systems technologies. Credit will be established by departmental evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the department chair. Prerequisite: electronic systems technologies majors.

299-1 to 16 Individual Study. This course provides the student with the opportunity to develop a special program of study to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor, program supervisor and department chair.

300-3 Introduction to Electronic Systems Technologies Research. An introduction to library resources, electronic media resources and formal academic writing styles common to electronic systems technologies research. Introduction to basic theories, concepts and practices pertinent to electronic systems technologies. May be independent study. Prerequisite: electronic systems technologies major or consent of department.

301-3 Introduction to Biomedical Instrumentation. This course covers a broad range of material that will introduce the student to maintenance, calibration, safe application and management of biomedical equipment. This course will also provide basic knowledge about the theory of operation, terminology and the underlying principles associated with biomedical equipment. Prerequisite: 201, 202 or consent of the school.

302-3 Optical Electronics. This course is designed to provide the theory and practice necessary to introduce the student to the broad fields of fiber optics and optoelectronics. Fiber optics is the optical technology concerned with the transmission of radiant power through transparent fibers and optoelectronics pertains to devices that emit, modify, or respond to optical radiation. Applications of fiber optics and optoelectronics to communications, imaging and sensing will be emphasized, with a concentration on communications applications. Lecture and laboratory. Prerequisite: 221 or consent of the school.

303-3 Microcomputer Construction and Troubleshooting. The student will be able to construct a microprocessor based system, make it operational and develop techniques used in software/hardware troubleshooting. Three credit hours. Prerequisite: 202 or 212 or consent of department and concurrent enrollment in 309 or consent of instructor.

304-3 Communication Systems. This course presents a non-calculus based theory of circuits used in modern communication systems; applicable to simple telephone systems through sophisticated satellite communications. Modulation, demodulation, multiplexing, and both analog and digital signal processing will be covered through lecture and laboratory exercises. Receivers, transmitters, and various interface devices will be studied. Lecture and Laboratory. Prerequisite: 221 or consent of the school.

305-3 Electronic Troubleshooting and Maintenance. This course covers troubleshooting and maintenance of electronic and interrelated systems. Formalized troubleshooting and preventative maintenance procedures will be covered with hands-on theoretical exercises. Other areas include customer relations, documentation and proper test equipment usage. Lecture and Laboratory. Prerequisite: 221 or consent of the school.

306-3 Technical Drawing. The theory and practice of computer-aided drawing and design encountered in the electrical/electronics industry. The course develops the competencies and skills necessary to produce the type of graphic documentation utilized in the field. Synthesis and design applications are also covered. Prerequisite: consent of the school.

307-3 Industrial Control Equipment. The selection, programming, installation, maintenance, and troubleshooting of Programmable Logic Controllers (PLCs) and related industrial control devices. Individual components will be defined and examined with respect to the overall control system. Safety and standard practices will be emphasized throughout the course. Lecture and Laboratory. Prerequisite: 201 and 202 or consent of the school.

309-3 Microcomputer Programming. This course is designed to familiarize the student with several microprocessor architectures and instruction sets with emphasis on the Intel series of processors. Microcomputer tools for programming and debugging will also be presented. The student will program in both machine language and assembly language with emphasis on programming techniques. Prerequisite: departmental approval and/or consent of instructor.

310-3 Information Technology, Integration and Support. A lecture/lab approach is used to give students background information and "hands-on" laboratory experience working with microcomputer and network systems. An introductory presentation of microcomputer and network systems includes proprietary and open computer operating systems, basic network and PC hardware components, microcomputer peripherals, and local and wide area networks. Students explore the installation, configuration, and integration of Information Technologies and Information Systems. Prerequisite: restricted to Information Technology minors with Computer Science 200a,b or Information Management Systems 229 or consent of department.

311-3 Biomedical Instrumentation Laboratory. This course provides hands-on experience with common biomedical instrumentation. The student will perform exercises that will teach maintenance, calibration, safe application, and management of biomedical instrumentation. This course will also provide basic knowledge about the theory of operation, terminology and the underlying principles associated with biomedical equipment. Prerequisite: concurrent enrollment in 301.

312-3 Optical Electronics Laboratory. This laboratory is designed to reinforce the concepts of fiber optics, laser and light physics. Emphasis will be placed on the integration of laser, fiber optic and communication principles with electronics. Prerequisite: concurrent enrollment in 302 or consent of instructor.

313-3 Microcomputer Construction and Troubleshooting Laboratory. This laboratory is designed to reinforce the concepts of microcomputer construction, operation, troubleshooting, programming and interfacing through actual practice. Prerequisite: prior or concurrent enrollment in 303 and 309 or consent of instructor.

317-3 Industrial Human Machine Interfacing. The selection, programming, installation, maintenance, and troubleshooting of industrial Human Machine Interface (HMI) equipment. Programming of Programmable Logic Controllers (PLC) for HMI will be included. Individual components will be defined and examined with respect to the overall control system. Safety and standard practices will be emphasized throughout the course. Lecture and laboratory. Prerequisite: 307 or consent of the school.

319-1 to 15 Electronic Occupations Internship. Students will be assigned to a University approved program to engage in activities related to the Electronic Systems Technologies program and the student's career objectives. The student will perform duties as assigned by the work supervisor and the internship coordinator. Internships may be performed in one of the following areas: (a) Biomedical Equipment Technology, (b) Communications Technology, (c) Computer Technology, or (d) Industrial Electronics Technology. Mandatory Pass/Fail. Prerequisite: consent of instructor.

320-1 to 12 Electronics Occupations Cooperative Education. Each student will participate in a departmentally approved cooperative education program that includes formal instruction, training and/or career-related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Department faculty evaluation, cooperative agency student performance evaluations and student reports are required. Hours and credit to be individually arranged. Mandatory Pass/Fail. Prerequisite: consent of instructor.

337-3 Power Distribution and Motor Control. Course emphasizes the theory and application of electrical power distribution systems from plant substation to branch circuits and safety procedures in working with these systems. Course also studies the fundamental operation and application of transformers, electric motors, and electronic and electromechanical control system for motors. Lecture and Laboratory. Prerequisite: 202 or consent of the school.

340-3 Application of Solid State Devices. A technical and managerial approach to the practical application of discrete solid state devices and linear integrated circuits. The characteristics of these devices will be reviewed to assist the student in understanding their selection and application process. Prerequisite: electronic systems technologies major or consent of department.

341-3 Digital Circuit Applications. Applications of digital electronic devices and circuits in business and industry. Geared to the needs of the technical manager, this course builds upon the student's knowledge of basic electronics theory. Basic principles of subsystems are reviewed to assist the student in understanding their selection and application to business/industrial settings. Prerequisite: electronic systems technologies major or consent of department.

342-3 Microcontroller Applications Lecture. This course emphasizes microcontroller fundamentals and applications as seen from the standpoint of the technical manager. Microcomputer theory is introduced since microcontrollers are a subset of microcomputer technology. Basic characteristics and principles of microcomputers and microcontrollers will be reviewed to provide an understanding of applications in specific business and industrial settings. Prerequisite: 341 or consent of department.

343-3 Microcontroller Applications Laboratory. Laboratory experiences selected to reinforce microcontroller characteristics and applications in business and industry. Students sample microcontroller programming on operational microcontrollers and through the use of simulation software. Included is the theory of operation, the control of input and output devices, multi-controller communication, and program development and entry. Students will be required to purchase a microcontroller system ranging in cost between \$100-130. Prerequisite: 342 or concurrent enrollment in 342; may be independent study.

350-1 to 32 Technical Career Subjects. This course provides the student with in-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions and health service occupations offered through various workshops, special short courses, and seminars. Hours and credits to be individually arranged. This course may be classified as independent study. Prerequisite: consent of instructor.

351-3 Readings in Electronic Systems Technologies. The use of written and electronic media resources relevant to electronic systems technologies and the development of an electronic systems technologies research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: 300 and electronic systems technologies major or consent of department.

365-3 Electronics Industry Data Applications. The application of statistical data within the electronics industry to include an introduction to the basic statistical treatment of data, data sources and the design of statistical studies. Emphasis is on the principles and techniques of data analysis, synthesis, and utilization as applied to decision making in the electronics field. Student will gain experience in applying data to decision making through case studies and class projects. Prerequisite: Mathematics 108 or consent of department.

385-3 Fiscal Aspects of Electronic Systems Technologies. An introduction to the types of fiscal problems encountered in the electronics industry. The course will address the diverse sizes and types of business within the field and will include an introduction to the accounting process. Emphasis will be given to financial management systems, financial analysis tools, cash flow management and budgeting procedures. Prerequisite: electronic systems technologies major or consent of department.

387-3 Electronics Industry Labor-Management relations. A study of economic situations that affect labor-management relations in electronics-related career fields. Study will include the evolution of labor relations in the American electronics industry and interactive differences in labor-management relations from a global perspective. Laws that are common to both union and non-union employees will be emphasized. Prerequisite: electronic systems technologies major or consent of department.

388-3 Legal Aspects of Electronics. An introduction to the types of legal problems encountered in the electronics industry to include American legal heritage and legal rights. The course will emphasize the na-

ture and classification of contracts, warranties, product liabilities, consumer protection and applicable employment laws. Prerequisite: electronic systems technologies major or consent of department.

401-3 Analysis of Issues in the Electronics Industry. The identification and study of current economic, regulatory or operational issues impacting the electronics industry. The use of both written and oral reports to present a critical analysis of selected topics. May be independent study. Not for graduate credit. Prerequisite: 300 and electronic systems technologies major or consent of department.

404-3 Communication Systems Management. Coverage of a broad range of material that will introduce the student to maintenance, evaluation, installation, troubleshooting and management of communications equipment, with an emphasis on computer networks. This course will also provide advanced knowledge about the theory of operation, terminology and the underlying principles associated with the transmission of voice, data and video information through telephone, satellite and cellular radio communications equipment. Not for graduate credit. Prerequisite: 305 or Information Systems Technologies 335.

407-3 Industrial Networking and Systems Integration. The selection, configuration, installation, maintenance, and troubleshooting of industrial peer-to-peer and device level networks will be examined with the purpose of forming a complete industrial control network structure. The integration of various industrial control devices, components, and automation cells to form a complete automated control system will be examined. Safety and standard practices will be emphasized throughout the course. Lecture and Laboratory. Not for graduate credit. Prerequisite: 317 or consent of the school.

411-3 Imaging and Information Systems in Healthcare. Course focuses on the integration and distribution of data between imaging systems, therapeutic devices, and various types of information systems found in healthcare facilities. The function and application of various types of therapeutic and imaging systems will be discussed. Topics related to Information Systems will include picture archiving systems, telemedicine and teleradiology systems. Not for graduate credit. Prerequisite: 301, 415.

414-3 Advanced Communication Systems. This course provides knowledge through lecture and laboratory exercises of the theory of operation, terminology, and the underlying principles pertaining to communication systems including basic telephony, cellular radio, microwave, satellite, and data network. It also serves as an introduction to the configuration, maintenance, and management of communications equipment. Not for graduate credit. Lecture and Laboratory. Prerequisite: 304 or consent of school.

420-1 to 12 Electronic Systems Technologies Cooperative Education. Students may participate in a departmentally approved cooperative education program that includes formal instruction, training and/or career-related work experience. Students will receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. Department faculty evaluation, cooperative agency student performance evaluations and student reports are required. Hours and credit to be individually arranged. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: consent of instructor.

441-3 Career Development for Electronics Managers. A study of elements to consider when seeking employment in an electronics career field. These elements include personal inventories and resumes, placement service and employment agencies, interviewing techniques, letters of application, references and employment testing. Emphasis will be placed on the roles of mentoring, membership in professional organizations, continuing education and other opportunities for professional growth throughout a career in the electronics industry. Each student will develop a portfolio including personal and professional information related to individual career goals. Not for graduate credit. Prerequisite: electronic systems technologies major or consent.

450-3 Management Problems in the Electronics Industry. The identification and study of problems related to management within the electronics industry. The application of electronic systems technologies theories, concepts and practices to the identified management problems. The use of written and electronic media research resources to produce a written problem solving report. May be independent study. Not for graduate credit. Prerequisite: 351 or 401 and electronic systems technologies major or consent of department.

451-3 Current Trends in Electronic Systems Technologies. This course is designed to familiarize the student with current managerial trends that support the installation, evaluation, repair and maintenance of electronic systems. Topics may include, but are not limited to, economic justification and cost control, quality control and program improvement, compliance with codes, equipment control and evaluation and input to administration. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Not for graduate credit. Prerequisite: English 101, senior status in electronic systems technologies or consent of department.

Elementary Education

(SEE CURRICULUM AND INSTRUCTION)

Energy Economics

(See Agribusiness Economics)

Engineering (College, Courses)

Courses (ENGR)

102-2 Computer-Aided Engineering Drawing. Manual sketching and computer aided engineering drawings techniques. Lettering; orthographic projections, isometric projection, oblique projections, auxiliary views, dimensioning, sectioning, working drawings.

222-4 (2,2) Computational Methods for Engineers and Technologists. Introduces the student to the use of digital computers in the solution of technical problems that are specifically designed for the engineering and technology student. Problem analysis, flowcharting, coding, diagnostics, execution, and solution verification are discussed. (a) Programs written in FORTRAN. (b) Programs written in C++ language. Prerequisite: Mathematics 111.

300-3 Engineering Thermodynamics. Study of the basic principles of thermodynamics. Engineering analysis of physical systems based on the first and second laws. Properties of pure substance (ideal gas behavior, non-ideal gas behavior, and equations of state.) Mixtures of ideal gases. Introduction to cycle analysis. Prerequisite: Mathematics 250, Physics 205a,b.

301I-3 Humans and Their Environment. (University Core Curriculum) [IAI Course: L1 905] An introduction to the study of the relationship between humans, resource consumption, pollution and the resulting environment. The effects of current human pollution and resource consumption on the environmental quality of the future. The interrelation of human population resource consumption and pollution. Methods of minimizing resource consumption and human pollution through both technological controls and changes in human behavior. Prerequisite: high school chemistry or equivalent.

303I-3 The Role of Energy in Society. (University Core Curriculum) Lectures, discussions and class projects directed at understanding the role of energy, power and related concepts in society in the past, the present and the future. Review of current energy resources and use patterns, as well as projections for new energy conservation techniques and the development of alternative energy technology. An overview of worldwide energy needs, seeking to identify future limits on energy use attributable to environmental, economic, political and other technological and evolutionary constraints. Prerequisite: satisfactory completion of three hours of University Core Curriculum science requirements.

304I-3 History of American Technology. (University Core Curriculum) Survey of some key technological transformations and their related social developments in the United States from colonial times to the present. Topics such as: industrialization, auto-mobility, aviation, development of the engineering professions, communication, computers and biotechnology. Lectures, discussions, class projects. Prerequisite: Mathematics 108 or 111, survey in United States History helpful.

312-3 Materials Science Fundamentals. Sub-microscopic structure of solids, including electronic states, atomic and molecular arrangement, structural imperfections and atomic diffusion, and their relationship to macro-mechanical properties. Lab supply fee: \$8. Prerequisite: Physics 205a, Mathematics 250, Chemistry 200, 201.

335-3 Electric Circuits. Foundation course in electric circuits. Basic laws and concepts of linear circuits. Analysis of AC and DC circuits by mesh and nodal methods, Thevenin's and Norton's theorems, superposition principle, and phasor notation. Transients. Prerequisite: Mathematics 250.

351-3 Numerical Methods in Engineering. Overview of numerical procedures such as root finding, curve fitting, integration, solutions of simultaneous equations, and solutions of ordinary differential equations. Emphasis will be on applications of these techniques to problems in engineering mechanics, and civil and mechanical engineering. Prerequisite: 102 and concurrent enrollment in or completion of Mathematics 305.

361-2 Engineering Economics in Design. Procedures for evaluating the relative economic merits of engineering projects and designs. Use of these procedures permits comparing alternate engineering estimates, evaluating engineering effectiveness, and proceeding toward decision making based on economic and engineering optimization. Professional engineering examinations include these course materials. Prerequisite: Mathematics 111 or equivalent.

400-1 Engineering Professionalism and Ethics. The role of the engineer as a professional in society and in the corporate structure. Engineering registration. The basis and function of Engineering Codes of Ethics. Major ethical/philosophical value systems in our country. Ethics applied to specific engineering case studies. Not for graduate credit. Prerequisite: senior standing in the College of Engineering.

Engineering Technology (Major, Courses, Faculty)

Engineering technology is part of the technological field that requires the application of scientific and engineering knowledge and methods combined with techni-

cal skills in support of engineering activities; it lies in the occupational spectrum between the technician and the engineer at the end of the spectrum closest to the engineer.

All curricula in engineering technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology 111 Market Place, Suite 1050, Baltimore, MD. 21202, phone (410) 347-7700. These curricula are the electrical engineering technology specializations. For each curriculum, a minimum of 30 hours in engineering technology courses must be taken in residence at Southern Illinois University Carbondale.

Bachelor of Science Degree in Engineering Technology, College of Engineering

ENGINEERING TECHNOLOGY MAJOR—ELECTRICAL ENGINEERING TECHNOLOGY SPECIALIZATION

The electrical engineering technology specialization is designed to prepare technologists who are capable of technical design and who can contribute to the development, production, testing, and installation of electrical and electronic devices, circuits, and systems. In addition, graduates are capable of participation in the planning and installation of power distribution systems and operating and maintaining complex electrical systems. Graduates of the program are employed in communications, power, electronics, sales, manufacturing, and other fields.

<i>University Core Curriculum Requirements</i>	41
Foundation Skills	12
English 101, 102	6
Mathematics (substitute Mathematics in major)	3
Speech Communication 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health (Biology 202)	2
Humanities	6
Science (substitute Physics in major)	6
Social Science	6
Integrative Studies	6
Multicultural	3
Interdisciplinary	3
<i>Requirements for Major in Engineering Technology with Electrical Engineering Technology Specialization</i>	(9) + 83 ¹
Physics 203a,b, 253a,b; Chemistry 140a	(6) + 6
Mathematics 111, 140, 282	(3) + 8
Management 202	3
Engineering 222b	2
Engineering Technology 238, 245a, 304a, 304b, 332a, 332b, 403a, 403b, 437a, 437b, 438a, 438b, 439	52
Technical electives	12
<i>Total</i>	124

¹ Courses in parenthesis will also apply towards 6 hours in the University Core Curriculum, making a total of 41.

Electrical Engineering Technology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
Select ¹	3	9	Select ¹	5	3
ENGL 101, 102	3	3	SPCM 101, ENGR 222b	3	2
CHEM 140a	4	-	ET 245a	-	4
MATH 111 ²	4	-	MATH 282, MGMT 202	3	3
MATH 140	-	4	PHYS 203a,b	3	3
			PHYS 253a,b	1	1
<i>Total</i>	14	16	<i>Total</i>	15	16

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Select ¹ Technical Electives	3	4	ET 403a,b	4	4
ET 238, ET 439	4	4	ET 437a,b	4	4
ET 304a,b	4	4	ET 438a,b	4	4
ET 332a,b	4	4	Technical Elective	5	3
<i>Total</i>	15	16	<i>Total</i>	17	15

¹ See University Core Curriculum requirement

² Substitutes for University Core Curriculum

Courses (ET)

A suitable calculator and textbooks are required for most of the following courses.

103-3 Engineering Drawing I. (Same as Industrial Technology 105) Links the components of technical sketching with current CAD software. Sketching to include: orthographic projection, sectional views and dimensioning. Employ these elements with current CAD software in creating drawing entities, managing layers, displaying and modifying drawings, annotating and dimensioning, and file management.

104-3 Engineering Drawing II. Principles and practices of engineering drawing. Representation of mechanical components, dimensioning, tolerancing, and mechanical drawing symbols. Introduction to computer-aided drawing systems with applications to both micro-computer and mini-computer systems. Prerequisite: 103.

202-3 Structural Detailing. Principles and practices of engineering drawing as applied to structural design with emphasis on reinforced concrete and structural steel drawings. Drawing supplies required, cost \$8. Prerequisite: 103.

209-3 Manufacturing Process Laboratory. (Same as Industrial Technology 209) Laboratory experiments to familiarize the student with the theory and operation of manufacturing processes. Lab. Prerequisite: IT 208 or consent of instructor.

236-2 Electrical Instrumentation. Theory and use of D.C. and A.C. instruments; measurement and error, units, standards, meters, bridges, oscilloscopes, electronic instruments, instruments for generation and analysis of waveforms, counters, and transducers. Lab. Prerequisite: Mathematics 111.

238-4 Digital Fundamentals. Introduction to fundamental concepts of digital systems, logic gates, simulation of logic gates, combinational logic design, Karnaugh maps, number systems, flip-flops, sequential circuits, digital circuit fault analysis, and comparison of logic families. Lab. Prerequisite: Mathematics 111.

245-8 (4,4) Electrical Systems for Industry. (a) Electrical symbols and schematics, resistance, Ohm's Law, capacitance, inductance, Kirchhoff's Law, meters, A.C. fundamentals, transformers, power factor, and safety. Laboratory. Prerequisite: Mathematics 111. **(b)** Introduction to electronics: laboratory practices, oscilloscopes, meters, components, power supplies, amplifiers, and characteristics of semiconductor devices. Lab. Prerequisite: Mathematics 111.

260-6 (3,3) Principles of Mechanics. (a) Statics. Concepts of force systems, moments, and equilibrium of rigid bodies, analysis of trusses and frames, determination of centroids, center of gravity, and moments of inertia, calculation of shear and moment diagrams in beams. Prerequisite: Mathematics 140 or concurrent enrollment. **(b)** Dynamics. Friction; particles and rigid bodies in translation, rotation, and plane motion; relative motion; impulse and momentum; work and energy. Prerequisite: 260a, Mathematics 140.

263-4 Basic Surveying. Use and care of surveying instruments; principles of surveying practice and computation. Laboratory. Prerequisite: 103, Mathematics 111.

304-8 (4,4) Electrical Circuits. (a) Solutions to D.C. steady-state networks by branch, equivalent circuit, loop circuit, and node voltage methods. Study of network theorems. Extension of these topics to A.C. steady-state by use of the phasor transform. Laboratory. Prerequisite: 245a, Mathematics 140 or concurrent enrollment. **(b)** Further topics in A.C. circuits; frequency response, resonance, filters, transformers and magnetic coupling, complex power, and dependent sources. Transient response by the classical solution of differential equations and by Laplace transform methods. Laboratory. Prerequisite: 304a, Engineering 222b.

311-3 Strength of Materials. Stress and strain; torsion, bending, and combined stresses; beam deflections; behavior of columns. Laboratory. Prerequisite: 260a, Engineering 222b or concurrent enrollment.

312-3 Materials Fundamentals for Design and Manufacturing. Applications and characteristics of metallic and nonmetallic materials used in design and manufacturing. Characteristics and properties of materials used in engineering applications. Prerequisite: Physics 203a,b; 253a,b.

313-3 Elementary Heat Power. First and second law analysis, properties of systems, fluid phases and mixtures. Mass and energy balances of steady state systems. Psychrometrics, power and refrigeration cycles and fundamentals of heat transfer. Prerequisite: Mathematics 140.

314-6 (3,3) Soil Mechanics. (a) Laboratory determination of the basic properties of soils; components of soil surveys; engineering soil classifications; fundamental study of soil properties. Laboratory. Laboratory notebook required, costing approximately \$4. **(b)** Soil water and seepage; frost action in soils; soil stabilization; stress distribution in soils and introduction to foundation design. Prerequisite: 260a, 314a.

315-2 Elementary Structural Analysis. Applications of the principles of mechanics to the determination of forces and deflections of statically determinate structures; approximate methods of determining member forces in indeterminate frames; study of various types of structures and loading conditions. Prerequisite: 260a, Engineering 222b or concurrent enrollment.

317-3 Fluid Mechanics. Fundamentals of fluid statics, basic fluid flow concepts for idealized fluids, flow networks, and introduction to viscous fluids. Prerequisite: 260b.

318-3 Hydraulics and Pneumatics. Viscous flow in closed conduits, basic hydraulic machinery, and fluid power systems. Laboratory. Prerequisite: 317.

- 321-3 Instrumentation and Controls.** Analog and digital signal conditioning; thermal, mechanical, and optical transducers; electrical pneumatic and hydraulic actuators; and control loop dynamics. Lab. Prerequisite: 245a.
- 332-8 (4,4) Electromagnetic Principles and Devices. (a)** Introduction to D.C. and A.C. machinery. Theory and operating characteristics of D.C. generators and D.C. motors. Laboratory. Prerequisite: 304a or concurrent enrollment. **(b)** Theory and operating characteristics of polyphase and single-phase A.C. motors. Special applications of A.C. and D.C. motors. Laboratory. Prerequisite: 332a.
- 342-2 Technology Design.** A design project on any technical subject selected by the student with advice from the instructor. Individual or group effort required to develop functional design. Report writing and oral presentation required. Prerequisite: 311, 312, 313, 318.
- 390-3 Cost Estimating.** (Same as Industrial Technology 390.) Study of the techniques of cost estimation for products, processes, equipment, projects, and systems. Prerequisite: Mathematics 111.
- 392-2 (1,1) Engineering Technology Co-op.** Supervised work experience in Engineering Technology industry. Prerequisite: junior standing and consent of instructor. Mandatory Pass/Fail.
- 401-3 Refrigeration and Air Conditioning.** Applications of thermodynamics and heat flow to air conditioning systems. Heating and cooling load analysis. Principles of human comfort. Discussion of various refrigeration and air conditioning cycles and their application to laboratory simulators. Lab. Prerequisite: 313.
- 403-8 (4,4) Electronics Technology. (a)** Fundamental theory and operation of semiconductor diodes and bipolar transistors, incremental models for transistors, biasing, stability, and feedback of single and multi-stage amplifiers. Parameters and applications of field-effect transistors, opto-electronic devices, thyristors, unijunction transistors and amorphous semi-conductors. Laboratory. Prerequisite: 304b. **(b)** Parameters and applications of operational amplifiers, linear integrated circuits, monolithic voltage regulators, and digital integrated circuits. Laboratory. Must be taken in a,b sequence. Prerequisite: 403a.
- 404-3 Machine Design Technology.** Strength and safety considerations in design of machine parts. Fatigue and stress concentrations, bearings, brakes, clutches, and springs. Applications of the principles of mechanics to problems of design and development, mechanisms. Lab. Not for graduate credit. Prerequisite: 260a, 311.
- 408-3 Instrumentation and Data Acquisition.** Introduction to instrumentation and sensors for discrete data sampling applications as well as computer-based data acquisition. Digital hardware and software applications. Theory and practice of sampled data systems. Available for graduate credit. Prerequisite: 304a, Engineering 222b, and senior standing.
- 415-4 Elementary Structural Design.** Introduction to structural properties of steel and reinforced concrete. Design of basic steel elements: tension members, beams, columns, and connections. Basic design of reinforced concrete elements: beams, columns, and footings. Use of AISC and ACI codes. Prerequisite: 202, 311 (or concurrent enrollment), 315.
- 416-3 Design and Manufacturing of Composite Structures.** Topics include: mechanical properties of materials, polymer matrices, reinforcing fibers, properties of composite materials, design of composite structures, manufacturing processes, machining. Prerequisite: 311, 312 or concurrent enrollment.
- 424-6 (3, 3) Power Systems Technology. (a)** Fundamentals of basic power plant operation, economics and equipment. Advanced Rankine cycles and cogeneration. Fuel classification and combustion principles. Alternative energy sources and conversion. Students work concurrently on group design projects emphasizing written and oral deliverables. Prerequisite: 311, 312, 313, 317, 318. **(b)** Alternate energy systems, e.g., wind power, solar energy, geothermal energy, biomass. Extension of 424a with heavier emphasis on optimization of design. Prerequisite: 424a.
- 437-8 (4,4) Communications Systems Technology. (a)** Theory and applications of radio frequency transmission lines, waveguides, optical fibers, wave propagation, and antennas. Lab. Prerequisite: 304b. **(b)** Theory and applications of analog and digital communications systems. Lab. Prerequisite: 403a, 437a.
- 438-8 (4,4) Continuous and Digital Control Systems. (a)** Fundamentals of continuous control systems; equation of electrical, hydraulic and thermal systems; application of Laplace transforms, transfer functions, block diagrams, and flow graphs. Computer implemented graphical analysis and design methods: root locus, frequency response. Nyquist diagrams and compensator design. Continuous systems laboratory. Prerequisite: 304b. **(b)** Fundamentals of digital control systems, Stepper motors, digital data acquisition and interface components, Fourier transforms, Z transforms, and applications of fast Fourier transform. Digital control laboratory. Prerequisite: 438a.
- 439-4 Microprocessor Applications and Hardware.** A study of microprocessor applications and hardware based on microprocessor manufacturer's literature. System configuration, hardware, requirements, typical instruction set, programming, input/output techniques, interfaces, and peripheral devices. Prerequisite: 238.
- 445-3 Computer-Aided Manufacturing.** (Same as Industrial Technology 445.) Introduction to the use of computers in the manufacturing of products. Includes the study of direct and computer numerical control of machine tools as well as interaction with process planning, inventory control and quality control. Laboratory. Prerequisite: Engineering Technology 103 or Industrial Technology 105, Industrial Technology 208 or Engineering Technology 209, and computer programming.
- 455-3 Industrial Robotics.** (Same as Industrial Technology 455.) Study of industrial robots and their applications; pendant and numerical programming of robots. Robotics design including tactile and visual sensors. Technical and psychological problems of justification, installation, and management of robotic systems. Prerequisite: 445.
- 492-1 to 6 Special Problems in Industry and Technology.** Special opportunity for students to obtain assistance and guidance in the investigation and solution of selected technical problems. Not for graduate credit. Prerequisite: consent of instructor.

Technology Faculty

Barbay, Joseph E., Jr., Associate Professor, *Emeritus*, Ph.D., University of Missouri, Columbia, 1971.

Besterfield, Dale H., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1971.

Chang, Feng-Chang (Roger), Associate Professor and *Chair*, Ph.D., Ohio State University, 1985.

Chen, Han Lin, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1958.

Contor, Keith L., Associate Professor, *Emeritus*, M.S., State College of Washington at Pullman, 1960.

Cross, Bud D., Visiting Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1965.

DeRuntz, Bruce D., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Dunning, E. Leon, Professor, *Emeritus*, Ph.D., University of Houston, 1967.

Dunston, Julie K., Associate Professor, Ph.D., Florida State University, 1995.

Ferketich, Robert R., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1980.

King, Frank H., Visiting Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University, 1981.

Marusarz, Ronald K., Associate Professor, Ph.D., Southern Illinois University Carbondale, 1999.

Meyers, Fred E., Associate Professor, *Emeritus*, M.B.A., Capitol University, 1975.

Orr, James P., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1983.

Rogers, C. Lee, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1975.

Savage, Mandara, Associate Professor, Ph.D., Iowa State University, 1999.

Velasco, Tomas, Associate Professor, Ph.D., University of Arkansas, 1991.

English (Department, Major, Courses, Faculty)

The major in English is 36 semester hours at least half of which must be taken at Southern Illinois University Carbondale. The English major may choose from four specializations listed below.

Students who wish to declare English, as a major should consult the director of undergraduate studies in English early in their college careers. Continuing students who wish to declare an English major should petition the Department of English for admission to the department. Transfer students should bring their transcripts and syllabi of courses in English for evaluation of transfer credit. Thereafter, all English majors must have their advance registration forms signed by an adviser in the Department of English.

Only English courses completed with at least a *C* will fulfill a major requirement. Deviations from regular programs must have prior written department approval.

Students who wish to construct an inter-departmental major in English and certain related fields may do so in consultation and with the approval of the director of undergraduate studies in English.

Students are urged to supplement their English majors through the study of classical and modern languages, as well as the study of foreign literature in translation. Majors preparing for graduate school should take two years of a foreign language.

Although a minor field is not required, English majors are encouraged to consider complementary minor fields such as foreign languages and literatures, history, philosophy, linguistics, speech communication, journalism, psychology, sociology, political science, African studies, Black American studies, theater, computer science, business administration, and marketing. In fact creativity, critical thinking, and communication – skills acquired in the English major – are crucial for success in any field of study. The English major and minor complement and enhance study in virtually all-academic disciplines.

No ILP course will count toward the major without prior consent from the Undergraduate Studies Director or the Director's assistant. In making such determinations, the Director will take into account the nature of the students' other educational experiences. Except in rare circumstances, students on campus during a given semester will not be allowed to take an ILP course in lieu of a course that is simultaneously being offered in traditional format. Except in rare circum-

stances, students will not be allowed to take more than two ILP courses toward completion of the English major.

ENGLISH CORE COURSES

All students majoring in English will take the following English core courses:
English 301, 302a, 302b, 303, 305 and either 365 or 471 or 472.

ENGLISH PROGRAM SPECIALIZATIONS

Bachelor of Arts Degree in English, College of Liberal Arts

A student may wish to pursue one of several specializations in the College of Liberal Arts. The degree earned and the requirements for the degree are as follows:

<i>University Core Curriculum Requirements</i>	41
To include Classics 230 with a grade of C or better	
<i>College of Liberal Arts Academic Requirements (See Chapter 4)</i>	
<i>Requirements for Major in English</i>	36
In addition, one year college credit in a single foreign language (also fulfills College of Liberal Arts foreign language requirement)	
8	
<i>Electives</i>	35
<i>Total</i>	120

Students should regularly consult with their departmental advisor to achieve a suitable range and breadth of course work. Students planning to enter graduate school are strongly urged to take two years of a foreign language.

ENGLISH MAJOR — LITERATURE SPECIALIZATION

In addition to the English core courses, students will take six electives from the 300 and 400-level courses in English. At least one of these elective courses must be a course in English Literature before 1800, and one course in continental literature or substitute.

ENGLISH MAJOR — CREATIVE WRITING SPECIALIZATION

In addition to the English core courses, students will take English 381a and 382a; English 381b and 382b; English 351 or 352; and either 492a or 492b.

ENGLISH MAJOR — PREPROFESSIONAL SPECIALIZATION

In addition to the English core courses, majors interested in such fields as law, business, technical communication, information technology, and government will take the following courses: English 290 or 291 or 491; English 300 or 401 or 403; English 391; English 445; two electives from the 300 and 400-level courses in English, or with the consent of the departmental advisor, a course in another department.

ENGLISH MAJOR — TEACHER EDUCATION PREPARATION

In addition to the English core courses, majors interested in becoming teachers of English will take the following courses: English 300 or 401, 485a and 485b. At least one course in English literature before 1800, one course in continental literature or substitute, and one elective from 300 and 400-level English courses. NOTE: For the teacher certification requirements, please see the course work offered by the College of Education and Human Services.

Bachelor of Science Degree, College of Education and Human Services or Bachelor of Arts Degree, College of Liberal Arts

Students who wish to become certified teachers of English may pursue their majors for the BS or BA degree as follows:

<i>University Core Curriculum Requirements</i>	41
--	----

To include non-western civilization, Psychology 102 and Classics 230 with a grade of C or better	
Requirements for Major in English	36
Teacher training candidates must take the Teacher Education Preparation specialization in the English major described above.	
In addition, one year college credit in a single foreign language	8
Education Requirements	28
Professional Education Requirements	28
Electives	7
Total	120

¹Required to meet non-western civilization/third world culture requirement.
²Must earn a grade of C or better.

English Minor

The minor in English is a minimum of 18 semester hours at least half of which must be taken at Southern Illinois University Carbondale. Only English courses, which are completed with at least a C, fulfill a minor requirement.

Minors are available with several specializations, and the following are listed as examples only. Students interested in English as a minor are asked to confer with the Director of Undergraduate Studies in English or an advisor in the Department of English to determine their specific course of study.

ENGLISH MINOR — PREPROFESSIONAL SPECIALIZATION (18 HOURS)

Preprofessional specialization English 300; 290; 301; 391; 445; and 365, 471 or 472.

ENGLISH MINOR — CREATIVE WRITING SPECIALIZATION (18 HOURS)

Creative writing minors should take at least one course from English 381a, 382a or 384; English 381b or 382b; English 351 or 352; either English 492a, 492b, or 492c; and two 300- or 400- level English courses.

ENGLISH MINOR — WORLD LITERATURE SPECIALIZATION (18 HOURS)

English 204, 301; and four courses from 425, 438, 445, 455, 465.

ENGLISH MINOR — TEACHING SPECIALIZATION (18 HOURS)

For students who wish to meet the Elementary Education Major requirements in English, choose six of the following English courses: English 209, 290, 302a, 302b, 303, 305, 325, 332, 333, 335, 365, 401 or 481.

Courses (ENGL)

100-3 Basic Writing. This course prepares students for the writing demands of English 101 and of the University. It teaches students processes for developing ideas, developing and organizing sentences and paragraphs, drafting, revising and editing. Placement in this course is determined by a combination of ACT score and a writing placement exam, or by a diagnostic essay exam given the first week of class in English 101.

101-3 English Composition I. (University Core Curriculum) [IAI Course: C1 900] This course provides students with the rhetorical foundations that prepare them for the demands of academic and professional writing. To this end, English Composition I teaches students how to recognize and deploy the strategies and processes that translate into effective written products in a variety of contexts for a variety of purposes. Class discussion and readings focus on the function and scope of literacy in professional and personal contexts. Prerequisite: English 100 with a minimum grade of C or placement by a combination of ACT score and Writing Placement Exam, or by diagnostic essay exam given the first week of this class.

102-3 English Composition II. (University Core Curriculum) [IAI Course: C1 901] The second course in the two-course sequence of composition courses required of all students in the University. Using culturally diverse reading materials, the course focuses on the kinds of writing students will do in the University and in the world outside the University. The emphasis is on helping students understand the purpose of research, develop methods of research (using both primary and secondary sources), and report their findings in the appropriate form. Prerequisite: English 101 or equivalent with a minimum grade of C. To receive credit in the University Core Curriculum, a student, must earn a C or better in English 102.

119-3 Introduction to Creative Writing. (University Core Curriculum) This course offers an introduction to the art and craft of writing poetry and short fiction. Requirements will include writing exercises, reading and analyzing published poetry and fiction, conferences, and the creation of a portfolio of original poetry and fiction. There may be examinations, journal writing, and/or compilation of an anthology of published or original works.

120-3 Advanced Freshman Composition. (University Core Curriculum) [IAI Course: C1 901] This course fulfills the Foundation Skills composition requirement. Prerequisite: top ten percent of the English section of ACT or the qualifying score on the CLEP test. Students will write critical essays on important books in the following categories: autobiography; politics; fiction; eyewitness reporting; and an intellectual discipline such as philosophy or science.

121-3 The Western Literary Tradition. (University Core Curriculum) [IAI Course: H3 900] The course offers a critical introduction to some of the most influential and representative work in the Western literary tradition. Emphasis is on the interconnections between literature and the philosophical and social thought that has helped to shape Western culture.

201-3 Introduction to Drama. [IAI Course: H3 902] Students will read and discuss plays of different types and periods. Prerequisite: 101 and 102; or 120; or equivalent.

202-3 Introduction to Poetry. [IAI Course: H3 903] Students will read and discuss poems of different types and periods. Prerequisite: 101 and 102; or 120; or equivalent.

204-3 Literary Perspective on the Modern World. (University Core Curriculum) [IAI Course: H3 900] This course introduces the literature of the twentieth century using representative works from the beginning through the close of the century. Course material may be drawn from fiction, verse, and drama, as well as including examples from supporting media (film, performance). Course may be taken as a sequence to English 121, "The Western Literary Tradition", but 121 is not a prerequisite for this course.

205-3 The American Mosaic in Literature. (University Core Curriculum) [IAI Course: H3 910D] An introduction to the multi-cultural diversity of American literature. Topics may include the first encounters between Native Americans and European colonists: slavery; immigration and city life; African-American, Hispanic-American, Asian-American, Irish-American and other representatives of the American pluralistic experience reflected in fiction and non-creative fiction.

206A-3 Literature Among the Arts: The Visual. (University Core Curriculum.) A theoretical and historical examination of American graphic novellas, comic books and "comix" from their origins in the 1930s to the present, emphasizing the opportunities that a new and developing medium makes available for redefining narration, for social critique, and for examining the historical.

206B-3 Literature Among the Arts: Music. (University Core Curriculum.) A theoretical and historical examination of American and British rock and roll and pop, from their origins in the 1950s to the present, emphasizing the opportunities that a new and developing medium makes available for redefining narration, for social critique, and for examining the historical.

209-3 Introduction to the Forms of Literature. [IAI Course: H3 900] Poetry, drama, and fiction. Statement and illustration of the techniques of the three genres over the range of American and English literature. Prerequisite: 101 and 102; or 120; or equivalent.

210-3 Introduction to Fiction. [IAI Course: H3 901] Students will read and discuss a variety of American and European short stories and novels. Prerequisite: 101 and 102; or 120; or equivalent.

225-3 Women in Literature. (Advanced University Core Curriculum course) (Same as Women's Studies 225.) [IAI Course: H3 911D] Examines the ways in which women are portrayed in literature, especially in twentieth-century novels, drama, short fiction, and poetry written by women. Prerequisite: 102 or 120. Satisfies the University Core Curriculum Multicultural requirement in lieu of English 205.

290-3 Intermediate Analytical Writing. Offers students practice and reflection in analytical, argumentative and expository writing. Emphasis is placed on understanding the writing and analytical processes necessary for effective integration of findings and arguments into reasoned written statements. Prerequisite: 101 and 102; or 120; or equivalent.

291-3 Intermediate Technical Writing. An intermediate course in technical and professional writing for sophomores, juniors, and seniors. Intended for students preparing for careers in applied technology, science, agriculture, business, and other fields where practical writing is a part of the daily routine. Prerequisite: 101 and 102; or 120; or equivalent.

293-3 to 9 (3 per topic) Special Topics in Literature and Language. Topics vary and are announced in advance. Both students and faculty suggest ideas. May be repeated as the topic varies. Prerequisite: departmental approval.

300-3 Introduction to Language Analysis. Nature of language and linguistic inquiry. Dialectology, usage, and chief grammatical descriptions of present day American English. Required of teacher training candidates. Prerequisite: 102 or 120 or equivalent.

301-3 Introduction to Literary Analysis. Intensive reading and writing, designed to acquaint students with basic terms, concepts and discourse of literary analysis. Satisfies CoLA Writing-Across-the-Curriculum requirement for English majors. Restricted to English majors, English minors and Elementary Education majors. Prerequisite: 102 or 120 or equivalent.

302A-3 Literary History of Britain, Beowulf to Civil War. A survey of British literature from Beowulf to the English Civil War. Prerequisite: 102 or 120 or equivalent.

302B-3 Literary History of Britain, Restoration to 1900. A survey of British literature from the English Restoration to 1900. Prerequisite: 102 or 120 or equivalent.

303-3 Literary History of the United States Before 1900. A survey of American literature to the beginning of 1900. Prerequisite: 102 or 120 or equivalent.

- 304I-3 The Politics of Empire.** (University Core Curriculum) A comparative perspective on the historical, political and sociological dimensions of literature. Readings and writing assignments encourage students to address key theoretical and analytical issues relevant to the role of ethnicity, race, gender and culture in shaping the common historical experience of political and cultural colonization and decolonization.
- 305-3 Literary History of Britain and the United States, 1900 to present.** A survey of British and American literature from 1900 to the present. Prerequisite: 102 or 120 or equivalent.
- 307I-3 Film as Literary Art.** (University Core Curriculum) [IAI Course: F2 908] This course proposes to examine the influential role literature has on the cinematic tradition both in the past and present. It intends to emphasize the artistic and visual debt cinema owes to literature by concentrating on major achievements and analyzing them accordingly.
- 325-3 Black American Writers.** (Advanced University Core Curriculum course) (Same as Black American Studies 399.) [IAI Course: H3 910D] Poetry, drama, and fiction by Black American writers. Prerequisite: 102 or 120 or equivalent. Satisfies the University Core Curriculum Multicultural requirements in lieu of English 205.
- 332-3 Folktales and Mythology.** A survey of non-classical mythology and folktales, emphasizing its medieval and modern aspects as well as the use of folklore in major literary works. Readings will cover Norse, Celtic, and Middle Eastern mythology, their use by English and American writers, such as Tennyson, Irving, and Hawthorne and the popular folk-ballad. Students are encouraged to explore other aspects of world folklore in their independent research papers. Prerequisite: 102 or 120 or equivalent.
- 333-3 The Bible as Literature.** To introduce students to types of literature in the Bible while familiarizing them with Biblical texts. Prerequisite: 102 or 120 or equivalent.
- 335-3 The Short Story.** Reading and discussion of short stories by American and European authors. Prerequisite: 101 and 102; or 120; or equivalent.
- 351-3 Forms of Fiction.** A study of fictional forms with special concentration on the most significant contemporary fiction including selected readings from current periodicals. This course is taught by a publishing fiction writer and designed for student fiction writers. Prerequisite: 381a or consent of instructor.
- 352-3 Forms of Poetry.** A study of poetic forms with special concentration on the most significant contemporary poetry, including selected readings from current periodicals. This course is taught by a publishing poet and designed for student poets. Prerequisite: 382a or consent of instructor.
- 365-3 Shakespeare.** Reading and discussion of the major plays. Satisfies CoLA Writing-Across-the Curriculum requirement for English majors. Prerequisite: 101 and 102; or 120; or equivalent.
- 381A-3 Creative Writing: Beginning Fiction.** Introduction to basic techniques of writing creative prose with emphasis on characterization, plot, and narrative devices. Study and application of various methods of short story writing. Exercises. Critiques. Prerequisite: 102 or 120; or consent of instructor.
- 381B-3 Creative Writing: Intermediate Fiction.** Emphasis on the long short story and novella with exercises and study oriented to more sustained forms of prose than the short story. Theories and techniques of extended fictional forms treated. Critiques. Prerequisite: 351, 381a or consent of instructor.
- 382A-3 Creative Writing: Beginning Poetry.** Introduction to basic theories and techniques of poetry writing with emphasis on metrics, forms, and poetic stanzas. Study and application of each of these general aspects of writing poetry. Exercises. Critiques. Prerequisite: 102 or 120; or consent of instructor.
- 382B-3 Creative Writing: Intermediate Poetry.** Concentration on modern forms and theories of poetry. Writing assignments and exercises in the application of various poetic techniques, primarily 20th century American. Critiques.
- 384-3 Creative Writing: Introduction to Literary Nonfiction.** A survey of the major forms of literary nonfiction (biography, autobiography, popular science, the essay, literary journalism and travel narratives) and an introduction to the stylistic and rhetorical aspects of those forms through study and practice. Prerequisite: 102 or 120; or consent of instructor.
- 390-3 Advanced Composition.** Expository writing. Prerequisite: C average in 120; or C average in 101 and 102; or equivalent. Open to English majors and minors or with consent of department.
- 391-3 Precision in Reading and Writing.** To improve the student's ability to read and write with precision and clarity, depending on reading complex material (requiring no particular background for comprehension) and on writing precis of it. Prerequisite: grade of B in 102; or C in 120; or C in English 290.
- 393-3 to 9 (3 per topic) Special Topics in Literature and Language.** Topics vary and are announced in advance. Both students and faculty suggest ideas. May be repeated as the topic varies. Prerequisite: departmental approval.
- 401-3 Modern English Grammars.** Survey of the structure of English, with emphasis on phonetics and phonology, morphology, syntax, semantics, pragmatics, grammar instruction, stylistics and language variation. Specifically designed to meet the needs of prospective teachers of composition and language arts at the secondary and college levels.
- 402-3 Old English Language and Literature.** Introduction to the language, literature and culture of Anglo-Saxon England, with emphasis on Old English heroic and elegiac poetry, exclusive of *Beowulf*.
- 403-3 History of the English Language.** The development of the language from its Indo-European roots through Early Modern English and selected American dialects. Emphasis on the geographical, historical and cultural causes of linguistic change.
- 404A-3 Medieval Allegory, History and Romance.** Three popular Medieval genres as represented by major texts of the early through the late Middle Ages, exclusive of Chaucer, including works such as *Dream of the Rood*, *Sir Orfeo*, *Sir Gawain and the Green Knight*, *Piers Plowman*, *The Book of Margery Kempe* and selections from *Lawman's Brut* and Malory's *Le Morte Darthur*.
- 404B-3 Medieval Lyric, Ballad and Drama.** Lyric, ballad and drama from the early through the late Middle Ages, including translations of the Old English *Wife's Lament*, *Husband's Message*, *Wanderer*, and

- Seafarer*, as well as Middle English religious and love lyrics and the Robin Hood ballads, with special emphasis on the great plays of the fifteenth century and the rebirth of drama in the Western World.
- 405-3 Middle English Literature: Chaucer.** Major works including *Troilus and Criseyde* and selections from *The Canterbury Tales*.
- 412-3 English Non-Dramatic Literature: The Renaissance.** Topics vary, but usually lyric poets, especially 17th-century metaphysical poets such as Donne, Herbert and Marvell.
- 413-3 English Non-Dramatic Literature: The Restoration and Earlier Eighteenth Century.** Major works of Dryden, Pope, and Swift, and the non-dramatic specialties of Behn, Addison and Steele.
- 414-3 English Non-Dramatic Literature: The Later Eighteenth Century.** Major poets from Thomson to Blake, and major prose writers, with emphasis on Johnson, Boswell and their circle.
- 421-3 English Romantic Literature.** Wordsworth, Coleridge, Byron, Shelley, Keats, other writers of the era.
- 422-3 Victorian Poetry.** Tennyson, Browning, Arnold and other poets in England.
- 423-3 Modern British Poetry.** Major modernists (Yeats, Eliot, Pound); with selected works of Auden, Owen, Thomas, Heaney and others.
- 425-3 Modern Continental Poetry.** Representative poems by major 20th century poets of France, Italy, Germany, Spain, Russia, and Greece.
- 426-3 American Poetry to 1900.** Trends and techniques in American poetry to 1900.
- 427-3 American Poetry from 1900 to the Present.** The more important poets since 1900.
- 433-3 Religion and Literature.** Introduce students to the study of religious meaning as it is found in literature.
- 436-3 Major American Writers.** Significant writers from the Puritans to the present. May be repeated only if topic varies and with consent of the department.
- 437-3 American Literature to 1800.** Representative works and authors from the period of exploration and settlement to the Federal period.
- 445-3 Cultural Backgrounds of Western Literature.** A study of ancient Greek and Roman literature, Dante's *Divine Comedy*, and Goethe's *Faust*, as to literary type and historical influence on later Western writers.
- 446-3 Caribbean Literature.** Representative texts from drama, poetry, and fiction that have shaped black diaspora aesthetics in the Caribbean, with special reference to black literature of the North American continent.
- 448-3 Irish Literature.** An introductory survey in historical context of the literature of Ireland, including Gaelic literature in translation from the early Christian era (400 AD) to the late eighteenth century; the first two centuries (the eighteenth and nineteenth) of Irish literature in English (Swift, Goldsmith, Burke, Edgeworth, Carleton, Thomas Moore, Mangan, Allingham); and the Celtic Twilight and the Irish Literary Renaissance (c. 1890-1921: Hyde, Gregory, Stephens, O'Kelly, George Moore, Synge, Yeats, Joyce).
- 451-3 Eighteenth Century English Fiction.** The novel from Defoe to Jane Austen. Including works by Fielding, Richardson and others.
- 452-3 Nineteenth Century English Fiction.** The Victorian novel: from 1830, including works by the Brontës, Dickens, George Eliot, Thackeray and others.
- 453-3 Modern British Fiction.** Major writers (including Conrad, Joyce, Woolf and Lawrence), with selected fiction from Mid-Century and later.
- 455-3 Modern Continental Fiction.** Selected major works of Europe and authors such as Mann, Silone, Camus, Kafka, Malraux, Hesse.
- 458-3 American Fiction to 1900.** Trends and techniques in the American novel and short story.
- 459A-3 American Prose from 1900 to Mid-Century: The Modern Age.** Representative narratives from the turn of the century to the post-World War II period.
- 459B-3 American Prose from Mid-Century to the Present: The Postmodern Age.** Representative narratives from the post-World War II period to the present.
- 460-3 Elizabethan and Jacobean Drama.** Elizabethan drama excluding Shakespeare: such Elizabethan playwrights as Greene, Peele, Marlowe, Dekker; and Jacobean drama: such Jacobean and Caroline playwrights as Jonson, Webster, Marston, Middleton, Beaumont and Fletcher, Massinger, Ford, Shirley.
- 462-3 English Restoration and 18th Century Drama.** After 1660, representative types of plays from Dryden to Sheridan.
- 464-3 Modern British Drama.** Major writers (including Shaw and Synge), with selected works of later dramatists such as Churchill and Bond.
- 465-3 Modern Continental Drama.** The continental drama of Europe since 1870; representative plays of Scandinavia, Russia, Germany, France, Italy, Spain and Portugal.
- 468-3 American Drama.** The rise of drama, with emphasis on the 20th century.
- 469-3 Contemporary Topics in Drama.** Varying topics on cross-national and cross-cultural 20th-century drama with focus on theoretical issues.
- 471-3 Shakespeare: The Early Plays, Histories, and Comedies.** Such plays as *A Midsummer Night's Dream*, *The Merchant of Venice*, *The Taming of the Shrew*, *Henry IV Part I*, *Henry V* and *Much Ado about Nothing*. Satisfies CoLA Writing-Across-the-Curriculum requirement for English majors.
- 472-3 Shakespeare: The Major Tragedies, Dark Comedies, and Romances.** Such plays as *Hamlet*, *Macbeth*, *Othello*, *King Lear*, *Measure for Measure*, *The Winter's Tale* and *The Tempest*.
- 473-3 Milton.** A reading of a selection of the minor poems, of *Paradise Lost*, *Paradise Regained*, *Samson Agonistes*, and the major treatises.
- 481-3 Young Adult Literature in a Multicultural Society.** Introduction to the evaluation of literary materials for junior and senior high school, with emphasis on critical approaches and the multicultural features of schools and society. Prerequisite: enrollment in English degree program or consent of de-

partment.

485A-3 Teaching Writing and Language in the Secondary School. Introduction to strategies for teaching English in the secondary school with emphasis on writing and language. Ideally, course should be taken semester prior to student teaching. Prerequisite: admittance to Teacher Education Program through CoEHS.

485B-3 Teaching Reading and Literature in the Secondary School. Introduction to strategies for teaching English in the secondary school with emphasis on critical reading skills and various genres of literature, including contemporary adolescent literature. Ideally, course should be taken semester prior to student teaching. Prerequisite: admittance to Teacher Education Program through CoEHS.

490-3 Expository Writing. Advanced composition with emphasis on a variety of rhetorical strategies. Prerequisite: English 290, 390 or equivalent.

491-3 Technical Writing. Introduction to technical communication; open to entire university community. Training also provided for students interested in teaching technical writing. Prerequisite: English 290, 291, 390, 391 or equivalent.

492A-3 Creative Writing Seminar: Fiction. Instruction in advanced writing of fiction. A directed written project in fiction will have to be submitted at the end of the semester. A collection of short stories or novel of what instructors consider to be acceptable quality will fulfill the seminar requirement. Prerequisite: consent.

492B-3 Creative Writing Seminar: Poetry. Instruction in advanced writing of poetry. A directed written project in poetry will have to be submitted at the end of the semester. A collection of poems of what instructors consider to be acceptable quality will fulfill the seminar requirement. Prerequisite: consent of department.

492C-3 Creative Writing Seminar: Literary Nonfiction. Instruction in advanced writing of literary nonfiction prose. A directed written project in literary nonfiction prose will be submitted at the end of the semester. A collection of nonfiction work of what instructors consider to be acceptable quality will fulfill the seminar requirement. Prerequisite: consent of department.

493-3 to 9 (3 per topic) Special Topics in Literature and Language. Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies.

494-3 Cultural Analysis and Cinema. Cultural Studies exploring various and selected topics in European and American Cinema. A \$10 screening fee is required.

495-3 A Survey of Literary Criticism. Introduction to the history of criticism and major recent schools of literary criticism and theory.

498-3 to 9 Internship. For English majors only. Student may take up to nine semester hours to receive credit for internships that may be available at SIU Press, Special Collections, University Museum, Coal Center, Writing Center, Computer Lab and other faculty or unit-sponsored projects. Prerequisite: enrollment in English degree program.

499-1 to 6 (1 to 3, 1 to 3) Readings in Literature and Language. For English majors only. Prior written departmental approval required. May be repeated as the topic varies, up to the maximum of six semester hours. Prerequisite: enrollment in English degree program or consent of department.

English Faculty

Amos, Mark A., Associate Professor, Ph.D., Duke University, 1994.

Anthony, David J., Associate Professor, Ph.D., University of Michigan, 1998.

Appleby, Bruce C., Professor, *Emeritus*, Ph.D., University of Iowa, 1967.

Benedict, Pinckney, Professor, M.F.A. (Creative Writing) University of Iowa Writers' Workshop, 1988.

Bennett, Paula B., Professor, *Emeritus*, Ph.D., Columbia University, 1970.

Bogumil, Mary L., Assistant Professor, Ph.D., University of South Florida, 1988.

Boulukos, George E., Assistant Professor, Ph.D., University of Texas at Austin, 1998.

Brunner, Edward J., Professor, Ph.D., University of Iowa, 1974.

Chandler, Anne K. Associate Professor, Ph.D., Duke University, 1995.

Clay Scott, Shirley, Professor and *Dean* of the College of Liberal Arts, Ph.D., Kent State University, 1973.

Cogie, Jane, Associate Professor, Ph.D., University of Iowa, 1984.

Collins, K. K., Associate Professor, Ph.D., Vanderbilt University, 1976.

Dettmar, Kevin J. H., Professor, Ph.D., University of California, Los Angeles, 1990.

Dively, Ronda L., Associate Professor, D.A., Illinois State University, 1994.

Donow, Herbert S., Professor, *Emeritus*, Ph.D., University of Iowa, 1966.

Dougherty, Jane Elizabeth, Assistant Professor, Ph.D., Tufts University, 2001.

Fanning, Charles, Professor, Ph.D., University of Pennsylvania, 1972.

Fox, Robert Elliot, Professor, Ph.D., SUNY at Buffalo, 1976.

Goodin, George V., Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1962.

Griffin, Robert P., Associate Professor, *Emeritus*, Ph.D., University of Connecticut, 1965.

Haruf, Kent S., Professor, *Emeritus*, M.F.A., University of Iowa, 1973.

Hatton, Thomas J., Associate Professor, *Emeritus*, Ph.D., University of Nebraska, 1966.

Howell, John M., Professor, *Emeritus*, Ph.D., Tulane University, 1963.

Humphries, Michael L., Associate Professor, and *Chair*, Ph.D., The Claremont Graduate School, 1990.

Jones, Rodney G., Professor, M.F.A., University of North Carolina at Greensboro, 1973.

Jordan, Judy, Assistant Professor, M.F.A. (Poetry), University of Virginia, 1995; M.F.A. (Fiction), University of Utah, 2000.

Joseph, Allison, Associate Professor, M.F.A., Indiana University, 1992.

Klaver, Elizabeth T., Professor, Ph.D., University of California at Riverside, 1990.

Kvernes, David M., Assistant Professor, *Emeritus*, Ph.D., University of Minnesota, 1967.

Lamb, Mary E., Professor, Ph.D., Columbia University, 1976.

Lawson, Richard A. Professor, *Emeritus*, Ph.D., Tulane University, 1966.

Little, Judy Ruth, Professor, *Emerita*, Ph.D., University of Nebraska, 1969.

Lordan, E. Beth, Professor, M.F.A., Cornell University, 1987.

Magnuson, Michael J., Associate Professor, M.F.A., University of Florida, 1997.

McClure, Lisa, Associate Professor, D.A., University of Michigan, 1988.

McEathron, Scott, Associate Professor, Ph.D., Duke University, 1993.

McNichols, Edward L., Assistant Professor, *Emeritus*, M.A., University of Detroit, 1958.

Molino, Michael R., Associate Professor, Ph.D., Marquette University, 1992.

Nelms, Ralph Gerald, Associate Professor, Ph.D., Ohio State University, 1990.

Netzley, Ryan, Assistant Professor, Ph.D., Pennsylvania State University, 2002.

Perillo, Lucia Maria, Associate Professor, M.A., Syracuse University, 1986.

Peterson, Richard F., Professor, *Emeritus*, Ph.D., Kent State University, 1969.

Riedinger, Anita R., Associate Professor, Ph.D., New York University, 1985.

Rudnick, Hans H., Professor, *Emeritus*, Ph.D., University of Freiburg, Germany, 1966.

Schonhorn, Manuel S., Professor, *Emeritus*, Ph.D., University of Pennsylvania, 1963.

Simon, Mary C., Instructor, *Emerita*, A.M., University of Illinois, 1940.

Townsend, Jacinda, Assistant Professor, M.F.A., (Fiction), University of Iowa, 2001.

Wells, Jeremy D., Assistant Professor, Ph.D., University of Michigan, 2000.

Weshinskey, Roy K., Assistant Professor, *Emeritus*, M.A., Southern Illinois University, 1950.

Williams, Tony, Professor, Ph.D., University of Manchester, 1974.

Zimra, Clarisse, Associate Professor, Ph.D., University of Washington, 1974.

Environmental Economics

(SEE AGRIBUSINESS ECONOMICS)

Environmental Science

(SEE PLANT AND SOIL SCIENCE)

Environmental Studies (Minor)

The Environmental Studies minor at Southern Illinois University allows students to concentrate core and elective courses from a variety of colleges in a focused, integrated, interdisciplinary study of the environment. The goals of the minor are: (1) to provide students with a basic understanding of the complex environmental issues and opportunities faced by society; (2) to develop and refine student's environmental values from an overview of these issues; and (3) to prepare students to translate these values into practical actions in a broad spectrum of environmental or related career fields, or simply as better informed individuals. The Environmental Studies minor involves the cooperation and contribution of SIUC faculty members from a broad range of disciplines and departments. In addition, credits may be earned toward the minor from summer courses taken in tropical ecology at any of three field stations in Costa Rica, operated through the Tropical Studies Program at SIUC.

Students may enroll in the Environmental Studies minor after entering a major program in any participating academic department at SIUC with the approval of the Environmental Studies coordinator. A minor consists of three core courses and a minimum of six hours of electives, for a total of 15 credit hours. For further information, contact the Environmental Studies coordinator at 453-4143, 453-4115 or visit the office in Life Science II, Room 354A.

Equine Science

(SEE ANIMAL SCIENCE)

Farm Management

(SEE AGRIBUSINESS ECONOMICS)

Fashion Design and Merchandising (Major, Courses, Faculty)

The fashion industry is known for rapid change and is characterized by new technology, globalization and changing consumer desires. The fashion industry employs millions of people and reflects the health of a nation's economy because of the millions of dollars spent by consumers for fashion goods. The fashion industry is composed of businesses that design, produce and sell a unique array of consumer goods known for seasonal changes in fabrics, colors and silhouettes. Fashion products are not exclusive to women's apparel. Rather, fashion production and sales are organized into several different product categories: men's, women's and children's apparel and accessories, cosmetics and fragrances, and home furnishings. A fashion career is for any individual who thrives on change.

The four-year curriculum in fashion design and merchandising offers the beginning level of education for those who intend to pursue a career in fashion. There are two specializations in the Fashion Design and Merchandising major: Fashion Design and Fashion Merchandising. Within each specialization, a structured sequencing of courses is included which provides for a gradual interactive development of required knowledge and skills. This preparation is combined with the University Core Curriculum courses to provide a comprehensive scholarly foundation for advancement.

A fast-paced atmosphere is created by the amount of information to be covered, the frequency of assignments, and the pressure of due dates. Successful students must be able to handle multiple projects simultaneously and manage their time wisely. While facilities are provided for use, cost for supplies, individual equipment and field trips necessary to the successful completion of the program are borne by the student. Due to variation in choice of individual materials used, it is impossible to predict the exact costs for each student. The Fashion Design and Merchandising program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble a photographic file of their work for their portfolios.

Potential Occupations

Participation in work experience, internships, externships and volunteer activities is recommended to enhance the academic curriculum. In addition, educational travel opportunities are provided allowing students to visit major fashion market cities with on-site business appointments. Graduates who pursue advanced studies can attain more responsible positions with the possibility of rising to top professional levels.

Graduates of the fashion design specialization are prepared to design clothing, accessories and other soft goods. Some designers are self-employed and design for individual clients. Other designers cater to specialty stores or department stores. Most fashion designers, however, work for apparel manufacturers creating and adapting fashions for the mass market. Some examples of careers in this area include, but are not limited to, manufacturer's representative, sales representative, production manager, inventory controller, stylist, apparel designer, textile designer, pattern maker, customer service representative, fashion illustrator,

costing engineer, technical services, government or private researcher, and computer-aided design (CAD) manager.

Fashion merchandising professionals operate at the wholesale or retail level in the fashion industry. Career placement is very high and is complemented by the work experience component of the program. Careers in fashion merchandising include, but are not limited to, account representative, personal shopper, wholesale buyer, retail buyer, independent wholesaler, sales manager, visual merchandiser, inventory planning and distribution analyst, manufacturer's representative, customer service management specialist, retail sales and sales support management, and showroom coordinator.

Fashion Design Specialization

In the fashion design specialization, students learn about all facets of the apparel and textile industries from raw materials to the consumer. This encompasses knowledge of textiles and fashion design from product development through promotion and distribution.

The curriculum focuses on fashion design, production and merchandising strategies to develop the skills necessary to work in the fashion industry. Courses provide instruction for students in all aspects of the industry including development and trends of national and foreign fashion; fibers, fabrics, and finishes basic to the selection, use and care of textiles; basic fashion production; current technology in computer-aided design; visual analysis of fashion; fashion sketching; pattern drafting; pattern grading; pattern-making techniques; draping; and history of clothing and textiles. In addition to knowledge of the fashion industry, students may obtain background and skills in art, history, journalism, theater, marketing, business management, production management, finance and accounting. A variety of opportunities are available to assess student learning in fashion design, production, and textiles, including comments on garments selected for the annual senior fashion show, senior portfolio review and evaluation from on-site field experience supervisors.

Fashion Merchandising Specialization

The fashion merchandising specialization offers in-depth study of the process of planning, negotiating, acquiring, selling and evaluating merchandise throughout the distribution channel. It is designed for students interested in product sales careers at the wholesale or retail level. Students acquire knowledge of merchandise, sales techniques, and trends in the market place and customer service. This specialization assumes a global perspective and is complemented by business courses to allow for career flexibility. In addition to knowledge of the fashion industry, students are encouraged to develop a background and related skills in art, marketing, or management. Because fashion production takes place worldwide, developing and/or enhancing writing and speaking skills in a second language such as Spanish, French, or Chinese is also encouraged.

Courses provide instruction to students in all aspects of fashion product sales – from product conception, sales floor visual merchandising plans, seasonal sales plan, and promotional campaigns. All courses include analytical skills necessary to interpret sales data and consumer behaviors. Fashion merchandising students are required to gain on-the-job work experience for course credit.

Selective Admission and Grade Requirements

All applicants must satisfy standard University baccalaureate entrance requirements in order to be admitted into the University and included in the Fashion Design and Merchandising applicant pool. Enrollment in the Fashion Design and Merchandising program will be based upon selective admission criteria. High School graduates will be evaluated on ACT results and class rank. Transfer and

change of major students will be evaluated on grade point average as calculated by Southern Illinois University Carbondale.

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale’s University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with a program representative.

Students must pass all FDM Prefix courses with a grade of *C* or better in order to satisfy prerequisites and to graduate. If a student receives a grade of *F* three times in the same course, the course cannot be taken again. Students cannot repeat FDM Prefix courses in which they received a grade of *C* or better.

Bachelor of Science Degree in Fashion Design and Merchandising, College of Applied Sciences and Arts

<i>University Core Curriculum Requirements</i>	41
As per University requirements for baccalaureate degrees	
<i>Requirements for Major in Fashion Design and Merchandising</i>	79
Core requirements	27
The following courses are required of all Fashion Design and Merchandising majors; 101, 102, 241, 242, 281, 341, 462, 442, (331 or 332 or 431)	
Specialization requirements (see below)	52
<i>Total</i>	120

Fashion Design Specialization

<i>Requirements for Fashion Design Specialization</i>	36
To include 111,112, 121, 211, 251, 252, 272, 351, 352, 451, 452, (331 or 332 or 431)	
Art and Design (Select)	6
Professional electives	10
<i>Total</i>	52

Fashion Merchandising Specialization

<i>Requirements for Fashion Merchandising Specialization</i>	18
To include 282, 381, 382, 392 (or approved substitute), 491, 492	
Accounting 210 or 220	3
Management	3
Management 301 or 304 or Psychology 320 or 323 (Prerequisite: Psychology 102)	3
Marketing 304, 363, 401 plus 6 additional hours in Marketing	15
Professional Electives	10
<i>Total</i>	52

Fashion Design Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
FDM 111, 112	3	3	FDM 211, 252	3	3
FDM 101, 102	3	3	FDM 251, 272	3	3
FDM 121	3	-	FDM 241, 242	3	3
MATH 108 or higher	-	3	FDM 281	3	-
ENGL 101, 102	3	3	Science	-	3
SPCM 101	3	-	AD Selection	3	3
Soc Sci	-	3			
<i>Total</i>	15	15	<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
FDM 351, 352	3	3	FDM 451, 452	3	3
FDM 331, 332	3	3	FDM 462	-	3
FDM 341	3	-	FDM 442	-	3
Humanities	3	3	Professional Elective	4	6
Social Science	3	3	Human Health	2	-
Fine Arts	-	3	Multicultural	3	-
			Interdisciplinary	3	-
<i>Total</i>	15	15	<i>Total</i>	15	15

Fashion Merchandising Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
FDM 101, 102	3	3	FDM 241, 242	3	3
ENGL 101, 102	3	3	FDM 281, 282	3	3
SPCM 101	3	-	Human Health, Humanities ...	2	3
Prof Elect, MGMT 170	3	3	Social Science, Fine Arts	3	3
MATH 139	-	3	Professional Elective	4	-
Humanities, Prof Elective	3	3	ACCT 210 or 220	-	3
<i>Total</i>	15	15	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
FDM 381, 382	3	3	MKTG Elective, 462	3	3
FDM 341, 332	3	3	FDM 491, 492	3	3
FDM 392	-	3	MKTG 401, FDM 442	3	3
MKTG 304	3	-	MGMT/PSYCH	3	-
MKTG 363, Multicultural	3	3	Science, MKTG Elective	3	3
Interdisciplinary, Science	3	3	Social Science	-	3
<i>Total</i>	15	15	<i>Total</i>	15	15

Courses (FDM)

101-3 Careers in Fashion. Explores the wide range of careers in the fashion industry from textiles, to design, to production and to distribution. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

102-3 Basic Principles of Clothing Design. Course content will include aesthetic, cultural, historical, psychological and social aspects of the basic elements and principles of clothing design. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

111-3 Fashion Production I. Beginning skills in fitting, construction, and pattern and fabric usage. Lab fee: \$30. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

112-3 Fashion Production II. Intermediate skills in fitting, construction, and pattern and fabric usage. Lab fee \$30. Prerequisite: 111 and major in Fashion Design and Merchandising or consent of school director.

121-3 Fashion Illustration. Introductory illustration course concentrating on developing skills necessary to create fashion illustrations and working drawings. Focus on designing apparel for women, men and children. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

182-3 Apparel Accessories. Product knowledge, levels of quality, selling points, care of plastics, leather goods, furs, jewelry, cosmetics. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

211-3 Fashion Production III. Advanced skills in fitting, construction, and pattern and fabric usage. Lab fee: \$40. Prerequisite: 112 and major in Fashion Design and Merchandising or consent of school director.

241-3 Textiles. Investigation of fiber, yarn and fabric characteristics as they influence product performance. Lab fee: \$30. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

242-3 Textile Product Testing. Hands-on experience with textile testing methods and tools/equipment used by retailers and manufacturers to maintain quality and predict performance. Standards, specifications, test methods, testing terminology, interpretation of test results and recording of test results. Lab fee: \$25. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

251-3 Flat Patternmaking and Drafting. Drafting and fitting basic patterns; making sloper; making styles through flat pattern manipulation and drafting; testing and refining patterns to provide perfect fit. Lab fee: \$30. Prerequisite: 112 and major in Fashion Design and Merchandising or consent of school director.

252-3 Draping. Application of draping principles and techniques. Lab fee: \$30. Prerequisite: 112 and major in Fashion Design and Merchandising or consent of school director.

258-1 to 30 Work Experience. Credit granted for past work experience while employed in business, industry, labor, government service or military organizations. Credit determined by departmental evaluation. Prerequisite: completion of 12 semester hours of Fashion Design and Merchandising courses with C or better, major in Fashion Design and Merchandising or consent of instructor and school director.

272-3 Computer-Aided Apparel Design. Hands-on experience in computer patternmaking and grading. Lab fee: \$15. Prerequisite: 251 and major in Fashion Design and Merchandising or consent of school director.

281-3 Fashion Promotional Strategies I. The study of promotional techniques unique to the fashion industry. Emphasis is placed on methods used at the point-of-sale to sell merchandise to the final consumer. Promotional methods to include: sales floor layouts and design, personal selling and specialized customer service department. Lab fee: \$20. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

282-3 Fashion Promotional Strategies II. The study of promotional techniques unique to the fashion industry. Emphasis is placed on fashion product management methods used by either retailers or manufacturers. Promotional methods and expense planning to include: wholesaling, market weeks, general advertising, direct marketing and special events. Prerequisite: 281 and major in Fashion Design and Merchandising or consent of school director.

331-3 Historic Clothing: Western Cultures. Development of clothing in Western civilization to 1850. Consideration of social, economic, aesthetic factors and technical innovations influencing clothing. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

332-3 History of Western Costume, 1860 to Present. Evolution of Western costume from 1860 through the present time. Emphasis on the interrelationship between costume, social, political, economic and technological changes. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

341-3 Fashion Product Analysis. Examines how quality and value of apparel products are visually evaluated by industry and consumers. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

351-3 Advanced Patternmaking. Advanced flat patternmaking and draping skills applied to original designs. Lab fee: \$15. Prerequisite: 211, 251, 252 and major in Fashion Design and Merchandising or consent of school director.

352-3 Experimental Custom Apparel Design. Development of apparel to meet aesthetic, structural and functional needs; problem solving for exceptional proportions, rehabilitation, activity, performing arts, new technology, materials and environment. Lab fee: \$15. Prerequisite: 121, 211, 251, 252 and major in Fashion Design and Merchandising or consent of school director.

381-3 Fashion Merchandising Mathematics I. Basic mathematical concepts used in a retailing environment to accurately track product sales, pricing strategies and inventory control. Prerequisite: University Core Curriculum mathematics requirement must be met, Accounting 210 or 220 and major in Fashion Design and Merchandising or consent of school director.

382-3 Fashion Merchandising Mathematics II. Focus on corporate level buying office practices such as sales analysis, seasonal sales plans, open-to-buy, and inventory control. Other topics include market trip planning, vendor negotiations, and participation on product development teams. Prerequisite: 381 and major in Fashion Design and Merchandising or consent of school director.

392-1 to 6 Field Study. Study of, and tours to apparel manufacturers, markets, museums, retailers, testing laboratories, textile mills, trade associations and other areas of interest within the softgoods industry. Variable credit with a maximum of six hours. Prerequisite: nine hours in Fashion Design and Merchandising, junior standing, major in Fashion Design and Merchandising or consent of school director.

398-1 to 3 Special Problems. Independent study for qualified students in Fashion Design and Merchandising. Prerequisite: major in Fashion Design and Merchandising or consent of instructor and school director.

431-3 Ethnic Dress. The study of ethnic dress in non-western cultures, with attention to aesthetics, symbolism and uses of ethnic dress. Cultures studied may vary with each offering. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

442-3 Apparel and Textile Economics. Emphasizes the issues and importance of the role the United States' softgoods industry plays in the global economy. Not for graduate credit. Prerequisite: junior standing, major in Fashion Design and Merchandising or consent of school director.

451-3 Mass-Market Apparel Design. Design a line, write garment specification and sequence of operations, determine work flow and calculate production costs. Lab fee: \$15. Not for graduate credit. Prerequisite: 121, 211, 251, 252 and major in Fashion Design and Merchandising or consent of school director.

452-3 Professional Practices in Fashion Design. Business principles of apparel design, including systems, forms and logistics of money and materials. Functions and responsibilities of the fashion designer. Career opportunities in the fashion industry. Lab fee: \$30. Not for graduate credit. Prerequisite: 121, 211, 251, 252, 451 and major in Fashion Design and Merchandising or consent of school director.

462-3 Fashion Motivation. Psychological motivation for wearing clothing, societal functions of clothing, cultural differences in dress. Not for graduate credit. Prerequisite: 102 and major in Fashion Design and Merchandising or consent of school director.

481-3 Contemporary Issues in Fashion. A forum geared toward seniors and graduate students in fashion design and merchandising that focuses on current issues in the softgoods industry. May re-enroll for a maximum of six credits. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of school director.

490-1 to 4 Readings. Supervised reading for qualified students in the area of fashion design and merchandising. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of instructor and school director.

491-3 Personnel Issues in Fashion Retailing. Identification and examination of personnel matters and the job search process in the fashion retail workplace. Not for graduate credit. Prerequisite: 101, junior standing, and major in Fashion Design and Merchandising or consent of school director.

492-1 to 24 Field Experience. Supervised work experience in a departmental approved position in business, industry, labor, government or military organizations for students specializing in fashion design and merchandising. Clock hours/credit to be individually arranged. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of instructor and school director.

493-1 to 5 Advanced Occupational Skills. Modern occupational practice in selected fields for experienced professionals seeking advanced techniques. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of instructor and school director.

494-1 to 4 Workshop. Current work education issues for teachers, supervisors and administrators. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of instructor and school director.

495-2 to 12 Instructional Internship. Internship in approved education and/or training centers. Intern instructor will increasingly assume responsibilities for preparing, presenting and guiding occupational learning in fashion design and merchandising. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of instructor and school director.

496-2 to 12 Professional Internship. Provides a supervised experience in a professional setting in the fashion industry. Activities must be related to the student's academic program and career objectives. Reports and assignments are required to be completed by the student. Not for graduate credit. Mandatory pass/fail. Prerequisite: major in Fashion Design and Merchandising and consent of instructor and school director.

497-1 to 6 Practicum. Application of work education skills and knowledge. Cooperative arrangements with corporations and professional agencies to study under specialist. Not for graduate credit. Prerequisite: twenty hours in specialty and major in Fashion Design and Merchandising or consent of instructor and school director.

498-1 to 5 Special Problems. Investigation of work education problems in fashion design and merchandising. Not for graduate credit. Prerequisite: major in Fashion Design and Merchandising or consent of instructor and school director.

Fashion Design and Merchandising Faculty

Kidd, Laura K., Associate Professor, Ph.D.,
Iowa State University, 1994.

Workman, Jane, Professor, Ph.D., Purdue
University, 1982.

Studak, Cathryn, Assistant Professor, Ph.D.,
Texas Woman's University, 1993.

Finance (Department, Major, Courses, Faculty)

The financial implications of decisions in both business and government are becoming more complex. Within the firm, financial considerations permeate research, engineering, production, and marketing. Within governmental activities, sophisticated financial techniques are becoming increasingly important. The financial executive thus takes a key role in the successful management of both business and governmental operations.

The finance curriculum offers three areas of specialization to meet the varied interests of students: (1) financial management, (2) financial institutions and (3) investments. The financial management program provides the background for a career in the financial operations of business firms and public institutions. The financial institutions specialization is designed for those interested in the operations of financial intermediaries and financial markets. The investments concentration is designed for those interested in Security Analysis and Portfolio Management. Certain courses may require the purchase of additional materials.

Finance majors must maintain a cumulative 2.00 grade point average in Finance prefix (FIN) courses taken at SIUC excluding Finance 200, 270, 310 and 323 in addition to meeting all of the College of Business and Administration's retention and graduation requirements. Finance majors who fail for two consecutive semesters to maintain the 2.00 cumulative grade point average in Finance prefix courses will be required to drop Finance as their major.

Technology Fee

The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.

Bachelor of Science Degree in Finance, College of Business and Administration

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core (See Chapter 4)</i>	45
<i>Requirements for Major in Finance</i>	24
Finance 331, 341, 361, Accounting 321 or 331	12

Specialization (choose one)	12
Financial Institutions:	
Finance 449; Select three: 432, 433, 462, 464 or	
Finance 320 and 322; Select two: 432, 433, 449, 464	
Financial Management:	
Finance 462, 463 and two of the following: 432, 433, 449, 464	
Investments:	
Finance 432, 433 and two of the following: 449, 462 or 463, 464	
Approved Electives (at least three credit non-business)	10
Total	120

Finance Suggested Curricular Guide

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
BUS 123	1	-		ACCT 220, 230	3	3	
ENGL 101, 102	3	3		ECON 241, 240	3	3	
UCC Science	3	3		ACCT/MGMT 208	3	-	
UCC Human Hlth, Fine Arts ..	2	3		CS 200b or ISAT 229	-	3	
PSYC 102 or SOC 108	-	3		UCC Humanities	3	-	
UCC Humanities	3	-		SPCM 101, ENGL 291	3	3	
MATH 140, 139	4	3		UCC Integrative Studies	-	3	
Total	16	15		Total	15	15	
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
MGMT 304, 318	3	3		FIN 270 ²	3	-	
FIN 330, 331	3	3		MGMT 481	-	3	
FIN 341, 361	-	6		FIN ³	6	3	
MKTG 304, BUS 302	3	1		Approved Elective ¹	3	5	
UCC Integrative Studies	3	-		MGMT 345	3	-	
ACCT 321 or 331/Approved				FIN ³	-	3	
Elective ¹	3	2		Total	15	14	
Total	15	15					

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.
²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.
³Major option, major specialization or secondary concentration.

Finance Minor

A minor in Finance consists of a minimum of 12 semester hours.

Requirements for a minor in Finance	12
Finance 330	
Specialization: (choose one)	
Financial Institutions	
Finance 331, 341 and 449	
Financial Management	
Finance 361, 462 and 463	
Investments	
Finance 331, 432 and 433	

Prerequisites for these classes must also be satisfied. An advisor within the College of Business and Administration must be consulted before selecting this field as a minor.

Courses (FIN)

- 200-3 Personal Finance.** An introduction to the problems of personal financial asset management, including income and expense budgeting. Emphasis also placed on consumer credit, insurance, investments, home ownership, and taxation. Will not count toward a major in finance.
- 270-3 The Legal and Social Environment of Business.** An examination of the legal, social, and political forces that influence business and businessmen. Particular attention to the role of law as an agency of social control in the modern business society. Prerequisite: sophomore standing.
- 280-3 Business Law I.** Legal problems arising from situations involving contracts and agency and business organizations. Not pass/fail for business majors.
- 310-3 Insurance.** Fundamentals of insurance and risk management including a study of selected insurance contracts and alternative methods of controlling risk exposures. Prerequisite: junior standing.

- 320-3 Real Estate.** Problems of real estate ownership, management, financing, and development. Prerequisite: junior standing.
- 321-3 Real Estate Finance.** A study of the instruments, techniques, and institutions of real estate finance; sources of and methods for obtaining funds for real estate investments; mortgage risk analyses. Prerequisite: 320 or consent of instructor and junior standing.
- 322-3 Real Estate Appraisal.** The techniques and art of real estate valuation using market comparison, cost, and income approaches. Includes appraisal principles, procedures, and applications. Prerequisite: 320 or consent of instructor and junior standing.
- 323-3 Real Estate Law.** A survey of legal principles applicable to real property, including the following: conveyances, titles, land descriptions, rights and duties of ownership, and the law of real estate brokerage. Prerequisite: 320 or consent of instructor and junior standing.
- 330-3 Introduction to Finance.** Study of issuance, distribution, and purchase of financial claims including the topics of financial management, financial markets, and financial investments. Prerequisite: Accounting 230, Economics 240, Accounting or Management 208, and junior standing.
- 331-3 Investments.** Survey of the problems and procedures of investment management; types of investment risks; investment problems of the individual as well as the corporation. Prerequisite: 330 with a grade of C or better; junior standing and must be business (not pre-business) major or consent of department.
- 341-3 Financial Markets.** Operations of capital markets. Sources and uses of funds of financial institutions. Prerequisite: 330 with a grade of C or better; junior standing and must be business major or consent.
- 350-3 Small Business Financing.** Financing problems involved in raising venture capital, debt type funds, expansion funds, and government sponsored funding. Budgeting, working capital management, and fixed asset planning are covered. Prerequisite: Accounting 230, Economics 240 and junior standing.
- 361-3 Management of Business Finance.** The principal problems of managing the financial operations of an enterprise. Emphasis upon analysis and solutions of problems pertaining to policy decisions. Prerequisite: 330 with a grade of C or better and Accounting 208 or Management 208, business major (not prebusiness).
- 380-3 Business Law II.** Legal problems arising from situations involving sales, commercial paper, secured transactions, suretyship, and bankruptcy. Prerequisite: junior standing.
- 432-3 Options and Futures Markets.** Study of modern concepts and issues in financial options and futures markets. Emphasis on risk management in financial institutions, and applications in corporate finance and funds management. Prerequisite: 331 with a grade of C or better and 361 (361 may be taken concurrently).
- 433-3 Portfolio Theory and Management.** Examination of modern concepts relating to management of security portfolios. Topics include security analysis, Markowitz Portfolio Theory, efficient market hypothesis, portfolio performance measurement, risk, and portfolio construction. Prerequisite: 331 with a grade of C or better, 361 (361 may be taken concurrently).
- 434-3 Risk Management.** This course includes a survey and application of various risk management techniques with an emphasis on commodity risk management. Topics include: pricing theories of futures and options, examination of firm risk, and the use of a trading room to simulate risk management techniques. Prerequisite: 432 or consent of department.
- 449-3 Management of Financial Institutions.** Principal policies and problems which confront top management. Emphasis on liquidity, loans, investments, deposits, capital funds, financial statements, organization structure, operations, personnel, cost analysis, and public relations. Not for graduate credit. Prerequisite: 330 and 341 with a grade of C or better.
- 462-3 Working Capital Management.** Liquidity analysis and management with focus on managing cash, marketable securities, accounts receivable, inventory, banking relationships and short-term financing. Students may choose to be associated with Corporate Treasury Management Program and may be eligible to pursue CTP certificate. Prerequisite: 361 or concurrent enrollment.
- 463-3 Forecasting and Capital Budgeting.** Long-term forecasting techniques used in business; alternative approaches to capital structure decisions, cost of capital measurement; and performance measurement for investment decisions including mergers and leasing; explicit consideration of certainty, risk, and uncertainty in investment analysis; theory and applications in private and public sectors. Prerequisite: 361 or concurrent enrollment.
- 464-3 International Financial Management.** Examine decision-making in International Finance via a broad study of the opportunities and problems encountered when investments and business operations cross national boundaries. Specific topics include foreign exchange markets, international parity conditions and exchange rate forecasting, exchange rate exposure and hedging, global capital sourcing, multinational capital budgeting, working capital management and international portfolio diversification. Prerequisite: 361 or concurrent enrollment.
- 469-3 Managerial Financial Policy.** Development of financial strategies and policies based on an evaluation of alternative approaches. Emphasis upon application of financial concepts and techniques to real-life situations. Not for graduate credit. Prerequisite: 361.
- 480-3 Problems in Labor Law.** Social, economic, and legal evaluations of recent labor problems, court decisions, and legislation. Concern is on long-run legislative impact on manpower planning, dispute settlement, and utilization of employment resources.
- 491-1 to 6 Readings in Finance.** Readings in classical and current writing on selected topics in various areas in the field of finance not available through regularly scheduled courses. Not for graduate credit. Prerequisite: consent of department chair and outstanding record in finance and must be a business (not pre-business) major or consent of department. Mandatory Pass/Fail.

495-1 to 15 Internship in Finance. Designed to provide an opportunity to relate certain types of work experience to the student's academic program and objectives. Approved internship assignments with cooperating companies in the fields of finance are coordinated by the faculty member. Not repeatable for credit. Not for graduate credit. Prerequisite: consent of department chair and outstanding record in finance and must be a business major or consent of department. Mandatory Pass/Fail.

Finance Faculty

Cornett, Marcia M., Professor, Ph.D., Indiana University, 1983.
David, Lewis E., Professor, *Emeritus*, Ph.D., New York University, 1949.
Davidson, Wallace N., III, Professor, Ph.D., Ohio State University, 1982.
Elsaid, Hussein H., Professor, *Emeritus*, Ph.D., University of Illinois, 1968.
Mathur, Iqbal, Professor, Ph.D., University of Cincinnati, 1974.
Musumeci, James, Associate Professor and Chair, Ph.D., University of Texas at Austin, 1987.

Peterson, Mark A., Assistant Professor, Ph.D., Pennsylvania State University, 1996.
Rakowski, David A., Assistant Professor Ph.D., Georgia State University, 2003.
Tyler, R. Stanley, Associate Professor, *Emeritus*, J.D., University of Illinois, 1952.
Vaughn, Donald E., Professor, *Emeritus*, Ph.D., University of Texas, 1961.
Wang, Xiaoxin, Assistant Professor, Ph.D., Pennsylvania State University, 2003.
Waters, Gola E., Professor, *Emeritus*, J.D., University of Iowa, 1957, Ph.D., Southern Illinois University, 1970.

Financial Management

(SEE AGRIBUSINESS ECONOMICS)

Fire Service Management (Major, Courses)

The Bachelor of Science in Fire Service Management currently is offered only at off-campus locations and provides those with a fire science-related technical background with a two-year, upper division program of study that enhances the successful graduate's pursuit of a career in the fire service industry. The program is designed to provide practical course work in areas of management and supervision for fire service professionals. Admission to the program requires prior completion of a fire science-related Associate of Applied Science (AAS) degree or prior formal training equivalent to a fire science related AAS or prior fire science-related licensure or certification, or prior employment in a fire science-related field.

The Capstone Option is available for eligible students who meet the Capstone criteria outlined in Chapter 3. Those seeking the Capstone Option must complete the application and must meet all eligibility criteria, including the fire science-related AAS degree with a 2.25 gpa or better, no later than the end of their first semester in the bachelor's degree program.

The Bachelor of Science in Fire Service Management is an ideal program of study for fire service professionals who have a prior, fire service-related AAS or its equivalent or who have extensive work experience in the fire service industry. Successful graduates are prepared for career enhancing opportunities that include fire service related management and supervisory positions, the insurance industry, the fire equipment manufacturing industry and other related fields.

The Fire Service Management program has signed articulation agreements with numerous colleges. Check with the office of Off-Campus Academic Programs for a current list. These agreements take advantage of the Capstone Option discussed in Chapter 3.

For additional information about this major, contact the College of Applied Sciences and Arts' Office of Off-Campus Academic Programs at (618) 536-6609 or visit our homepage at <<http://www.siu.edu/~asaocap/>>.

Bachelor of Science Degree in Fire Service Management, College of Applied Sciences and Arts

<i>University Core Curriculum Requirements</i>	30-41
(Capstone Core Curriculum Requirements.....)	30)

<i>Requirements for Major in Fire Service Management</i>	48
Core Requirements: Fire Service Management 332, 421, 425 and	
Technical Resource Management 316	12
Twenty-four hours from Fire Service Management 360, 383, 387,	
388, 390, 398, 402 and 423	24
Twelve hours selected from Fire Service Management 301, 319, 350,	
401 and 450	12
<i>Approved Career Electives</i> (Formal course work or its equivalent that is Fire	
Service-related and technical, managerial or supervisory in Nature)	31-42
<i>Total</i>	120

Fire Service Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
FSM 332, 383	3	3	FSM 390, 423	3	3
FSM 360, 387	3	3	FSM 398, 421	3	3
TRM 316, 350	3	3	FSM 402, 425	3	3
FSM 301, 388	3	3	FSM 319 or 401, 450	3	3
<i>Total</i>	12	12	<i>Total</i>	12	12

Courses (FSM)

258-1 to 30 Fire Service Work Experience. Credit will be granted via school evaluation of prior fire service management related job skills, management-worker relations and supervisory experience. Unless otherwise determined by the school director, this credit may be applied only to the approved career electives requirement of the fire service management degree. Prerequisite: fire service management major.

259-1 to 60 Fire Service Occupational Education. Credit granted via school evaluation of past fire service management-related occupational education experience. Unless otherwise determined by the school director, this credit may be applied only to the approved career electives requirement of the fire service management degree. Prerequisite: fire service management major.

301-3 Introduction to Fire Service Management Research. An introduction to library resources, electronic media resources and formal academic writing styles common to fire service management research. Introduction to basic theories, concepts and practices pertinent to fire service management. May be independent study. Prerequisite: fire service management major or consent of school.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

332-3 Labor-Management Relations. The student will gain a general understanding of the economic situation of which labor/management relations represent a subset. Students will develop a perspective on the evolution of labor relations in the United States economy and how the interaction of labor and management differs throughout the world. The collective bargaining section introduces the student to the techniques of bargaining used by labor and management in their ongoing interactions.

350-3 Readings in Fire Service Management. The use of written and electronic media resources relevant to fire service management and the development of a fire service management research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: 301 and fire service management major or consent of school.

360-3 Human Resource Management. This course examines relationship and issues in personnel administration and human resource development within the context of fire-related organizations, including personnel management, organizational development, productivity, recruitment and selection, performance management systems, discipline, and collective bargaining. Prerequisite: Fire Service Major or consent of school.

365-3 Grant and Proposal Writing for the Fire Service. Comprehensive presentation of fire service grants from governmental, public and private funding sources. Course covers the funding application, approval process, and grant administration. Students will prepare a grant proposal with objective statement, study methodology, work programs/schedules and budget. Prerequisite: consent of school.

383-3 Data Interpretation. A course designed for students beginning their major program of study to examine data use in their respective professions. Emphasis will be placed upon an understanding of the basic principles and techniques involved with analysis, synthesis and utilization of data.

387-3 Fiscal Aspects of Fire Service. An introduction to the fiscal problems encountered in the administration of fire service facilities.

388-3 Legal Aspects of Fire Service Management. The student will learn basic law principles, identify sources of American laws, and recognize the structural framework of American law. Additionally, the student will be able to identify the principles of law which relate to management of fire protection services and areas of law which impact on the operations of fire service management, including applicable laws and ordinances (Fire Fighter Bill of Rights, et al), collective bargaining, and state/local civil service Fire/Police Commission provisions hearing protocols. Further, the student is able to effectively participate in the conduct of a mock hearing, following applicable protocols for such, in accordance with due process and legal requirements

and effectively document and enforce such findings.

390-3 Governmental Aspects of the Fire Service. The role of subnational governments in the management of the fire services. The demographic and political environment in which the fire services operate. The duties, powers and obligations of governmental agencies relative to the operation of a fire department. Prerequisite: fire service management major or consent of department.

398-3 Risk Management in the Fire Service. This course, designed for the middle-level fire service manager, introduces the concept of risk management and examines its applicability in the fire service. Particular emphasis is placed on developing and implementing a fire service risk management program in both career and paid on-call departments.

401-3 Analysis of Trends in the Fire Service Industry. The identification and study of current economic, regulatory, or operational trends impacting the fire services industry. The use of both written and oral reports to present a critical analysis of selected topics. May be independent study. Not for graduate credit. Prerequisite: 350 or consent of school.

402-3 Current Issues in Fire Service Management. A review of the current problems affecting the fire service with particular emphasis on resource allocation, planning, and constraints. Not for graduate credit.

421-3 Professional Development. Introduces students to the various elements involved in obtaining a position in their chosen fields. Topics included are: personal inventories, placement services, employment agencies, interviewing techniques, resumes, letters of application, references and employment tests. Each student will develop a portfolio, including personal and professional information related to career goals. Not for graduate credit.

423-3 Master Planning for Community Fire Protection. The development and management of a community fire protection plan. Students will learn to organize, coordinate and implement a community fire protection master plan. Not for graduate credit. Prerequisite: fire service management major or consent of school.

425-3 Fire Service Management. The role of upper level fire service managers with a focus on the significant areas of fire department management. Emphasis is placed on an understanding of major issues facing fire service managers and the management theories, concepts and practices that apply to these issues. Not for graduate credit. Prerequisite: fire service management major or consent of school.

450-3 Management Problems in the Fire Service Industry. The identification and study of problems related to management within the fire services industry. The application of fire service management theories, concepts and practices to the identified management problems. The use of written and electronic media research resources to produce a written problem solving report. May be independent study. Not for graduate credit. Prerequisite: Fire Service Management 401 or consent of school.

Food and Nutrition (Major, Courses, Faculty)

The food and nutrition program is a part of the Department of Animal Science, Food and Nutrition.

Students will be required to take field trips in those courses so designated with the expenses pro-rated for each student. Appropriate uniforms will be required of all students enrolling in those courses that involve preparation of food.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Food and Nutrition, College of Agricultural Sciences

FOOD AND NUTRITION MAJOR — DIETETICS SPECIALIZATION

The dietetics specialization is currently granted accreditation by the Commission on Accreditation for Dietetics Education (CADE) of The American Dietetic Association (ADA), 216 W. Jackson Blvd., Chicago, Illinois 60606-6995, phone (312) 899-5400. Successful graduates meet the first step to become a Registered Dietitian® and/or Licensed Dietitian (LD) in the State of Illinois.

To become a Registered Dietitian® or Licensed Dietitian in the State of Illinois, the following qualifications apply:

1. Baccalaureate degree or post baccalaureate degree in human nutrition, food and nutrition, dietetics, food systems management, nutrition education or equivalent from an accredited University.
2. 900 hours of supervised practice.
3. Successful completion of examination.

4. Continuing education.

Job opportunities are available in traditional areas of dietetics (clinical, management and community), and non-traditional fields such as private practice, business, industry, education, product development, government/politics, media, marketing, book publishing, sales, health promotion, sports nutrition, spas, fitness centers and restaurants. Opportunities even exist for consultants and public speakers. More information regarding this major and the profession of dietetics can be found at <<http://www.siu.edu/departments/coagr/animal/dietetic>>.

<i>University Core Curriculum Requirements</i>	41 ¹
<i>Requirement for Major in Food and Nutrition with Specialization in Dietetics</i>	69
Agribusiness 318, Educational Psychology 402, or Mathematics 282.....	3
Anthropology 104, Economics 113, Geography and Environmental Resources 103, Political Science 114, or Sociology 108	(3)
Anthropology 202, Philosophy 211 or Sociology 215	(3)
Agriculture 300i, Engineering 301i, Sociology 304i, or Zoology 321i	(3)
Chemistry 140a,b	(3) + 5
Health Education 461 (sect. 402 Welshimes) or Educational Psychol- ogy 493	3
Health Career Professions 105	2
Information Management Systems 229	3
Marketing 304	3
Microbiology 201	4
Philosophy 104	(3)
Physiology 201 and 208	4
Psychology 102, and 322, or Management 304	(3) + 3
Zoology 115 or 118	(3)
Food and Nutrition 100, 101, 206, 320, 321, 356, 360, 363, 373, 400, 410, 425, 461, 470, 472, 480, 485	(2) + 39
<i>Electives</i>	10
Recommended Electives: Accounting 210, Animal Science 210, Food and Nutrition 460, Health Education 330, 402, 440, 441, 485, Journalism 303, 310, Physiology 301, Physical Education 381, Spanish 140a,b or 175 and 201, Speech Communica- tion 301i, Workforce Education 321, 384.	
<i>Total</i>	120

¹ The numbers in parentheses are counted as part of the 41-hour University Core Curriculum Requirement.

FOOD AND NUTRITION MAJOR— HOSPITALITY AND TOURISM SPECIALIZATION

The Hospitality and Tourism Specialization offers an undergraduate program as preparation for careers in hospitality management. The mission is to provide education and service activities with the goal of enabling students, professionals and the community to function in a changing global society. The specialization integrates other disciplines and addresses ongoing concerns and needs of the hospitality industry in its diverse environments. It is broad in scope and content. The specialization provides for theory development, experimentation and practice that foster personal, social and intellectual pursuits for the enhancement of life-long learning. The Hospitality and Tourism specialization is accredited by ACPHA (Accreditation Commission for Programs in Hospitality, P.O. Box 400, Oxford, MD, 21654, phone (416) 226-5527).

<i>University Core Curriculum Requirements</i>	41
Including: Psychology 102, Economics 113	
<i>Requirements for Major in Food and Nutrition with Specialization in Hospital- ity and Tourism</i>	79
<i>Professional Core Requirement</i>	21
Accounting 220; Information Management Systems 229 or Computer Science 200b; Finance 270 or 280; Management 304; Marketing	

304; Psychology 322 or 323 or Management 341; Educational Psychology 402 or Agribusiness Economics 318 or Mathematics 282	
<i>Hospitality and Tourism Core Requirement</i>	20
Food and Nutrition 202, 360, 380, 400, 435, 440, and 461	
<i>Hospitality and Tourism Options (select one)</i>	17-18
Mission Statement: The mission is to provide education and service activities with the goal of enabling students, professionals and the community to function in a changing global society.	
Restaurant Management: Students in this option will be able to use principles of foodservice and restaurant management to assess, analyze and apply practices within the industry. Food and Nutrition 206, 371, 373, 460 plus two courses from other two options	
Hotel Management: Students in this option will be able to use principles of hotel and lodging management to assess, analyze and apply practices within the industry. Food and Nutrition 371, 372, 421b, 473 plus two courses from other two options	
Tourism Management: Students in this option will be able to use principles of travel and tourism administration to assess, analyze and apply practices within the industry. Food and Nutrition 302, 371, 421b, Recreation 375 or Geography and Environmental Resources 103 plus two courses from other two options	
<i>Approved Electives</i>	20-21
<i>Total</i>	120

Courses (FN)

See also Animal Science for additional 400-level courses.

- 100-1 Careers in Dietetics.** Analyzes the impact of past, present and future societal influences on the profession of dietetics. Introduced students to a variety of career options through readings and guest speakers. Prerequisite: Food and Nutrition major or pre-major only.
- 101-2 Personal Nutrition.** (University Core Curriculum) This course integrates nutrition and promotion of health through prevention of disease and will answer questions found daily in the media regarding nutrition. Topics emphasized are functions of basic nutrients, impact of culture, gender, ethnicity, social environments and lifestyle on nutrition and health.
- 156-3 Fundamentals of Foods.** An introduction to the basic principles and techniques of food preparation.
- 202-3 The Hospitality and Tourism Industries.** Introduction to the diverse aspects of the hospitality and tourism industries and the interrelationships between them. Historical development of the industries, trends, current issues and career opportunities will be examined.
- 206-2 Food Service Sanitation.** Basic sanitation principles and application in food service. Employee sanitation training, sanitation standards and safety regulations in the food service will be part of the course. Upon completion of the course, students will be eligible for the sanitation certificate national exam.
- 215-2 Introduction to Nutrition.** (Same as Animal Sciences 215.) An up-to-date study of basic principles of nutrition including classification of nutrients (physical and chemical properties) and their uses in order to provide the student a working knowledge of nutrition in today's environment.
- 247-3 (1,1,1) The School Lunch Program.** (a) Food purchasing; (b) quantity food production; and (c) nutrition practices in the school lunchroom.
- 256-5 Science of Food.** Application of scientific principles including preparation, chemistry, functions, and interrelationships in ingredients and their effects on physical, chemical, and sensory characteristics of foods. Three lectures and two three-hour laboratories per week. Prerequisite: Chemistry 140a or 200 and 201.
- 298-1 Multicultural Food Experience.** (Multicultural Applied Experience Course) This course is designed to provide multicultural experience in food selection, eating habits, meal patterns and food preparation. Students will interact with community members of various ethnicity throughout the semester. Shopping and cooking projects will provide firsthand experience. Prerequisite: concurrent or prior registration in one of the following: Anthropology 202, History 210, Philosophy 210, 211 or Sociology 215.
- 302-3 Dimensions of Tourism.** In-depth examination of the components of the travel and tourism industry, motivators to travel, and the various market segments. Also covers analysis of the economic, social, cultural and environmental impacts to tourism. Prerequisite: 202 or consent of instructor.
- 320-3 Foundations of Human Nutrition.** Principles of human nutrition in relation to intermediary metabolism and the role of vitamins and minerals. Prerequisite: 101, Chemistry 140a or equivalent.
- 321-3 Food and Nutrition Assessments.** Demonstration and use of tools and practices in assessing food and nutrition behaviors of individuals and groups in clinical and community nutrition care settings. Prerequisites: 320 or equivalent.

335-3 Beverage Management. Introduction to beers, wines and spirits. Legal responsibilities of alcohol service. Introduction to responsible beverage service and management. Lab fee: \$20. Prerequisite: Must be a food and nutrition major.

356-3 Experimental Foods. Experimental approach to the study of factors influencing behavior of foods. Individual problems. A charge of \$10 will be made for laboratory. Prerequisite: 360.

360-4 Quantity Food Production. Selection and use of institutional foodservice equipment including specifications, cost and care; use of standardized formulas, techniques of quantity preparation, and service of food to large groups. Lab fee: \$30. Prerequisite: 206 or sanitation certification.

361-3 Hospitality Development. Development issues in the hospitality industry. Case studies on purchase/construction issues, inflation and recession, fiscal management and expansion of hospitality firms. Family-owned and operated businesses and entrepreneurship will be addressed. Prerequisite: restricted to food and nutrition majors only or consent of instructor.

363-3 Purchasing Management in the Hospitality Industry. Managerial principles of purchasing in the hospitality industry, with emphasis on functions of purchasing agents, types of markets, and methods of purchasing. Restricted to food and nutrition majors only or consent of instructor.

371-2 Field Experience. Opportunity for supervised learning experiences in the student's major. Prerequisite: restricted to food and nutrition majors only, sophomore status and consent of internship coordinator.

372-3 Front Office Management. Principles and concepts of effective front office management in the lodging industry. Prerequisite: specialization in hospitality and tourism, 202 or consent of instructor.

373-3 Food and Beverage Cost Control. Examination of the managerial responsibilities of the food and beverage manager in the hospitality operation. Management methods in budgeting, forecasting, cost control, and establishing operational policies and systems. Lab fee: \$30. Prerequisite: restricted to food and nutrition majors only, Mathematics 108 or above, Accounting 220 or consent of instructor.

380-3 Hospitality Human Resources. The study of practices related to the management and development of human resources in the hospitality industry. Contemporary management issues specifically addressing the employment challenges in hospitality and tourism will be covered. Prerequisite: 202, Specialization in Hospitality and Tourism or consent of instructor.

390-1 to 4 Special Studies in Food and Nutrition. Enables students to pursue personal research interests in the food and nutrition area. Prerequisite: juniors and seniors only and consent of department.

400-1 Senior Seminar. Discussion of issues affecting food and nutrition professionals. Not for graduate credit. Prerequisite: 100 or 202, 380 senior status or consent of instructor.

410-3 Nutrition Education. Course provides principles, techniques and evaluation methods necessary to incorporate food and nutrition into the educational curriculum of schools, hospitals, out-patient clinics and health agencies. Prerequisite: 320 and 321 or equivalent.

420-3 Recent Developments in Nutrition. Critical study of current scientific literature in nutrition. Prerequisite: 320 or equivalent.

421-3 to 9 (3 per topic) Developments in Hospitality. This course will provide the students with the opportunity for an in-depth study of topics relating to their specific interest in the hospitality field. Any subject area may be repeated (a) food, (b) lodging and (c) travel. The topic within the subject area will be selected from issues, problems or developments in the hospitality field. Prerequisite: 202 or consent of instructor 3-9 credits.

425-3 Biochemical Aspects of Nutrition. (Same as Animal Science 425.) The interrelationship of cell physiology, metabolism and nutrition as related to energy and nutrient utilization, including host needs and biochemical disorders and diseases requiring specific nutrition consideration. Prerequisites: 215 or 360, Chemistry 140b, course in Physiology.

435-3 Hospitality Marketing Management. This course concentrates on marketing for hotel, restaurants and tourism. Problems and characteristics specific to the students will be able to develop a comprehensive strategy for marketing a hospitality operation. The starting point for the hospitality industry will be examined. By the end of the course students will be able to develop a comprehensive strategy for marketing a hospitality operation. The starting point for the development of hospitality marketing strategy assumes basic marketing knowledge has been derived from completing a previous marketing course. Prerequisite: 202 or 302 and Marketing 304.

440-3 Hospitality Risk Management. Introduction to risk management, security, liability and contract management applicable to the awareness and/or operations of hotels, restaurants and resorts. Prerequisite: Specialization in hospitality and tourism, 202, Management 304 or consent of instructor.

460-4 Food Service Management. The course includes practical experience in the operational administration of a food service facility by providing opportunities to demonstrate ability and creativity in managing noon lunch services for the Old Main Room. Labs involve situations in which students fill various roles in food service and may occur outside of the regular schedule. Lab fee: \$30. Prerequisite: specialization in hospitality and tourism 202, 360, 373 or consent.

461-3 Service Organization and Management. Managerial aspects of the hospitality industry as related to provision of quality service. Organizational structures, management techniques, decision-making abilities, ethics, leadership, and human resource issues are examined. Prerequisite: 202, 380, Management 304 or Psychology 323 or consent of instructor.

470-5 Medical Nutrition. In-depth study of pathophysiology and principles of nutrition therapy for various disease states. Application of these principles also prerequisite. Off-campus experience may be required. Prerequisite: 320, 321, Health Care Professions 105, Chemistry 140b, Physiology 201 and 208 or equivalents.

473-3 Hotel Administration. An advanced hotel administration course covering contemporary management issues such as conference management, hotel security, strategic planning and hotel law. Prerequisite: Specialization in hospitality and tourism, 302, 372, Management 304 or consent of instructor.

475-3 Nutrition Through the Life Cycle. The study of human nutrition during each phase of the life cycle, prenatal through geriatric. Students elect at least two phases for in-depth study. A general review of basic nutrition is included. Prerequisite: 320 or equivalent.

480-3 Community Nutrition. Offers a study of the objectives, implementation strategies, and evaluation methods of nutrition programs in communities' health programs. Integration of nutrition into the health care delivery system at local, state, and federal levels is included. Prerequisite: 472.

485-3 Advanced Nutrition. This course applies advanced principles of biochemistry and physiology to expand on basic nutrition information and explains the role of nutrients from cellular and mechanistic aspects. Prerequisite: 320, 425 or equivalents.

Food and Nutrition Faculty

Long, Sara, Professor, Ph.D., Southern Illinois University Carbondale, 1991.

Ajuwon, Kolapo, Assistant Professor, Ph.D., Purdue University, 2004.

Ashraf, Hea-Ran L., Professor, *Emerita*, Ph.D., Iowa State University, 1979.

Banz, William J., Professor, Ph.D., University of Tennessee, 1995.

Davis, Nicole L., Instructor, M.S., Southern Illinois University, 2003.

Endres, Jeannette M., Professor, *Emerita*, Ph.D., St. Louis University, 1972.

Girard, T. C., Associate Professor, M.S., University of Wisconsin, 1992.

Harper, Jenny M., Professor, *Emerita*, Ph.D., Cornell University, 1941.

Higginbotham, D. Allan, Assistant Professor, Ph.D., Auburn University, 2001.

Kim, Kyungmi, Assistant Professor, Ph.D., Virginia Polytechnic Institute and State University, 2003

Konishi, Frank, Professor, *Emeritus*, Ph.D., Cornell University, 1958.

Null, Dawn C., Instructor, M.S., Southern Illinois University Carbondale, 1995.

Welch, Patricia, Professor, *Emerita*, Ph.D., Southern Illinois University, 1982.

Winters, Todd A., Associate Professor and *Interim Chair*, Ph.D., University of Wisconsin, 1992.

Food Economics

(See Agribusiness Economics)

Food Policy

(SEE AGRIBUSINESS ECONOMICS)

Foreign Language and International Trade

(Major)

The foreign language and international trade major, leading to the Bachelor of Arts degree in the College of Liberal Arts, combines education in the liberal arts with preparation for careers in the international business community. It is designed to combine skill in a foreign language with a fundamental understanding of international commerce. This is accomplished by a curriculum of studies, which has two cores—one in language and one in international trade and related subject matters. This cross-disciplinary program allows for choice of language as well as some options in electives so that different interests may be accommodated and individual goals may be realized. The chosen language cannot be the student's native language, nor can it be English. Because of the demands made by such a course of studies, guidance throughout it is important; therefore it is required of students that their Foreign Language and International Trade language advisor as well as the Foreign Language and International Trade director advise them each semester.

At or near the end of the program of studies, application and expansion of the knowledge and skills gained by the student through course work is provided by an internship. Prerequisite to the internship: senior standing and satisfactory completion of both oral and written language competency examinations before the internship begins. An "internship checklist" must be submitted to the Foreign

Language and International Trade director at least one year before internship begins.

No grade lower than *C* will be accepted for any course required by the major (including Economics 302i, English 101 and 102, Foreign Language 301i, Mathematics 139 and Psychology 102) taken at any institution at any time. A minimum grade of *B* is required in the appropriate SIUC 320b language skills course. All students entering or reentering (after at least one fall or spring semester not enrolled as a Foreign Language and International Trade major or not enrolled at Southern Illinois University Carbondale) the foreign language and international trade program begin in the pre-foreign language and international trade classification (PFLT). Admission to the major may be requested only after overall grade point average is at least 2.75. After admission, a minimum overall gpa of 2.75 must be maintained. Students falling below that level will be remanded to PFLT. When the grade point average is back to 2.75, students may request reinstatement to the major.

Bachelor of Arts Degree in Foreign Language and International Trade, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	(3) + 41
Including Economics 302i; English 101 and 102; Foreign Language 301i; Mathematics 139; Psychology 102, Foreign Language 201a or above substitutes for 3 hours of core humanities.	
<i>Requirements for Major in Foreign Language and International Trade</i>	68-75
Courses in a Language (Chinese, French, German, Japanese, Russian or Spanish)	29-36
As prescribed by the program director; must include internship (Foreign Language 495).	
Business Related Courses	39
Accounting 220, 230	6
Computer Science 200b or Information Management Systems 229	3
Economics 240, 241, 329	9
Finance 330	3
Management 202, 304, 345	9
Management 208 or Accounting 208 or Economics 308	3
Marketing 304; and either 336 or 435	6
<i>Electives</i>	4-11
When choosing electives, the area of specialization should be considered. In the past students have taken electives in Computer Science, East Asian Studies, Economics, Finance, Food and Nutrition, Geography and Environmental Resources, History, Management, Marketing, Philosophy, Political Science and Sociology.	
<i>Total</i>	120

Foreign Language and International Trade Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
Foreign Language(100-Level) ..	4	4	Foreign Language(200-Level) ..	4	4
ENGL 101, 102	3	3	MGMT 202, 208	3	3
MATH 139, PSYC 102	3	3	ACCT 220, 230	3	3
Human Health, SPCM 101	2	3	Science	3	3
ECON 240, 241	3	3	Humanities Core, CS 200b	3	3
<i>Total</i>	15	17	<i>Total</i>	16	16

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Foreign Language(300-level)	3-4	6	Foreign Language.....	3	3
FL 301i, MKTG 304	3	3	Foreign Lang or Elect ¹	3	2-3
ECON 329, MGMT 345	3	3	MGMT 304	3	-
FIN 330,	3	-	MKTG 336	3	-
Fine Arts, Social Science	3	3	ECON 302i, FL 495 ²	3	3
			Multicultural Course.....	-	3
Total.....	15-16	15	Total	15	11-12

¹Elective only if foreign language section does not require this course.
²Although a major part of the paperwork for Foreign Language 495 (Internship) takes place in the last semester of the senior year, students usually go on their internship the summer after the senior year.

Foreign Languages and Literatures (Department,
Majors [Classics, French, German, Spanish] Courses, Faculty)

Majors and minors are offered in Classics, French, German, and Spanish. Minors are also offered in Chinese, Classical Civilization, Classical Greek, East Asian Civilization, Japanese and Latin. Transfer students planning to major in a foreign language must complete a minimum of 12 semester hours of courses including at least one 300 or 400 level language/grammar course in that language at Southern Illinois University Carbondale. No courses completed with a grade below *C* will be counted toward fulfillment of the requirements for a major or minor. For modern foreign languages, both oral and written language competency must be demonstrated in separate examinations at the advanced level. Students should plan to take these exams no later than two semesters prior to graduation so there is time to make up possible deficiencies before graduation. As part of the University Assessment program, majors in this department may require portfolios of student work. Students should check with their departmental adviser about this requirement. Failure to submit a suitable portfolio in a timely fashion may result in a delay in graduation. For students preparing to teach in the public schools, the oral and written competency examinations at the intermediate high level must be passed before student teaching is begun because of time constraints. Every foreign language major must have a departmental advance registration form, signed by the appropriate adviser in the department, before proceeding to college advisement and registration. It is strongly recommended that students who are planning to study abroad consult with their departmental adviser before leaving if they expect to transfer credit to SIUC.

Proficiency Examination Policy. Unit credit (without grade) on the basis of proficiency may be obtained through the Department of Foreign Languages and Literature in Chinese, French, German, Greek, Japanese, Latin, Russian and Spanish. This may be accomplished either by examination and/or by a validating course.

By Examination: Credit through examination may be given for first and second year basic skills courses only. Students who desire credit must not have earned college credit in the language they wish to proficiency. See *Proficiency Examinations and CLEP* in Chapter Two earlier in this catalog for University guidelines. Credit is given by the semester in Chinese, Japanese, Russian, Greek and Latin; French, German and Spanish credit is given only by the year. CLEP examinations in French, German and Spanish, and non-CLEP examinations in Latin are offered by the Testing Center Office in Woody Hall. Arrangements for other examinations should be made with the section head of the appropriate language. Languages not taught by the University may be able to be proficiencied. Requests should be made to the undergraduate advisor in Foreign Languages and Literatures. If a student qualifies for and opts for a departmental proficiency examination, a \$5.00 fee will be charged per proficiency test. This fee applies to the following courses: Chinese 120a,b and 201a,b, Classics 130a,b and 201a,b, Foreign

Language 100a,b, 120a,b and 220a,b, Japanese 131a,b and 201a,b, Russian 136a,b.

By Validating Course: Only basic language skills courses taken at SIUC, up to and including 320b may serve as validating courses. (See department for specific list.) Upon receiving a grade of *A* or *B* in a validating course, a student may, upon petitioning to the department, be granted credit for up to two of the immediately preceding basic skills courses.

Bachelor of Arts Degree in Foreign Languages and Literatures, College of Liberal Arts

FOREIGN LANGUAGE (WITHOUT SECONDARY SCHOOL TEACHING CERTIFICATE)

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4)	14
Though not required, a minor of at least 15 hours is recommended. This may be in another foreign language or in any other department within the College of Liberal Arts, but must be approved by the student's departmental adviser; the dean of the college must approve a minor outside the college as well.	
<i>Requirements for Major in Foreign Language</i> (See Language)	29-33 ¹
100-level courses will not count toward the major and at least 12 hours must be in courses on the 400-level except for Classics.	
<i>Electives</i>	32-36
<i>Total</i>	120

Bachelor of Arts Degree, College of Liberal Arts

FOREIGN LANGUAGE (WITH SECONDARY SCHOOL TEACHING CERTIFICATION)

<i>University Core Curriculum Requirements</i>	41
To include ENGL 101, 102; SPCM 101; MATH 110 or 113; PHYS 101, GEOL 110 or CHEM 106; PLB 115, 117 or ZOOL 115; PLB 301i, 303i or ZOOL 312i; HIST 101a ² or EA 102; AD 101, HIST 201, MUS 103 or THEA 101; ENGL 121 or 204; AD 227, ANTH 202, ENGL 205, HIST 202, 210, LING 201, PHIL 210, 211 or SOC 215; POLS 114; HIST 110; HED 101 or PE 101.	
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4)	14
Though not required, a minor of at least 15 hours is recommended. This may be in another foreign language or in any other department within the College of Liberal Arts, but must be approved by the student's departmental adviser; the dean of the college must approve a minor outside the college as well.	
<i>Requirements for Major in Foreign Language</i> (See Language)	29-33 ¹
100-level courses will not count toward the major and at least 12 hours must be in courses on the 400-level. Foreign Languages and Literatures 436 will be one of those courses required on the 400-level for majors in French, German, and Spanish.	
<i>Education Requirements</i>	31
Professional Education Requirements	28
(See Teacher Education Program.)	
Psychology 102	3
<i>Electives</i>	1-5
<i>Total</i>	123-124

Bachelor of Science Degree, College of Education and Human Services

FOREIGN LANGUAGE (WITH SECONDARY SCHOOL TEACHING CERTIFICATION)

For College of Education and Human Services students majoring in a foreign language, the scheduling of those classes, which apply to the major, must be done with the appropriate adviser from the Department of Foreign Languages and Literatures.

<i>University Core Curriculum Requirements</i>	41
To include SPCM 101; ENGL 101 and 102; MATH 110 or 113; PHYS 101, GEOL 110 or CHEM 106; PLB 115, 117 or ZOOL 115; PLB 301i, 303i or ZOOL 312i; HIST 101a ² or AC 102; AD 101, HIST 201, MUS 103 or THEA 101; ENGL 121 or 204; AD 227, ANTH 202, ENGL 205, HIST 202, 210, LING 201, PHIL 210, 211 or SOC 215; POLS 114; HIST 110; HED 101 or PE 101.	
<i>Requirements for Major in Foreign Language (see Language)</i>	29-33 ¹
100-level courses will not count toward the major and at least 12 hours must be in courses at the 400-level. Foreign Languages and Literatures 436 will be one of those courses required at the 400-level for majors in French, German, and Spanish.	
<i>Education Requirements</i>	31
Professional Education Requirements	28
See Teacher Education Program.	
Psychology 102	3
<i>Electives</i>	<u>15-19</u>
<i>Total</i>	120

¹See individual language listings for specific requirements.
² Required to meet non-western civilization/third world culture requirement.

Placement. The student who has completed only one year of foreign language in high school normally begins with the first semester course. The student who has successfully completed two years of study in high school of any language currently taught in the department may begin with the second year level. A student majoring in a foreign language who has taken four years of that language in high school is expected to begin with 300-level courses and to take more upper level courses. Those students who have successfully completed three or more years of high school language should consult the section head of that language for placement.

International Public Service Specialization

Foreign Language with a specialization in International Public Service (IPS) is designed for those students whose interests are not focused on language alone, but on its application or use in a career in one of the many forms of international public service in either the governmental or private sectors. The program of study includes all language skill courses normally required for the major in French, German, or Spanish, an internship or study abroad experience, a core of required courses for the IPS specialization, and appropriate area studies courses in history, political science, anthropology and geography.

Foreign Languages and Literatures Minor

A minor in a foreign language consists of a minimum of 18 hours in courses above the first-year level of which 3 hours must be taken in a regularly scheduled 300- or 400-level course at Southern Illinois University Carbondale. See individual language listings for specific requirements. State certification requirements, in terms of total semester hours of subject matter courses, may be met in part by counting first-year foreign language courses or by doing additional advanced work. No courses completed with a grade below C will be counted toward fulfillment of the requirements for a language minor.

A student wishing to complete a minor in Foreign Languages and Literatures must apply to the Department of Foreign Languages and Literatures for approval of the program of study for the minor. Without this approval the minor will not be officially listed on the student's transcript at the time of graduation. Application forms are available in the office of the director of undergraduate studies in the main office.

A minor in classical civilization or East Asian civilizations is constituted by 15 hours of courses to be selected in consultation with the appropriate sectional adviser.

CHINESE MINOR

<i>Chinese courses</i>	20
100 level: 120b	4
200 level: 201a,b	8
300 level or 400 level	8

CLASSICS MAJOR

Bachelor of Arts Degree in Classics, College of Liberal Arts

<i>Classics courses and courses from related disciplines</i>	36
Original Greek and Latin courses, two years of one language or one year of each	12-16
CLAS 270, 271, 230 and Classics 491	12
Electives approved by classics adviser from offerings in classics and related disciplines	8-12

Classics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
CLAS (Latin) 133a,b	4	4	CLAS 202a,b	3	3
ENGL 101, 102	3	3	CLAS 130a,b	4	4
Math, Fine Arts	3	3	Social Science	3	3
CLAS 230, 270 or 271	3	3	Science	3	3
Human Health, Elective	2	3	Multicultural, SPCM 101	3	3
<i>Total</i>	15	16	<i>Total</i>	16	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Latin 300-Level	3	3	Latin 400-Level	3	3
Greek 201a,b	3	3	Greek 300-Level	3	3
CLAS 270 or 271	3	-	Elective	9	6
Science	3	-			
CLAS 310, 311, 315	-	3			
Elective	3	3			
<i>Total</i>	15	12	<i>Total</i>	15	12

CLASSICAL CIVILIZATION MINOR

Courses to be selected in consultation with classics adviser from Greek, Latin, Classical Civilization, and approved courses in related disciplines.	15 ¹
---	-----------------

EAST ASIAN CIVILIZATION MINOR

Courses in Chinese and Japanese selected in consultation with adviser	15 ¹
---	-----------------

GREEK MINOR

Greek courses above 100-level	18
-------------------------------------	----

LATIN MINOR

Latin courses above 100-level (488 may not be counted); 320 recommended	18
---	----

¹18 hours is required for state certification.

FRENCH MAJOR

Bachelor of Arts Degree in French, College of Liberal Arts

<i>Requirements for Major in French</i> ¹	31-32
200 level: 201a,b plus 2-3 credit hour course.....	10-11
(The core curriculum Foreign Language 200a, French 200, offered in English, may count toward the degree requirement)	
300-level: 320a,b plus 2 additional courses	12
(French 320b fulfills the College of Liberal Arts Writing-Across-the-Curriculum requirement)	
400-level: 3 courses	9
(French 410 fulfills the College of Liberal Arts requirement for a second departmental writing-intensive course.)	
At least one literature course must be taken at either the 300 or 400-level.	

¹ Three hours of the French major will substitute for three credits of Humanities, Group One or Group Two.

Bachelor of Science Degree in French, College of Education and Human Services, or Bachelor of Arts Degree in French, College of Liberal Arts (with secondary school certification)

<i>Requirements for Major in French with secondary school certification</i>	36
French 201a,b.....	8
French 320a,b, 330 plus 5 hours of any other 300-level course ¹	14
(French 320b fulfills the College of Liberal Arts Writing-Across-the-Curriculum requirement)	
Foreign Language 436 and any combination of 400-level French courses.....	14
(French 410 fulfills the College of Liberal Arts requirement for a second departmental writing-intensive course.)	
At least one literature course must be taken at either the 300 or 400-level.	

¹ With the approval of the French section, one semester of 220 may be counted toward the major or minor, in which case the 300 or 400-level requirements would be reduced by 2 hours for the major or minor.

French Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
French 101a,b	4	4	French 201a,b	4	4
English 101, 102	3	3	SPCM 101	3	-
Core Math, Electives	3	3	Core Humanities	-	3
Core Social Science.....	3	3	Core Science.....	3	3
Core Human Hlth, Fine Arts....	2	3	Electives	6	6
<i>Total</i>	15	16	<i>Total</i>	16	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
French 320a,b	3	3	French 410, 435	3	3
French 321, French 330	3	3	Interdisciplinary Course	3	-
CoLA Science	3	-	Electives	9	9
Multicultural Course.....	-	3			
Electives.....	6	6			
<i>Total</i>	15	15	<i>Total</i>	15	12

FRENCH MINOR

<i>French courses above 100 level</i> ¹	18
200 level: 201a,b	8
300 level: 320a,b plus any other 300 level courses	10

¹ With the approval of the French section, one semester of 220 may be counted toward the major or minor, in which case the 300 or 400-level requirements would be reduced by 2 hours for a major or minor.

Bachelor of Arts Degree in French, College of Liberal Arts**FRENCH MAJOR— FRENCH FOREIGN LANGUAGE AND INTERNATIONAL PUBLIC SERVICE SPECIALIZATION**

<i>University Core Requirements</i>	(3) + 38
To include ECON 302i; ENGL 101; ENGL 102; MATH 139; PSYC 102; FL 301i. (Foreign language above 201a substitutes for three hours of humanities)	
<i>College of Liberal Arts</i>	(11)
One year foreign language; additional English composition or Writing-Across-the-Curriculum approved foreign language course.	
<i>French Requirements</i>	29-32
(Three hours substitute for humanities; three hours substitute for CoLA English composition requirement; eight hours substitute for CoLA foreign language requirement)	
200 level: French 201a,b	8
300 level: French 320a,b, 321	9
400 level: French 410, 470	6
300 or 400-level French course excluding 390/490	3
495 Internship and/or Study Abroad	3-6
The Internship/Study abroad requirement also serves to fulfill the Senior Thesis requirement. Students must register for a minimum of three hours.	
A. International Internship done on the FLIT model; or	
B. The following combination:	
1. At least one full semester of study abroad at a university in France or any other francophone country and	
2. A domestic internship; or	
C. Full year study abroad (2 semesters) as described under B1	
It is the responsibility of the student to find an internship, but he/she does so with guidance of the faculty adviser. Before being effected, the internship must be fully approved. (For both A and B2, registration for Foreign Language 495 is required.)	
Oral/Written Proficiency	0
<i>Area Studies Courses and Electives</i>	27
Speech Communication 301i	3
Additional eight courses	24
(Students should select eight additional courses (24 hours) with an international focus in Anthropology, Economics, Geography and Environmental Resources, History, Philosophy, or Political Science. The following are recommended: Economics 302i, 329, 429; Geography and Environmental Resources 304, 306; History 320, 324, 328, 337, 338, 339, 340, 370, 425, 433, 444, 474; Political Science 352i, 372i, 375, 459, 461, 475, 480.)	
<i>Career Orientation Electives</i>	18
In choosing electives, students are to select an area of concentration as a possible career to be combined with the study of foreign language to be approved by the major adviser. Areas such as Agriculture, Computer Science, Film, Food and Nutrition, Health Education, History, Linguistics, Literature, Management, Philosophy, Political Science, Sociology, Urban Planning, or other similar fields are offered as appropriate examples.	

General Electives	5-8
Total	120

GERMAN STUDIES

Students majoring in German may choose between a specialization in German Studies, Foreign Language and International Public Service or Teacher Education. Credit must be earned in at least one regularly scheduled 400-level German course taken on the Southern Illinois University Carbondale campus.

Bachelor of Arts Degree in German Studies, College of Liberal Arts

Requirements for Major in German Studies

University Core Requirements	(3) ¹ + 38
To include ENGL 101, ENGL 102, FL 301i	
College of Liberal Arts	(11) ²
One year foreign language	8
Additional English composition or WAC-approved foreign language course	3
Foreign Language	33 ²
GER 201a,b	8
GER 320a,b	7
GER 410, plus any combination of 300- and 400-level courses (at least one literature course must be taken)	18
Oral/Written Proficiency	0
General Electives (recommended are):	38
Art History: 347, 357, 417, 427 and 437; Economics: 302i, 329 and 429; History: 101, 201, 205, 326, 334, 425a,b, 444; Philosophy: 306, 468; Political Science: 170, 207, 250, 372i, 480, SPCM 301i	
Total	120

¹Foreign language, above 201a, substitutes for three humanities
²Three hours substitute for humanities, three hours substitute for CoLA English composition requirement, eight hours substitute for CoLA foreign language

Both oral and written language competency must be demonstrated in separate examinations. Minimum competency required for graduation is Intermediate-High oral and Advanced on the written.

German Studies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
German 101a,b	4	4	German 201a,b	4	4
English 101, 102	3	3	SPCM 101, Core Humanities... ..	3	3
Core Math, Fine Arts	3	3	Science	3	3
Core Social Science	3	3	FL 301i	3	-
Core Human Health, Elective ..	2	3	Elective	3	5
Total	15	16	Total	16	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
German 320a,b	4	3	German 410	3	-
German 335 or 460	3	-	German 381	-	3
German 385 or 435	-	3	German 336	3	-
Science	3	-	German 465	-	3
Multicultural Course	-	3	Interdisciplinary Course	3	-
Elective	6	6	Elective	6	6
Total	16	15	Total	15	12

GERMAN STUDIES MINOR

Courses above 100 level	18
201a,b	8
320a,b	7
German electives (300 or 400 level including at least one regularly scheduled course)	3

Total 18

**Bachelor of Science Degree, College of Education and Human Services
or Bachelor of Arts Degree, College of Liberal Arts** (with secondary school
certification)

Requirements for Major in German Studies with secondary school certification

University Core Requirements (3¹ + 38)

To include ENGL 101, 102, FL 301i

College of Liberal Arts (11)

To include one year of foreign languages, an additional English
composition course or writing-Across-the-Curriculum foreign
language courses, e.g., German 320b.

Foreign Language 33

GER 201a,b 8

GER 320a,b 7

GER 410 plus any combination of 300- and 400-level
courses 18

Oral/Written Proficiency 0

Area Studies 3

FL 436 3

General Electives (recommended are): 35

Art History: 347, 357, 417, 427, 437, Economics: 302i,

329, 429, History 101, 201, 205, 326, 334, 425a,b, 444,

Philosophy: 306, 468, Political Science: 170, 207, 250,

372i, 480, SPCM 301i

Total 120

¹Foreign language, above 201a, substitutes for three humanities

²Three hours substitute for humanities, three hours substitute for CoLA English composition requirement, eight hours
substitute for CoLA foreign language

Both oral and written language competency must be demonstrated in separate
examinations. Minimum competency required for student teaching is Intermedi-
ate-High oral and Advanced on the written.

Bachelor of Arts Degree in German Studies, College of Liberal Arts

GERMAN FOREIGN LANGUAGE AND INTERNATIONAL PUBLIC SERVICE SPECIALIZATION

University Core Requirements (3) + 38

To include ECON 302i; ENGL 101; ENGL 102; MATH 139; PSYC
102 FL 301i. (Foreign language above 201a substitutes for three
hours of humanities)

College of Liberal Arts (11)

One year foreign language; additional English composition or
Writing-Across-the-Curriculum approved foreign language
course.

German Requirements 33-36

Three hours substitute for humanities, three hours substitute for
CoLA English composition requirement, eight hours substitute
for CoLA foreign language requirement

GER 201a,b 8

GER 320a,b 7

GER 410 plus any combination of 300- and 400-level courses 15

495 Internship and/or Study Abroad 3-6

The Internship/Study abroad requirement also serves to fulfill the
Senior Thesis requirement. Students must register for a mini-
mum of three hours.

A. International Internship done on the FLIT model; or

B. The following combination:

1. At least one full semester of study abroad at a university in Austria or Germany (e.g., at any of our established SIUC study abroad sites: Regensburg, Mainz, Zurich, or Salzburg) and	
2. A domestic internship; or	
C. Full year study abroad (2 semesters) as described under B1	
It is the responsibility of the student to find an internship, but he/she does so with guidance of the faculty adviser. Before being effected, the internship must be fully approved. (For both A and B2, registration for Foreign Language 495 is required.)	
Oral/Written Proficiency	0
General Electives (recommended are):	20
(Students should select additional courses with an international focus in Anthropology, Economics, Geography and Environmental Resources, History, Philosophy, or Political Science. The following are recommended: Economics 302i, 329, 429; Geography and Environmental Resources 304; History 320, 324, 328, 334, 337, 338, 340, 370, 425, 444, 474; Political Science 352i, 372i, 375, 459, 461, 475, 480, SPCM 301i).	
Career Orientation Electives	18
In choosing electives, students are to select an area of concentration as a possible career to be combined with the study of foreign language to be approved by the major adviser. Areas such as Agriculture, Computer Science, Film, Food and Nutrition, Health Education, History, Linguistics, Literature, Management, Philosophy, Political Science, Sociology, Urban Planning, or other similar fields are offered as appropriate examples.	
Total	120
GREEK	
(SEE CLASSICS)	
JAPANESE MINOR	
Japanese courses	20
100 level: 131b	4
200 level: 201a,b	8
300 level or 400 level	8
LATIN	
(SEE CLASSICS)	
RUSSIAN MINOR	
Russian courses above 100 level	18
200 level: 201a,b	8
Any combination of 300 or 400 level courses	10
SPANISH MAJOR	
Bachelor of Arts Degree in Spanish, College of Liberal Arts	
Requirements for Major in Spanish	33
200 level: Spanish 201a,b	8
300 level: Spanish 306, 310, 320a, 320b and 370	16
400 level: Spanish 410, 411 or 412, a 400-level literature course, plus any other 400-level course in Spanish (excluding 490)	9
(Spanish 320b fulfills the College of Liberal Arts Writing-Across-the-Curriculum requirements; Spanish 410 fulfills the College	

of Liberal Arts requirement for a second departmental writing-intensive course.)

Spanish 221 (Conversation, three credit hours) does not count toward the major, but taking the course is strongly recommended.

Spanish Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
Spanish 140a,b	4	4	SPAN 201a,b	4	4
ENGL 101, 102	3	3	SPCM 101, Core Humanities... ..	3	3
Core Math, Fine Arts	3	3	Science.....	3	3
Core Social Science	3	3	Elective.....	6	5
Core Human Health, Elective	2	3			
<i>Total</i>	15	16	<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Spanish 320a,b	4	3	Spanish 411 or 412.....	3	-
Spanish 306, 370	3	3	Spanish 400-Level Literature..	3	3
Spanish 310	-	3	Spanish 410	-	3
Core Science	3	-	Elective.....	6	3
Core Multicultural Course.....	-	3	Interdisciplinary Course	3	3
Elective	6	3			
<i>Total</i>	16	15	<i>Total</i>	15	12

Bachelor of Science Degree in Spanish, College of Education and Human Services or Bachelor of Arts Degree in Spanish, College of Liberal Arts
(with secondary school certification)

<i>Requirements for Major in Spanish with secondary school certification</i>	36
200 level: Spanish 201a,b	8
300 level: Spanish 306, 310, 320a,b and 370	16
400 level: Spanish 410, 411 or 412, Foreign Language 436, plus a 400-level literature course in Spanish	12
Spanish 221 (Conversation, three credit hours) does not count toward the major, but is strongly recommended.)	
Both oral and written language competency. Exams must be passed before the professional semester is begun.	

SPANISH MINOR

<i>Spanish courses above 100 level</i>	18
200 level: 201a,b	8
300 level: 306, 320a and 320b	10
Spanish 221 (conversation, 3 credit hours) does not count toward the minor, but is strongly recommended	

Bachelor of Arts Degree in Spanish, College of Liberal Arts

SPANISH FOREIGN LANGUAGE AND INTERNATIONAL PUBLIC SERVICE SPECIALIZATION

<i>University Core Requirements</i>	(3) + 38
To include ECON 302i; ENGL 101; ENGL 102; MATH 139; PSYC 102; FL 301i. (Foreign language above 201, substitutes for three hours of humanities)	
<i>College of Liberal Arts</i>	(11)
One year foreign language; additional English composition or Writing-Across-the-Curriculum approved foreign language course.	
<i>Major Requirements for Spanish with a Public Service Specialization</i>	30-33
Three hours substitute for humanities, three hours substitute for CoLA English composition requirement, eight hours substitute for CoLA foreign language requirement	
200 level: Spanish 201a,b	8
300 level: Spanish 306, 320a,b	10
Spanish 310, 335 or 370	6

400 level: 410, plus one of 400-level course (excluding Spanish 490)	6
495 Internship and/or Study Abroad	3
The Internship/Study abroad requirement also serves to fulfill the Senior Thesis requirement. Students must register for a minimum of three hours.	
A. International Internship done on the FLIT model; or	
B. The following combination:	
1. At least one full semester of study abroad at a university in Spain or any other Spanish-speaking country and	
2. A domestic internship; or	
C. Full year study abroad (2 semesters) as described under B1	
It is the responsibility of the student to find an internship, but he/she does so with guidance of the faculty adviser. Before being effected, the internship must be fully approved. (For both A and B2, registration for Foreign Language 495 is required.)	
Oral/Written Proficiency	0
Area Studies Courses and Electives	27
SPCM 301i	3
Additional eight courses	24
(Students should select eight additional courses (24 hours) with an international focus in Anthropology, Economics, Geography and Environmental Resources, History, Philosophy, or Political Science. The following are recommended: Economics 302i, 329, 429; Geography and Environmental Resources 304, 306; History 320, 324, 328, 337, 338, 339, 340, 370, 425, 433, 444, 474; Political Science 352i, 372i, 375, 459, 461, 475, 480.)	
Career Orientation Electives	18
In choosing electives, students are to select an area of concentration as a possible career to be combined with the study of foreign language to be approved by the major adviser. Areas such as Agriculture, Computer Science, Film, Food and Nutrition, Health Education, History, Linguistics, Literature, Management, Philosophy, Political Science, Sociology, Urban Planning, or other similar fields are offered as appropriate examples.	
General Electives	4-7
Total	120

Foreign Language Courses (FL)

For other foreign language courses see Chinese, Classics, East Asia, French, German, Japanese, Russian and Spanish following foreign language courses.

- 100A-3 to 9 (3 per topic) Variable Elementary Languages.** Elementary skills in a language not otherwise taught in this department. Primary emphasis is on oral skills. The language to be taught will vary. Should be taken in a,b sequence if available, 100b will always be a continuation of 100a. Instructional proficiency fee: \$5.
- 100B-3 to 9 (3 per topic) Variable Elementary Languages.** Elementary skills in a language not otherwise taught in this department. Primary emphasis is on oral skills. The language to be taught will vary. Should be taken in a, b sequence if available, as 100b will always be a continuation of 100a. Instructional proficiency fee: \$5. Prerequisite: 100a.
- 120-8 (4, 4) Beginning Sign Language.** This course is designed for students who have had limited or no prior knowledge of American Sign Language (ASL). The focus will be on developing visual readiness skills and developing both expressive and receptive skills in basic ASL for academic and social environments. The course includes an introduction to conversational vocabulary, finger spelling, grammatical principles and sign order rules (syntax). Information about the deaf community and deaf culture will also be introduced. Must be taken in a,b sequence. Lab fee: \$2 per credit hour. Prerequisite for 120b: 120a must be completed with a passing grade.

200-3 to 9 (3,3,3) Masterpieces of World Literature. (University Core Curriculum) Readings and discussions of Western literature taken from the Middle Ages to modern times. (a) France and Francophone Countries. (b) German, Switzerland, Austria. (c) Spain. All readings and lectures in English.

220-8 (4, 4) Intermediate American Sign Language. This course is designed for students who have taken ASL 120a,b or had some prior training in American Sign Language (ASL). The focus will be on continuing to develop both expressive and receptive skills in basic ASL for academic and social environments. The course includes conversational vocabulary, finger spelling, grammatical principles, and sign order rules (syntax). Information about deafness, deaf history and deaf language/performing arts will be covered as well as unique aspects of the American deaf community and deaf culture. Must be taken in a,b sequence. Prerequisite: (a) 120b with a passing grade, or one year of proficiency credit; (b) 220a with a passing grade.

258-1 to 4 Work Experience. Ungraded credit for work experience, which has taken place subsequent to admission to SIUC. Such experience must be related to student's major in a foreign language or FLIT. Mandatory Pass/Fail. Prerequisite: sophomore standing and approval by chair if foreign language major or by director if FLIT major.

298-3 Multicultural Applied Experience. (University Core Curriculum)(Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students should consult the department for course specifications regarding grading, work requirements, and supervision. Grade Pass/Fail. Prerequisite: written approval from the instructor of record.

301I-3 Cross-Cultural Orientation. (University Core Curriculum) Students are introduced to a wide variety of interaction patterns in cross-cultural social and professional settings. Through readings, interactive classroom activities, and out-of-class contact with the international community at Southern Illinois University Carbondale they acquire conceptual tools, which allow them to discover appropriate behavior patterns in diverse cultural settings.

302-3 Internship Extension. Facilitates the returned international intern to evaluate, appreciate and optimize the advantages of the international internship experience by sharing the international experience with as many members of the community as possible through a written report, oral presentations, mentoring, newsletter and broadcasting productions, and international student partnerships. Prerequisite: 202 and international internship experience.

436-3 Methods in Teaching Foreign Languages. Survey of general principles of second-language teaching, based upon insights of modern linguistics and learning-psychology. Followed by intensive practical work in classroom and language laboratory with teachers experienced in the student's specific language field. Required of prospective teachers of foreign languages in secondary schools. Prerequisite: concurrent or prior enrollment in 300-level course in French, German, Latin, Russian, or Spanish.

437-3 Instructional Technology and Foreign Language Learning. Familiarizes students with basic principles of design, development, utilization and evaluation of computer-based instructional materials for language learning. Introduces students to software authoring packages for multimedia instructional units and develops skills and knowledge for exploring the potential of the Internet as a language-learning and distance-education tool. Prerequisite: concurrent or prior enrollment in 300-level French, German, Latin, Russian or Spanish.

475V-1 to 40 Study Abroad in Vienna, Austria. One or two semesters at the University of Vienna and the Economics University, Vienna, Austria. All courses taught in German. Students may obtain 30 to 40 semester hours of credit in German language, literature and civilization, and with prior approval, in elective areas of study including music, art, architecture, history, anthropology, political science, physical education, business, economics, and sociology. This course or 475B is highly recommended for German and/or FLIT majors. Not for graduate credit. Students will be charged on the basis of 15 hours per semester regardless of the hours of credit actually earned. Prerequisite: 5 semesters of college German or equivalent with 3.0 grade point average.

491-1 to 4 Independent Study: American Sign Language/Deaf Studies. Guided individual exploration of some area(s) of significance within the field of American Sign Language or deafness. Students taking class for graduate credit will do critical study of one aspect. May be repeated as topic varies. Prerequisite: consent.

495-3 to 12 (3 to 6, 3 to 6) Internship. Provides structure for application and expansion of knowledge gained through extensive preparatory course work in the subject area for the internship, as well as in the foreign language, which has been studied. Normally taken abroad, in a country where the foreign language acquired by the student is universally used. Not for graduate credit. Prerequisite: senior standing, minimum 2.75 gpa, a business language course and a culture course (see Foreign Language and International Trade for details), and written approval from the director of Foreign Language and International Trade. This approval is subject to satisfactory completion of both oral and written language competency exams before the internship begins.

Chinese Courses (CHIN)

120-8 (4,4) Elementary Chinese. Standard (Mandarin) Chinese. The basic skills of listening, speaking, reading, and writing. No previous knowledge of Chinese required. Must be taken in a,b sequence. Lab fee: \$2 per credit hour. Prerequisite for 120b: 120a must be completed with a passing grade.

201-8 (4,4) Intermediate Chinese. [IAI Course: (b) H1 900] Standard (Mandarin) Chinese. Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in a,b sequence. Prerequisite: (a) 120b with a passing grade (b) 201a with a passing grade.

305-2 to 4 (2,2) Individualized Language Study. Designed to improve language skills beyond the intermediate level. Tailored to the particular needs of students. Prerequisite: 201b or equivalent.

320-8 (4,4) Advanced Chinese. Standard (Mandarin) Chinese. Further development of listening, speaking, reading, and writing skills on the advanced level. Emphasis on developing proficiency in reading modern Chinese through cultural readings. Must be taken in a,b, sequence. Prerequisite: (a) grade of C or better in 201b or two years of proficiency credit or permission of section head; (b) 320a with a grade of C or better or equivalent.

370-3 Contemporary China. A study of customs, habits, beliefs and traditions operating in China today. Taught in English. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: East Asian 102 or consent of instructor.

390-1 to 6 Independent Study in Chinese. Directed individual study of some question, author, or theme of significance in the field of Chinese literature, language, or culture. Prerequisite: consent of instructor.

410-3 The Linguistic Structure of Chinese. (Same as Linguistics 411.) Phonology and syntax of Mandarin Chinese. Principal phonological features of major Chinese dialects. Special emphasis on the contrastive analysis between Mandarin Chinese and English. Theoretical implications of Chinese syntax for current linguistic theories. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: one year of Chinese or Linguistics 401.

435-3 Business Chinese. An overview of China's business through reading in Chinese dealing with the major aspects of China's foreign trade ranging from broad principles and policies to concrete details of operation and procedure. Enhancement of conversational skills for business contexts. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 320 or equivalent.

470-3 Chinese Literature in Translation. Reading and analysis of selected Chinese works, authors, themes or genres in English translation with attention to literary genres and thought from ancient to contemporary times. Students taking this course for graduate credit will do a critical aspect. No knowledge of Chinese is required.

490-1 to 6 Advanced Independent Study in Chinese. Directed individual study of some question, author, or theme of significance in the field of Chinese literature, language, or culture. Prerequisite: consent of instructor.

Classics Courses (CLAS)

130-8 (4,4) Elementary Classical Greek. The object of this course is to give students a firm foundation in the grammar, vocabulary, and syntax of Ancient Greek in order to enable them to progress to the reading of the Greek classics and New Testament. Must be taken in a,b sequence. No previous knowledge of Greek required. Lab fee: \$2 per credit hour. Prerequisite for 130b: 130a must be completed with a passing grade.

133-8 (4,4) Elementary Latin. The object of this course is to give students a firm foundation in the grammar, vocabulary, and syntax of Latin in order to enable them to progress to the reading of the Latin classics. Must be taken in a,b sequence. No previous knowledge of Latin required. Lab fee: \$2 per credit hour. Prerequisite for 133b: 133a must be completed with a passing grade.

201-8 (4,4) Intermediate Greek. [IAI Course: (b) H1 900] Reading and interpretation of selected works by authors such as Xenophon, Plato, Homer, and the New Testament writers. Must be taken in a,b sequence. Prerequisite: (a) 130b with a grade of C or better, or one year of proficiency credit; (b) 201a with a passing grade.

202-6 (3,3) Intermediate Latin. [IAI Course: (b) H1 900] Reading from authors such as Livy, Caesar, and Cicero. Must be taken in a,b sequence. Prerequisite: (a) 133b with a grade of C or better, one year of proficiency credit; (b) 202a with a passing grade.

230-3 Classical Mythology. (University Core Curriculum) [IAI Course: H9 901] An inquiry into the nature of myth and its relevance today while studying selected myths principally of the Greeks and Romans.

270-3 Greek Civilization. (University Core Curriculum) An introduction to the life and culture of ancient Greece. Greek contributions to western civilization in literature, art, history, and philosophy. No knowledge of Greek or Latin is required.

271-3 Roman Civilization. (University Core Curriculum) An introduction to the life and culture of ancient Rome. Rome's function in assimilating, transforming, and passing on the Greek literary and intellectual achievement. Rome's own contributions in the political, social, and cultural spheres. No knowledge of Greek or Latin is required.

310-3 to 9 (3 per topic) Ancient Art and Archaeology. Survey of the physical remains of ancient civilizations of the Aegean and Mediterranean areas. Special attention to the artistic and architectural achievements of the Greeks and Romans. Occasionally offered overseas. No knowledge of Greek or Latin is required.

315I-3 Classical Themes and Contemporary Life: Seminar Series. (University Core Curriculum) [IAI Course: H9 900] Specific aspects of Classical Civilization are compared with aspects of our own society. In alternate years, the course will treat different themes, e.g., Drama's Birthplace: Classical Athens; Roman Heroes and Anti-Heroes, or Athletics, Sports and Games in the Ancient World. When offered in Europe, the course will focus on how these values are reflected in architecture, art, the military and the arena from ancient times through the Renaissance and beyond.

320-3 Latin Composition. The object of this course is to understand and appreciate the structure and style of Latin through composition. Prerequisite: grade of C or better in 202b or two years of proficiency credit or permission of section head.

321-2 (1,1) Greek Composition. The object of this course is to understand and appreciate the structure and style of Greek through composition. Prerequisite: (a) grade of C or better in 201b or two years of proficiency credit or permission of section head; (b) 321a with a grade of C or better or equivalent.

332-3 Classical Drama. Reading several tragedies and comedies of the Greeks and Romans both with a view to enjoying them as timeless works of art and with a view to understanding how they grew out of the

societies of classical Greece and Rome. No knowledge of Greek or Latin is required. This course satisfies the CoLA Writing Across the Curriculum requirement.

350-3 Homer in Greek. Reading and interpretation of selections from the *Iliad* or the *Odyssey*. Homeric grammar and metrics, epic diction, the conventions of oral poetry. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: 201a and b, with a grade of C or better.

351-3 Greek Lyric Poetry in Greek. Reading and interpretation of poets of the Archaic Age such as Alcaeus, Sappho, and Pindar. Socio-political background, dialects, meters. Prerequisite: 201a and b, with a grade of C or better.

352-3 to 9 (3 per topic) Greek Tragedy in Greek. Reading and interpretation of selections from Greek tragic playwrights (Aeschylus, Sophocles, Euripides). Prerequisite: 201a and b, each with a grade of C or better.

353-3 to 9 (3 per topic) Greek Comedy in Greek. Reading and interpretation of the works of Greek comic playwrights such as Aristophanes and Menander. Prerequisite: 201a and b, each with a grade of C or better.

354-3 to 9 (3 per topic) Greek Philosophy in Greek. Reading and interpretation of the major works of Greek philosophy. Recommended for students with a double major in classics and philosophy. Prerequisite: 201a and b, each with a C or better.

356-3 to 9 (3 per topic) Greek Historians in Greek. Reading and interpretation of the works of Greek historians such as Herodotus, Thucydides and Xenophon. Recommended for students with double majors in classics and history. Prerequisite: 201a and b, with a grade of C or better.

370-3 to 9 (3 per topic) Vergil in Latin. Selections from Vergil's major works, the *Aeneid*, *Eclogues*, and *Georgics*. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: 202a and b, each with a grade of C or better.

371-3 to 9 (3 per topic) Roman Lyric Poetry in Latin. Reading and interpretation of Latin lyric poetry. Socio-political background, meters, debts to Greek poets. Prerequisite: 202a and b, each with a grade of C or better.

372-3 to 9 (3 per topic) Senecan Tragedy in Latin. Reading and interpretation of Roman tragedies by Seneca. Prerequisite: 202a and b, each with a C or better.

373-3 to 9 (3 per topic) Roman Comedy in Latin. Reading and interpretation of selections from play(s) by Plautus and Terence. Prerequisite: 202a and b, each with a grade of C or better.

374-3 Roman Philosophy in Latin. Selections from Cicero, Lucretius, and Seneca the Younger. Recommended for students with double majors in philosophy and classics. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: 202a and b, each with a grade of C or better.

376-3 to 9 (3 per topic) Roman Historians in Latin. Selections from Caesar, Sallust, Livy, Tacitus and Suetonius. Recommended for students with double majors in classics and history. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: 202a, b, each with a grade of C or better.

377-3 to 9 (3 per topic) Roman Satire in Latin. Reading and interpretation of work of authors such as Horace, Juvenal and Persius. Prerequisite: 202a and b, each with a grade of C or better.

392-3 to 9 (3 per topic) Cicero in Latin. Reading and interpretation of Cicero's works. Prerequisite: 202a and b, each with a grade of C or better.

393-3 to 9 (3 per topic) Ovid in Latin. Reading and interpretation of Ovid's works including *Metamorphoses*, *Amores*, *Heroides* and *Ars Amatoria*. Recommended for students with double majors in classics and English. Prerequisite: 202a and b with a grade of C or better in each.

415-3 to 9 (3 per topic) Readings in Greek Authors. Reading and interpretation of works of Greek literature at an advanced level. Students taking the course for graduate credit will do a critical study of one aspect. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: two semesters of 300-level Greek or consent of instructor.

416-3 to 9 (3 per topic) Readings in Latin Authors. Reading and interpretation of works of Latin literature at an advanced level. Students taking the course for graduate credit will do a critical study of one aspect. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: two semesters of 300-level Latin or consent of instructor.

488-3 Latin as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. Undergraduates who wish to enroll are encouraged to consult with course instructor. With consent of student's own department, and with a grade of B or A, satisfies graduate program requirements for foreign language as a research tool. Prerequisite: one year of Latin or equivalent.

491-3 to 9 (3 per topic) Topics in Classics. Intensive examination of selected areas of interest such as women in antiquity, Greece and the Near East, magic and superstition in the Ancient World.

496-1 to 9 (1 to 3 per topic) Independent Study in Classics. Guided research on problems in classics. The academic work may be done on campus or in conjunction with approved off-campus activities. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: consent of instructor.

497-3 Honors in Classics. Readings of classical literature, in Greek or Latin or English translation, for junior or senior majors. The course requires preparation of an honors paper or comparable project, and satisfies one of the requirements for graduation with honors in classics. This course satisfies the CoLA Writing Across the Curriculum requirement. Not for graduate credit. Prerequisite: 3.75 grade point average in classics courses and consent of classics faculty.

East Asian Courses (EA)

102-3 East Asian Civilization. (University Core Curriculum) An introduction to East Asian cultural traditions, literature, philosophy, history, art and social organization of China and Japan.

300-3 Masterpieces of Oriental Literatures. Lectures and collateral readings of representative oriental literary works in English translation with special attention to literary forms and thought from ancient to contemporary China and Japan. No knowledge of an oriental language required.

370-1 to 6 (1 to 3 per topic) Topics in East Asian Cultural Traditions. Selected topics in East Asian cultural traditions. May be repeated to a total of six hours with the consent of the department. No prerequisite. Taught in English.

French Courses (FR)

101A-4 French Language and Culture I. (University Core Curriculum) This course offers an introduction to the language and culture of the French-speaking people. It combines an overview of French political, economic, social, and aesthetic developments with the acquisition of elementary-level written and spoken French. No previous knowledge of French is required. Must be taken in a,b sequence. Lab fee: \$8.

101B-4 French Language and Culture II. (University Core Curriculum) This course offers an introduction to the language and culture of the French-speaking people. It combines an overview of French political, economic, social, and aesthetic developments with the acquisition of elementary-level written and spoken French. Lab fee: \$8. Prerequisite: 101a with a passing grade.

123-8 (4,4) Elementary French. This course is to be used solely for 100-level French proficiency and transfer credit. It can be used to fulfill college language requirements. It does not count toward the University Core Curriculum requirements.

200-3 Women in French and Francophone Literatures. (University Core Curriculum)(Same as Women's Studies 200.) This course offers a study of the representation of women in 20th century French and Francophone literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

201-8 (4,4) Intermediate French. [IAI Course: (b) H1 900] Grammar review, translation, oral practice, written composition, and development of reading skills. Reading of material on contemporary France and selections from French literature. Must be taken in a,b sequence. Prerequisite: (a) 101b, with a passing grade, 123b, or one year of proficiency credit; (b) 201a with a passing grade.

220-2 to 4 (2,2) Intermediate French Conversation. Development of oral skills on the intermediate level. Not usually accepted toward major requirement. Prerequisite: 123b or 190 or equivalent.

310-4 Development of French Literature from the Middle Ages Through the Eighteenth Century. Major literary movements and authors as exemplified in representative works.

311-3 Modern French Literature. The themes, structures, and language of some major works of poets, novelists, and playwrights from the early Romantics through the Existentialists and Robbe-Grillet.

312-3 French Literature and Cinema. An overview of the history of French cinema and an introduction to French literature. This course will notably examine the interaction between two major forms of art, literature and cinema. Study of literary texts and their film adaptations; reaction of French writers to cinema; new narrative techniques and redefinition of literature since the 1960's inspired by cinema.

320-6 (3,3) Advanced Language Skills. A review of grammar and syntax with extensive practice in translation and composition. Reading of French texts as basis for discussion and papers. Must be taken in a,b sequence. French 320b satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: (a) grade of C or better in 201b or two years of proficiency credit or permission of section head; (b) 320a with a grade of C or better or equivalent.

321-3 Advanced French Conversation. Improvement of self-expression and listening comprehension. Expansion of vocabulary and idioms emphasized through classroom and language laboratory work. Highly recommended for those students with a major in French. Prerequisite: 201b.

330-3 Advanced Writing Skills. This course will help students make the transition from intermediate language courses to advanced courses that call for more sophisticated writing skills. Selections of texts (from media, literature, etc.) and exercises will teach the skills necessary to read, analyze and summarize texts, as well as write critical analyses and argumentative essays. Prerequisite: concurrent enrollment in 320a or permission of instructor.

335-3 Business French. An overview of cultural, economic, and commercial France. Study through readings and discussions of the following topics: government, agriculture, industry, and commerce; European Union and foreign trade, financial institutions and taxation, social classes, and the world of work. France as a society of consumption. Translations and some commercial correspondence. Prerequisite: 320a or equivalent.

350-3 French Phonetics. Introduction to French phonetics involving perception and production of spoken French. Emphasis on corrective pronunciation and avoidance of English interference. Prerequisite: 201B or consent of faculty.

375-1 to 6 Travel-Study in France. Travel-Study project, planned under supervision of French faculty and carried out in France. Prerequisite: 201b, and consent of faculty.

390-1 to 6 Independent Study in French. Individual exploration of some question, author, or theme of significance within the field of French literature, language, or culture. Prerequisite: consent of instructor.

410-3 Advanced Language Study. Designed to improve language skills beyond the level of 320. Selected grammar review, intensive practice in effective use of the written and spoken language through translations and free compositions. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite 320b or permission of instructor.

411-3 Linguistic Structure of French. (Same as Linguistics 413.) Study of the phonology, morphology, and syntax of modern spoken and written French, stressing interference areas for English speakers in learning French. Prerequisite: 320b and permission of instructor.

412-3 History of the French Language. A survey of the phonological and morphological changes from Latin through Vulgar Latin and Old French to Modern French; study of an original Old French text, such as the *Chanson de Roland* or a romance of Chretien de Troyes. Knowledge of Latin not required. Prerequisite: permission of instructor.

414-3 Translation Techniques. Practice in oral translation—simultaneous and subsequent; written translation practice, from and into French, of materials from sources varying from technical, commercial, political, to general interest. Advanced grammar and syntax review as they relate to translation, with practice through exercises and translation. Prerequisite: 320b or equivalent and permission of instructor.

435-3 Business French II. Detailed treatment of postal facilities and services, types of banks and their operations, transport of goods, import-export bills of exchange, billing and shipping, insurance, accounting, and the stock market. These topics will be the subject of translations and of commercial correspondence. May be taken independently of 335. Prerequisite: 320b or equivalent or permission of instructor.

440-3 Literature of the Enlightenment. Study and discussion of the novel, theater, and philosophic writing of 18th century France as literature and as expressions of the Enlightenment. Major attention given to Montesquieu, Voltaire, Diderot, and Rousseau. Prerequisite: permission of instructor.

450-3 Literary Movements of the 19th Century. Romanticism, Realism, and Naturalism in poems, novels and theater plays followed by an examination of the reaction to these movements and of the influence of symbolism. Prerequisite: permission of instructor.

460-3 Studies in Literature of the 20th Century. Examination of the major themes, forms, techniques and style of novelists from Gide and Proust to Robbe-Grillet and dramatists from Firdoux to Lonesco and Beckett. Prerequisite: permission of instructor.

470-3 French Culture and Civilization. Study of France culture and civilization (history, philosophy, literature, and the arts) treated as a means of better understanding present day France: values, attitudes, beliefs and instructions. Offered in French. Prerequisite: 320a and permission of instructor.

475-3 to 6 Travel-Study in France. Travel-study project, planned under supervision of French faculty and carried out in France. Amount of credit depending on scope of study. Prerequisite: 320a or equivalent.

476-3 Francophone Cultures and Literatures. Representative works and authors of the francophone world outside of France with special reference to African, Caribbean and Canadian literatures. Prerequisite: permission of instructor.

480-3 Studies of Masterpieces of French and Francophone Literatures. Selected readings from French and Francophone authors. Introduction to main literary movements from the Middle Ages to the 20th century. Prerequisite: 330 or permission of instructor.

488-3 French as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement for foreign language as a research tool. Prerequisite: permission of instructor, or one year of French, or equivalent.

490-1 to 6 Advanced Independent Study in French. Individual exploration of some question, author, or theme of significance within the field of French literature, language or culture. Prerequisite: 320a and permission of instructor.

German Courses (GER)

101A-4 German Language and Culture I. (University Core Curriculum) This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. No previous knowledge of German required. Must be taken in a,b sequence. Lab fee: \$2 per credit hour.

101B-4 German Language and Culture II. (University Core Curriculum) This course offers an introduction to the language and culture of the German-speaking peoples. It combines an overview of German political, economic, social and aesthetic developments with the acquisition of elementary-level written and spoken German. Must be taken in a,b sequence. Lab fee: \$2 per credit hour. Prerequisite: 101a with a passing grade.

126-8 (4,4) Elementary German. This course is to be used solely for 100-level German proficiency and transfer credit. It can be used to fulfill college language requirements. It does not count toward the University Core Curriculum requirements.

201-8 (4,4) Intermediate German: Cultural Encounters. [IAI Course: (b) H1 900] Continued grammar and vocabulary of development through reading, writing, listening, and speaking German. Up-to-date subject matter from film, politics, fine arts, literature and science will bring students to a deeper understanding of the German language and culture. Conducted primarily in German. Must be taken in a,b sequence. Prerequisite: (a) 101b with a passing grade; (b) 201 with a passing grade.

320-7 (4,3) Advanced Conversation and Writing: 20th Century Voices. Practice in oral and written composition. Review of grammatical concepts and their applications. Emphasis on texts by important figures in modern German, Austrian and Swiss literature. Conducted in German. Must be taken in a, b sequence. German 320b satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: (a) grade of B or better in 201b or permission of instructor. (b) 320a with a passing grade.

335-3 The Germans I: From Tribes to Empire in History and Literature. The course introduces students to the cultural and political history of Germany from Germanic tribal times to the 18th century. Through readings, lectures and discussions in German, augmented by audio-visual media, students will become familiar with literary works in a historical context and gain an understanding of artistic movements and political developments in this period. Prerequisite: 201b or equivalent.

337-3 The Germans II: From Reich to Republic in History and Literature. The course introduces students to the cultural and political history of Germany from the 19th century to the present. Through readings, lectures, and discussions in German, augmented by audio-visual media, students will become familiar with literary works in a historical context and develop an understanding of artistic movements and political developments in the modern period. Prerequisite: 201b or equivalent.

370-3 Contemporary Germany. Study of life in Germany since World War II including the customs and habits, thoughts and beliefs, as well as the broad complex of traditions basic to everyday life. Readings include literary and journalistic materials as well as written and filmed documentaries. Taught primarily in German. Prerequisite: 201b or equivalent and/or consent of instructor.

381-3 Film and Literature. This course will introduce students to developments in German film making from the 1920s through the present from a historical perspective. Focusing on silent film, Expressionism, Weimar period, Third Reich, East German film, the New German Cinema, and Postmodernism, students will gain a familiarity with cinematic aesthetics and cultural issues as treated through the medium of film. Conducted in German. Prerequisite: 201b or equivalent.

385-3 Reading German Poetry. This course introduces students to German poetry of the 18th, 19th and 20th centuries. Poetry is an important aspect of the German literary and musical tradition, and is a useful tool for all students even those who dislike it, to understand the language and culture. Assignments will include reading and analyzing individual poems, musical settings of poems, and outside materials. Conducted in German. Prerequisite: 201b with a grade of C or higher.

390-1 to 6 (1 to 3, 1 to 3) Directed Language Learning Activity. Special projects such as translation practicum, German play production, German newsletter, instructional assistance, special presentations, or internship in a business firm in Germany. May count as the fifth semester required for Foreign Languages and Literatures 475a. Prerequisite: consent of instructor.

410-3 German for Writing Proficiency. This course teaches the advanced grammar, vocabulary, and stylistic principles students need to write expository prose, critical essays, business and personal correspondence in German. Through readings and discussions in German, it also expands vocabulary and speaking ability. The final exam in the course can be counted for the German writing proficiency examination. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: 320b with a grade of B or the equivalent.

411-3 Linguistic Structure of Modern German. (Same as Linguistics 409.) The descriptive study of phonology, grammatical structure, and vocabulary of modern German with consideration of its structural differences from English and application to teaching. Appropriate for students with at least two years of German. Conducted in English.

435-3 Business German. An overview of German business, presented through lectures, readings, and discussions. Coursework with textbook and supplementary materials will focus on the major aspects of German business. Exercises will include vocabulary building, listening and reading comprehension, oral and written summarization, role playing in typical situations, mock telephone conversations, and business correspondence. Prerequisite: 320b or consent of instructor.

460-3 German Theater: Literature on Stage. This course will explore developments in the German drama from the eighteenth century to the present, focusing on dramatic form and social, historical, and cultural contexts. Conducted in German. Prerequisite: 320a or consent of instructor.

465-3 Self and Society: First-person Narrative. This course will introduce beginning students to German literature written in first person. It serves as an introduction to the way the personal voice is constructed in texts, and students will develop their understanding of the German narrative tradition. We will collectively probe our notions of realism, believability, and truth as we read stories of self-conscious narrators. Conducted in German. Prerequisite: 320b with a grade of C or higher.

488-3 German as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for reading and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement for foreign language as a research tool. Prerequisite: Passing of CLEP test in German; or one year of college-level German; or consent of instructor (as determined by examination).

490-1 to 6 (1 to 3, 1 to 3) Independent Study in German. Project-study under supervision of German faculty. Amount of credit depends on scope of study. May be repeated as the topic varies, up to the maximum of six semester hours. Prerequisite: senior or graduate standing and approval of supervising instructor.

493-3 to 9 (3 per topic) Seminars in Special Topics in Literature and Language. Topics vary and are announced in advance; both students and faculty suggest ideas. May be repeated as the topic varies. Primarily for undergraduates. Prerequisite: consent of instructor.

Japanese Courses (JPN)

131-8 (4,4) Elementary Japanese. Emphasis on basic skills of listening, speaking, reading, and writing. No previous knowledge of Japanese is required. Must be taken in a,b sequence. Lab fee: \$2 per credit hour. Prerequisite for 131b: 131a must be completed with a passing grade.

201-8 (4,4) Intermediate Japanese. [IAI Course: (b) H1 900] Development of listening, speaking, reading, and writing on the intermediate level. Must be taken in a,b sequence. Prerequisite: (a) 131b with a passing grade, or one year of proficiency credit; (b) 201a with a passing grade.

305-2 to 4 (2,2) Individualized Language Study. Designed to improve language skill beyond the intermediate level. Tailored to the particular needs of students. Prerequisite: 201b or equivalent.

320-8 (4,4) Advanced Japanese. Further development of listening, speaking, reading, and writing on the advanced level. Emphasis on developing proficiency in reading modern Japanese through cultural readings. Must be taken in a,b sequence. Prerequisite: (a) grade of C or better in 201b or two years of proficiency credit or permission of section head; (b) 320a with a grade of C or better or equivalent.

321-2 Conversational Japanese. Practice in spoken Japanese and practical writing skills (e.g., writing memos, letters, notes). Activities include practice of routines of Japanese etiquette, discussions of Japanese television and film, prepared and impromptu group discussion and speeches, writing and performing a play in Japanese. Not open to native speakers without permission. Prerequisite: 201a or consent of instructor.

360-3 Reading and Writing Japanese. Practice in reading Japanese for comprehension and writing for practical communication. Introduces a variety of written media (e.g., Japanese comic books, newspaper, magazines, children's books, school textbook) and teaches the fundamentals of Japanese word processing. Taught primarily in Japanese. Prerequisite: 201b or the equivalent.

370-3 Contemporary Japan. A study of customs, habits, beliefs, values and etiquette in Japanese culture. Instruction in English. Prerequisite: East Asian 102 or consent of instructor.

375-1 to 6 Travel Study in Japan. Supervised travel-study in Japan. Prerequisite: consent of faculty.

390-1 to 6 Independent Study in Japanese. Directed individual study of some question, author, or theme of significance in the field of Japanese literature, language, or culture. Prerequisite: consent of instructor.

410-3 The Linguistic Structure of Japanese. (Same as Linguistics 412.) Inductive approach to the analysis of various aspects (such as phonology, morphology, syntax) of Japanese grammar with emphasis on syntactic structures within any of the current theoretical frameworks such as pragmatics, functionalism and formal linguistics. May include contrastive analysis between Japanese and English, and close examination of theories of comparative-historical linguistics of Japanese and Korean. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: One year of Japanese or one previous course in linguistics or consent of instructor.

435-3 Business Japanese. An introduction to the language and culture of the Japanese business world and to the structure of the Japanese business economy. The emphasis will be on learning appropriate levels of formality and politeness in oral communication and on achieving competency in the specialized language of business. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 320a,b or equivalent.

490-1 to 6 Advanced Independent Study in Japanese. Directed individual study of some questions, author, or theme of significance in the field of Japanese literature, language, or culture. Prerequisite: consent of instructor.

Russian Courses (RUSS)

136-8 (4,4) Elementary Russian. Emphasis on basic skills of listening, speaking, reading, and writing. No previous knowledge of Russian required. Must be taken in a,b sequence. Lab fee: \$2 per credit hour. Prerequisite for 136b: 136a must be completed with a passing grade.

201-8 (4,4) Intermediate Russian. [IAI Course: (b) H1 900] Continuation of the language structure with practice in oral and written Russian. Must be taken in a,b sequence. Prerequisite: (a) 136b with a passing grade, or one year of proficiency credit; (b) 201a with passing grade.

305-4 Advanced Conversation and Composition. Improvement of self-expression, oral and written comprehension, free composition and conversation; readings based on the history of Russia, as well as readings of magazine and newspaper articles. This course satisfies the CoLA Writing Across the Curriculum requirement. Prerequisite: 201 or equivalent.

306-3 Intermediate Readings in Russian. Designed to improve skills in reading selections from Russian prose. Prerequisite: 201 or equivalent.

320-3 Advanced Language Skills. A review of fine points of grammar and polishing of student's syntax. Prerequisite: grade of C or better in 201b or two years of proficiency credit or permission of section head.

390-1 to 6 (1 to 3, 1 to 3) Independent Study in Russian. Directed independent study in a selected area of Russian studies. Prerequisite: consent of instructor.

411-3 Russian Stylistics. Writing styles in Russian and its application to the development of skills in written expression. This course satisfies the CoLA Writing Across the Curriculum requirement.

430-4 Business Russian. A study of the style of commercial language and its application to the development of skill in business correspondence, such as: inquiries, offers, orders, contracts, agreements, as well as documents concerning transport, insurance, and customs. Prerequisite: 201 or equivalent.

470-3 Russian Civilization. Soviet culture and civilization is studied primarily through literary works, journalistic materials, and excerpts from non-literary works as general background reading. Lectures are illustrated with maps, slides, films and art works. Taught in English. Readings are in English and in bilingual edition. May count toward Russian major with consent of graduate advisor.

490-1 to 6 Advanced Independent Study in Russian. Directed independent study in a selected area of Russian studies. Prerequisite: consent of instructor.

Spanish Courses (SPAN)

140-8 (4,4) Elementary Spanish. The basic skills of listening, speaking, reading, and writing. No previous knowledge required. Must be taken in a,b sequence. Lab fee: \$2 per credit hour. Prerequisite for 140b: 140a must be completed with a passing grade.

175-5 Accelerated Elementary Spanish. Elementary Spanish covered in one semester. The basic skills of listening, speaking, reading, and writing. Lab fee: \$2 per credit hour. Prerequisite: one year of high school Spanish or equivalent or permission of instructor.

201-8 (4,4) Intermediate Spanish. [IAI Course: (b) H1 900] Continued development of the four basic language skills. Must be taken in a,b sequence. Prerequisite: (a) 140b or 175 with passing grade, or one year of proficiency credit; (b) 201a with a passing grade.

221-3 Spanish Conversation for the Professions. Practice in spoken Spanish tailored to fit professions or careers. Topics are discussions on everyday situations in the selected profession. May be taken in any order. Frequent short talks by students. Does not count toward the major or minor in Spanish (a) Spanish for business and finance, (b) Spanish for law enforcement, (c) Spanish for medical personnel, (d) Spanish for social work, (e) Spanish for other professions. Prerequisite: 140b or two years of high school Spanish.

306-3 Intermediate Readings in Spanish. Designed to improve reading skills in Spanish. Prerequisite: 201b or equivalent.

310-6 (3,3) Survey of Hispanic Literature. (a) Spain, study of selected majors work. (b) Spanish-America. Need not be taken in sequence. Prerequisite: 306 or equivalent.

320-7 (4,3) Third-Year Grammar and Composition. Extensive practice in translation and composition; special attention to grammar problems, idiomatic expressions, and syntactical features. Must be taken in a,b sequence. Spanish 320b satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: (a) grade of C or better in 201b or two years of proficiency credit or permission of section head; (b) 320a with a grade of C or better or equivalent.

335-3 Introduction to Business Spanish. The language of the Hispanic business community in readings, correspondence, and documents. Prerequisite: 320b.

370-6 (3, 3) Hispanic Culture and Civilization. (a) The cultural patterns and heritage of the Spanish people from earliest times to present. (b) A survey of the cultural heritage of the Spanish-American people. Class discussion will be emphasized to improve conversational skills. Need not be taken in sequence. Prerequisite: 201b or equivalent.

390-1 to 4 (1 to 2, 1 to 2) Independent Study in Spanish. Individual exploration of some question, author, or theme of significance within the field of Spanish literature, language, or culture. Prerequisite: consent of instructor.

410-3 Advanced Spanish Grammar. A detailed study of complex grammatical structures of Spanish. In the course of manipulating these complex structures, students will expand their vocabulary and sensitivity to word choice, building the foundation for an understanding for stylistic differences. Not for graduate credit. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 320b.

411-3 Linguistic Structure of Spanish. (Same as Linguistics 414.) Theory and practice in Spanish pronunciation and study of Spanish grammatical structure, in contrast to English, with application to teaching.

412-3 History of the Spanish Language. Survey of internal and external history, from Vulgar Latin to Modern Spanish.

414-3 Translation Techniques. A practical introduction to the field of professional translation, from and into Spanish. Prerequisite: 320b or equivalent.

420-3 Studies in Literature of the Middle Ages. Studies of the origins of Spanish literature emphasizing works such as the *Cantar de Mio Cid*, *Libro de buen amor*, and *La Celestina*. Prerequisite: 310 or consent of instructor.

430-3 The Golden Age: Drama. Plays of Lope de Vega, Calderon, Tirso de Molina, and others. Prerequisite: 310a or 310b or consent of instructor.

431-3 Cervantes. Study of Miquel de Cervantes' masterpiece *Don Quixote* and of other Cervantine works. Prerequisite: 310a or b or consent of instructor.

432-3 The Golden Age: Prose and Poetry. The most representative prose and poetry written during the 16th and 17th centuries in Spain. Prerequisite: 310a or consent of instructor.

434-3 Colonial Literature. Study of the literature of Spanish America before 1825. Prerequisite: 310a or consent of instructor.

435-3 Business Spanish. Discussion and practice of the vocabulary, styles, and forms used in Spanish business correspondence, as well as report writing and documents dealing with trade, transportation, payment, banking and advertising. Does not count toward the M. A. in Foreign Languages. Prerequisite: 320b or consent of instructor.

450-3 Studies in Spanish Literature of the 19th Century. Romanticism, Realism, and Naturalism in Spain. Prerequisite: 310 or consent of instructor.

451-3 Studies in Spanish American Literature of the 19th Century. Modernism, Romanticism, Realism and Naturalism in Spanish America. Prerequisite: 310 consent of instructor.

460-3 Studies in Spanish Literature of the 20th Century. The main currents and outstanding works in the literature of Spain since 1900. Prerequisite: 310 or consent of instructor.

461-3 Studies in Spanish American Literature of the 20th Century. The main currents and outstanding works in the literature of Spanish America since 1900. Prerequisite: 310 or consent of instructor.

488-3 Spanish as a Research Tool. Concentrated and individualized training in the recognition and interpretation of basic and complex grammatical structures and in the systematic acquisition of the principles of word formation for vocabulary expansion. Techniques for intensive and extensive readings and for translation of unedited texts in the student's own field of study. Intended for graduate students. With consent of student's department, and with a grade of B or A, satisfies graduate program requirement for foreign languages as a research tool. Prerequisite: one year Spanish or equivalent.

490-1 to 3 Advanced Independent Study. Individual exploration of some topic in Hispanic literature, language, or culture. Prior consent of instructor required.

- Albuxech, Lourdes**, Associate Professor, Ph.D., University of California Riverside, 1997.
- Aydt, Judith**, Assistant Professor, *Emerita*, M.A., Southern Illinois University, 1966.
- Bell, Maria Rosa**, Lecturer, M.A., Southern Illinois University Carbondale, 1989.
- Bender, M. Lionel**, Professor, *Emeritus*, Ph.D., University of Texas at Austin, 1968.
- Betz, Frederick**, Professor, *Emeritus*, Ph.D., Indiana University, 1973.
- Brown, H. Paul**, Assistant Professor, Ph.D., Ohio State University, 2003.
- Carlson, Anne F.**, Assistant Professor, Ph.D., University of Wisconsin-Madison, 2001.
- Cáceres, Alejandro**, Associate Professor, Ph.D., Indiana University, 1992.
- Chonez, Kathy G.**, Lecturer, ABD, Indiana University, 1996.
- Cudahy, Mary A.**, Assistant Professor, Ph.D., University of California Berkeley, 2003.
- Gobert, David L.**, Professor, *Emeritus*, Ph.D., University of Iowa, 1960.
- Hammond, Charles E.**, Associate Professor, Ph.D., Columbia University, 1986.
- Hartman, Steven Lee**, Associate Professor, *Emeritus*, Ph.D., University of Wisconsin, 1971.
- Huth, Thorsten**, Assistant Professor, Ph.D., The University of Kansas, 2005.
- Johnson, David M.**, Associate Professor, Ph.D., University of North Carolina, Chapel Hill, 1996.
- Karayiannis, Dimitrios H.**, Lecturer, M.A., Southern Illinois University Carbondale, 1990.
- Keller, Thomas**, Associate Professor, *Emeritus*, Ph.D., University of Colorado Boulder, 1975.
- Kilker, James**, Professor, *Emeritus*, Ph.D., University of Missouri at Columbia, 1961.
- Kim, Alan Hyun-Oak**, Associate Professor, Ph.D., University of Southern California, 1985.
- Liedloff, Helmut**, Professor, *Emeritus*, Ph.D., Philips University, Germany, 1956.
- Maisier, Véronique**, Associate Professor, Ph.D., University of Paris-Sorbonne, 1998.
- Meinhardt, Warren**, Associate Professor, *Emeritus*, Ph.D., University of California at Berkeley, 1965.
- Mejia, Edgar**, Assistant Professor, Ph.D., Boston University, 2006.
- Momicilovic, Natasa**, Assistant Professor, Ph.D., Purdue University, 2004.
- O'Brien, Joan**, Professor, *Emerita*, Ph.D., Fordham University, 1961.
- Peters, Rosemary A.**, Assistant Professor, Ph.D., Harvard University, 2003.
- Smith, Jennifer**, Assistant Professor, Ph.D., Indiana University, 2005.
- Speck, Charles**, Assistant Professor, *Emeritus*, Laurea in Diritto Canonico, Pontifical Lateran University, Italy, 1963.
- Stahl, Lidia, C.**, Lecturer, M.A., Southern Illinois University Carbondale, 1981.
- Timpe, Eugene F.**, Professor, *Emeritus*, Ph.D., University of Southern California, 1960.
- Ulner, Arnold**, Assistant Professor, *Emeritus*, Ph.D., University of Missouri at Columbia, 1972.
- Walker, Pamela J.**, Lecturer, M.A., Gallaudet University, 1984.
- Wilkinson, Mildred**, Assistant Professor, *Emerita*, M.A., Southern Illinois University, 1965.
- Williams, Frederick**, Associate Professor, *Emeritus*, Ph.D., Cornell University, 1976.
- Winston-Allen, C. Anne**, Associate Professor and Chair, Ph.D., University of Kansas, 1979.

Forestry (Department, Major, Courses, Faculty)

Four specializations are offered within the major in forestry: forest resources management, forest hydrology, urban forest management and outdoor recreation resources management. University Core Curriculum requirements and a core of professional courses are similar for each specializations. Students majoring in the Department of Forestry may not take courses specifically required in the various specializations for pass/fail credit. The specializations are accredited by the Society of American Foresters, 5400 Grosvenor Lane, Bethesda, MD., 20814, (301) 897-8720.

Available to the Department of Forestry for teaching and research in addition to resources present on campus are the following: the Crab Orchard National Wildlife refuge; the Shawnee National Forest; a number of state parks and state forests; conservation areas and federal reservoirs. Collectively, these comprise more than a million acres of forestland, all in the vicinity of the University.

The curricula of the Department of Forestry prepare graduates for employment with local, state and federal natural resource agencies, as well as private industry. In addition, many graduates continue their education in advanced masters and doctoral programs. Federal agencies employing our graduates include the Forest Service, Natural Resources Conservation Service, Fish and Wildlife Service, National Park Service, Bureau of Reclamation, Bureau of Land Management, Environmental Protection Agency, Tennessee Valley Authority, and the Army Corps of Engineers. There are also employment opportunities in state gov-

ernment with agencies such as fish and game commissions, departments of natural resources and conservation, and forest services. At the local level, there are opportunities with urban forest and park systems. Private agencies have included Ducks Unlimited, the Nature Conservancy, the National Audubon Society and the American Forestry Association. Forestry graduates often are employed by private forestry consulting firms and by private industries such as Weyerhaeuser Co., International Paper Co., Georgia Pacific Corporation and Mead Westvaco Corp,

Bachelor of Science Degree in Forestry, College of Agricultural Sciences

FORESTRY MAJOR — FOREST HYDROLOGY SPECIALIZATION

The program in Forest Hydrology helps students develop knowledge and skills in integrated natural resource management in a watershed context with an emphasis on freshwater and forest resources. The goal of the Forest Hydrology specialization is to prepare individuals for water-related careers in federal and state government agencies, municipal/county watershed management, and environmental/engineering consulting firms. This specialization also prepares students for graduate study in natural resource management and hydrology. The specialization includes areas of study recommended and accredited by the Society of American Foresters and includes the course work necessary to qualify as a hydrologist in a federal agency. Students in the specialization are required to participate in either the forest resource management or outdoor recreation summer field camp to gain practical field experience. Summer camp fees for off-campus living expenses and transportation are not to exceed \$550 per student for the forest resource management camp or \$550 for the outdoor recreation resources management camp. Other courses in the program may require additional fees.

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Forestry with Forest Hydrology Specialization</i>	90
Forestry Core: 100, 201, 202, 220, 310, 314, 315, 331, 351, 381, 409, 410, 411, 485	38
Plant Biology 200, Chemistry 140a, 140b	(6) ¹ +6=12
Agribusiness Economics 204 or Economics 240	(3) ¹
English 101, 102, Speech Communication 101, Mathematics 140 or 141, Agribusiness Economics 318 or Mathematics 282 or Plant Biology 360	(12) ¹ +3=15
Forestry 422c or Forestry 310c, 314c, 351c, 360c	4 or 5
Forestry 402, 416 or 420, 429, 430, 452	13
Plant and Soil Science 240	4
Resource Electives (Course Selection) Forestry 350, 403, 405, 415, 416, 420, 428, 431, 451, 454, 460, 470, 480, Geography and Environmental Resources 401, 425, 433, 434, Geology 470, 471, 474, Mathematics 140, Physics 203a, 203b, Plant and Soil Science 441, 442, 443, 445, 446, 447, 448, 454, Zoology 410, 411, 414, 415, 458, 466	(13) ²
Electives (To be determined with advisor's assistance)	8
Total	130

¹Hours included in total for University Core Curriculum requirements.
²Minimum hours required.

Forestry Forest Hydrology Suggested Curricular Guide¹

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
FOR 100, Human Health.....	1	2	FOR 201, 220	3	2
PLB 200, MATH 140 or 141	4	4	FOR 202, 331	2	3
CHEM 140a,b	4	4	PLSS 240, SPCM 101	4	3
ENGL 101, 102	3	3	ECON 240 or ABE 204	-	3
Soc Sci, Humanities	3	3	Fine Arts, Interdisciplinary	3	3
			Humanities, ABE 318 or		
			MATH 282 or PLB 360	3	3
Total	15	16	Total	15	17

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
FOR 314, PLSS 401/403	-	3	FOR 411, 381	3	1
FOR 410, 315	3	3	FOR 416 or 420, 409	3	3
FOR 351	-	4	FOR 429, 402	2	3
FOR 485, 452	3	2	FOR 430	3	-
Multicultural Diversity	3	-	Resource Elective	-	5-7
Resource Elective, FOR 310 ..	6-8	4	Elective ¹	5-6	3
Total	15-17	16	Total	16-17	15-17

¹A minimum of 8 elective hours are required. At least two structured courses to be selected from among the areas listed: Forest Science; Business Administration or Law and Law Enforcement; Biological Science, Physical Science, or an appropriate Social Science.

Bachelor of Science Degree in Forestry, College of Agricultural Sciences

FORESTRY MAJOR — FOREST RESOURCES MANAGEMENT SPECIALIZATION

The program in forest resources management includes instruction leading to careers in forest management and production, multiple-use resource management, and the forest products industries. The goal of the Forest Resources Management specialization is to develop individuals with sufficient understanding of the physical, biological and economic considerations required to make sound management decisions for the multiple uses of forest resources. The specialization includes areas of study recommended and accredited by the Society of American Foresters. Emphasis is upon integrated resource management of natural and renewable resources, coordinating forest utilization methods and conservation practices, and preserving our wild lands heritage. A summer camp is required after the junior year to give the student practical field experience. Field study costs per student for off-campus living expenses and transportation are not to exceed \$550 per student and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses are specified in course descriptions.

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Forestry Major with Forest Resources Management Specialization</i>	89
Forestry Core: 100, 201, 202, 220, 310, 314, 315, 331, 351, 381, 409, 410, 411, 485	40
Plant Biology 200; Chemistry; 140a,b	(8) ¹ + 4 or (6) ¹ + 6
Agribusiness Economics 204 or Economics 240	(3) ¹
English 101, 102, Speech Communication 101, Mathematics 110 or 140, Mathematics 282 or Plant Biology 360 or Agribusiness Economics 318	(12) ¹ + 3
Five-week early summer field studies: Forestry 310c, 314c, 351c, 360c	5
Forestry 416	3
Plant and Soil Science 240	4
Courses selected from: Forestry 313, 350, 402, 403, 405, 408, 412, 414, 415, 418, 420, 428, 430, 431, 451, 452, 454, 460, 470, 480, Biology 307, Geography and Environmental Resources 401, Zoology 118, 468, 469	15
Electives	8
Total	130

¹Hours included in total for University Core Curriculum requirements.

Forest Resources Management Suggested Curricular Guide¹

FIRST YEAR	FALL	SPRING	SUMMER CAMP	SUMMER
FOR 100, Human Health	1	2	FOR 310C	1
PLB 200, MATH 110 or 140	4	3-4	FOR 314C	2
CHEM 140a,b	4	4	FOR 351C	1
ENGL 101, 102	3	3	FOR 360C	1
Soc Sci, Humanities	3	3	Total	5
Total	15	15-16		

SECOND YEAR	FALL	SPRING
FOR 201, 331	3	3
FOR 202, 220	2	2
PLSS 240	4	-
MTH 282, PLB 360 or ABE 318 ...	-	3
THIRD YEAR	FALL	SPRING
FOR 310	-	4
FOR 410, 314 or PLSS 401/403	3	3
FOR 315	-	3
FOR 485	3	-
FOR 351	4	-
Resource Elective	9-11	6-7
Total	16-17	16-17

Fine Arts, Interdisciplinary	3	3
ECON 240 or ABE 204	-	3
Humanities	3	-
SPCM 101	-	3
Total	15	17
FOURTH YEAR	FALL	SPRING
FOR 411, 381	3	1
FOR 416, 409	3	3
FOR 430	3	-
Multicultural	-	3
Resource Elective	3-4	3-4
Elective ¹	3-4	5-6
Total	15-17	15-17

¹A minimum of 8 elective hours are required. At least two structured courses to be selected from among the areas listed: Forest Science; Business Administration or Law and Law Enforcement; Biological Science, Physical Science, or an appropriate Social Science.

FORESTRY MAJOR — OUTDOOR RECREATION RESOURCES MANAGEMENT SPECIALIZATION

The program in outdoor recreation resources management provides interdisciplinary training for management of the nation's outdoor recreation heritage. The National Recreation and Park Association and the Society of American Foresters among those recommend the courses offered. The goal of the Outdoor Recreation Resources Management option is to prepare students for entry into professional careers in managing and administering wild lands for outdoor recreation and park uses in a variety of agencies operating programs in diverse geographic and natural settings. The outdoor recreation resource management student travels through selected sections of the United States on a park and recreation field studies session of outdoor recreation and park facilities. The summer camp requires the student pay transportation and living expenses not to exceed \$550. Other courses in this program may also require additional fees.

University Core Curriculum Requirements	41
Requirements for Major in Forestry with Outdoor Recreation Resources Management Specialization	89
Forestry Core: 100, 201, 202, 220, 310, 314, 315, 331, 351, 381, 409, 410, 411, 485	40
Plant Biology 200, Chemistry 140a,b	(6) ¹ + 6
Agribusiness Economics 204 or Economics 240	(3) ¹
English 101, 102, Speech Communication 101, Mathematics 110 or 140, Mathematics 282 or Plant Biology 360 or Agribusiness Economics 318	(12) ¹ + 3
Plant and Soil Science 240, 328a,b	8
Forestry 422c (Park and Wildlands Management Camp)	4
Forestry 420, 421, 423, 470	13
Select at least seven hours from Forestry 402, 403, 405, 414, 415, 416, 428, 430, 451, 452, 454, 480, Biology 307, Geography and Environmental Resources 401, Zoology 468 or 469	7
Electives	7-9
Total	130

¹Hours included in total for University Core Curriculum requirements.

Forestry Outdoor Recreation Suggested Curricular Guide¹

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
FOR 100	1	-	FOR 201, 220	3	2
MATH 110 or 140	3-4	-	FOR 202, 331	2	3
PLB 200	-	4	PLSS 240, SPCM 101	4	3
CHEM 140a,b	4	4	ECON 240 or ABE 204	-	3
ENGL 101, 102	3	3	Fine Arts, Interdisciplinary ...	3	3
Social Sci, Humanities	3	3	Humanities, MATH 282 or		
Human Health	-	2	PLB 360 or ABE 318	3	3
Total	14-15	16	Total	15	17

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
FOR 485, FOR 310	3	4	FOR 411, 381	3	1
FOR 410, 314 or PLSS 401/403	3	3	FOR 420, 409	3	3
PLSS 328a, FOR 315	2	3	FOR 421, 430	3	3
PLSS 328b, FOR 351	6	-	FOR 470	-	2
Multicultural, Elective	-	6	Resource Elective, FOR 423..	4-6	3
Resource Elective	3	-	Elective ¹	3-4	4-5
<i>Total</i>	17	16	<i>Total</i>	16-18	16-17
SUMMER CAMP	SUMMER				
FOR 422c	4				
<i>Total</i>	4				

¹ A minimum of eight elective hours is required. At least three structured courses to be selected from among the areas listed; Forest Science; Business Administration or Law and Law Enforcement; Biological Science, Physical Science, or an appropriate Social Science.

Bachelor of Science Degree in Forestry, College of Agricultural Sciences

FORESTRY MAJOR — URBAN FOREST MANAGEMENT SPECIALIZATION

The program in urban forest management provides students with interdisciplinary training in the management of forest resources in urban areas and other settings where esthetics and high human impacts are of primary concern. The specialization includes areas of study recommended and accredited by the Society of American Foresters with additional course work providing a background in arboriculture, landscape management and design, small business management, and municipal government. Students are especially prepared for entry into careers in the green industry and municipal forest management and administration. A four-week summer camp, in conjunction with the Forest Resources Management Specialization, is required following the junior year. Field study costs per student for off-campus living expenses and transportation are not to exceed \$550 per student and must be borne by the student. Other costs for equipment and supplies, which are required for field study and certain other courses are specified in course descriptions.

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Forestry with Urban Forest Management Specialization</i>	89
Forestry Core: 100, 201, 202, 220, 310, 314, 315, 331, 351, 381, 409, 410, 411, 485	38
Plant Biology 200, Chemistry 140a, 140b	(6) ¹⁺⁶
Agribusiness Economics 204 or Economics 240	(3) ¹
English 101, 102, Speech Communication 101, Mathematics 110 or 140, Agribusiness Economics 318 or Mathematics 282 or Plant Biology 360	(12) ¹⁺³ =15
Forestry 310c, 314c, 351c, 360c	5
Forestry 416, 428	5
Plant and Soil Science 240, 327, 328a, 328b, 434	14
Political Science 213 or Management 350	3
Resource Electives (Course Selection) Forestry 402, 403, 405, 415, 416, 408, 414, 418, 420, 421, 423, 430, 451, 452, 452l, 480, Geography and Environmental Resources 401, Plant and Soil Science 322, 325, 420, 422, 428, 429, 442, 443, 447, 475, Zoology 468, 469	(8) ²
Electives (To be determined with advisor's assistance)	8
<i>Total</i>	130

¹Hours included in total for University Core Curriculum requirements.

²Minimum hours required.

Forestry Urban Forest Management Suggested Curricular Guide¹

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
FOR 100	1	-	FOR 201, 220	3	2
MATH 110 or 140	-	4	FOR 202, 331	2	3
PLB 200	4	-	PLSS 240, SPCM 101	4	3
CHEM 140a,b	4	4	ECON 240 or ABE 204	-	3
ENGL 101, 102	3	3	Fine Arts, Interdisciplinary	3	3
Soc Sci, Humanities	3	3	Humanities, ABE 318 or		
Human Health.....	-	2	MATH 282 or 360	3	3
Total	16	16	Total	15	17
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
FOR 410, 310.....	3	4	FOR 411, 381	3	1
FOR 314 or PLSS 401/403	-	3	FOR 416, 409	3	3
FOR 428, 315	2	3	FOR 485	3	-
PLSS 327, FOR 351	3	4	FOR 430	3	-
PLSS 328a, 328b	4	-	PLSS 434	-	3
POLS 213 or MGMT 350	3	-	Resource Electives	4	4
Multicultural Diversity.....	-	3	Elective ¹	-	4-5
Total	15	17	Total	16	15-16

¹A minimum of 8 elective hours are required. At least two structured courses to be selected from among the areas listed: Forest Science; Business Administration or Law and Law Enforcement; Biological Science, Physical Science, or an appropriate Social Science.

Courses (FOR)

- 100-1 Introduction to Forestry.** Acquaints students with the broad field of multiple-use forestry. Special emphasis is given to forestry as a profession. Required field trips cost \$15.
- 201-3 Ecology of North American Forests.** An introduction to forest ecology concepts, site factors, and forests of North America. Emphasis is placed on the silvics of tree species and the impact of soil, climate, and topography on forest vegetation. Forest site-community relationships of selected major North American forest ecosystems will be studied. Requires field trip transportation fee not to exceed \$20 per course registration. Prerequisite: Plant Biology 200, Plant and Soil Science 240, Biology 307, or consent of instructor.
- 202-2 Tree Identification Laboratory.** Field and laboratory identification of native and exotic trees, shrubs and woody vines using leaf, twig, bark and fruit characteristics. Requires field trip transportation fee not to exceed \$50 per course registration. Prerequisite: Plant Biology 200.
- 220-2 Introduction to Forest Recreation.** Trends in outdoor recreational use of wild lands and natural areas with emphasis on state and federal parks and forests. Introductory concepts in recreation resources management, visitor impact assessment and environmental interpretation.
- 310-4 Practices of Silviculture.** Detailed study of classical concepts and recently developed techniques utilized in silviculture treatment of forests. Major emphasis to be placed upon establishment, thinning, timber stand improvement, and regeneration of forest. Prerequisite: 331.
- 310C-1 Silviculture Field Studies.** Field experience for the student in the various facets of silviculture including planning, thinning, harvesting, timber stand improvement, and site-growth relationships. Offered only at summer camp. Costs for students are given in forestry description. Prerequisite: 310 and 331.
- 311-3 Resources Photogrammetry.** The science and art of obtaining reliable measurement by means of photographs, detection of disease, insects, and fire invasion by remote sensors; and delineation of resources boundaries through interpretation.
- 313-3 Harvesting Forest Crops.** Emphasis is given to lumber sale layouts, sale contracts, and harvest engineering methods. Consideration is given to the environmental impacts of harvesting. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: 310 or consent of instructor.
- 314-3 Insect, Abiotic, and Other Stresses Within the Forest.** The impact, recognition, and control of destructive forces within the forest environment. Emphasis placed upon stresses due to climatic factors, macro-parasitic plants, chemical injury, pollution, animal damage, and forest insect pests. Prerequisite: 331, Plant Biology 200, and Zoology 118 or consent of instructor.
- 314C-2 Forest Protection Field Studies.** The prevention and suppression of forest fires, the recognition and control of insect and disease organisms and other destructive agents in the forest. Offered at summer camp only. Summer camp transportation fees and costs are outlined in the Forestry Major description - Forest Resources Management Specialization. May require supplemental expenditures not to exceed \$25 per course registration. Prerequisite: 331 and two of the following: 314, 315, Plant Biology 357.
- 315-3 Fire in Wildland Management.** Fire as a phenomenon in wildland management. Topics covered are fire prevention, detection, suppression, behavior, effects, use, and economics. Major emphasis is on fire control and fire ecology. Requires field trip transportation fees and supplemental expenditures not to exceed \$50 per course registration. Prerequisite: 331 or consent of instructor.
- 320C-1 Forest and Wildlands Recreation Field Studies.** Recreation of forest and adjacent lands with emphasis on parks and national forests. Administration; interpretation; trends in use and development. Offered at summer camp only. Summer camp transportation fees and cost are outlined in the Forestry Major description - Forest Resources Management Specialization. May require supplemental expenditures not to exceed \$35 per course registration. Prerequisite: 220
- 331-3 Forest Ecosystems.** An analysis and integration of tree growth and of forest structure, material and energy flow, and classification in relation to climatic and edaphic factors to provide an ecological basis for management of forest ecosystems. Prerequisite: 201, 202, Biology 307, Plant and Soil Science 240.

- 341-3 Forestry Practices.** The fundamentals of integrated resource management of timberlands. Management systems, tree stand measurements. Planting and harvesting methods, multiple-use aspects of forest lands. Field trips. Emphasis on small forest ownerships. Not for graduation credit in forest resource's management.
- 350-3 Wood as a Raw Material.** Structure, identification, and properties of wood. Important species, significance of properties to end-use and significance of wood to the environment.
- 351-4 Forest Measurements.** Introductory measurement, statistical and data processing concepts; volume, growth, and yield of forest products; methods of sampling forest resources. Requires field trip transportation fees and supplemental expenditures not to exceed \$50 per course registration. Prerequisite: Mathematics 110 or 140; and Mathematics 282 or Plant Biology 360 or Agribusiness Economics 318.
- 351C-1 Forest Resources Measurements Field Studies.** Methods of determining volume and quality of forest products, forest resource inventory procedures, growth, and productivity studies. Field trip. Prerequisite: 351.
- 360C-1 Forest Industries Field Studies.** A study of primary and secondary forest product processing in the central hardwood region. Course requires field trips. Estimated trip costs \$50.
- 381-1 Forestry Seminar.** Presentation of topics pertinent to multiple-use management and utilization of forest resources. Prerequisite: senior standing.
- 391-1 to 4 Special Problems in Forest Resources.** Independent research sufficiently important to require three hours per week of productive work for each hour of credit.
- 401-3 Fundamentals of Environmental Education.** (Same as Agriculture 401 and Recreation 401) A survey course designed to help education majors develop an understanding of environmental education principles and teaching both inside and outside the classroom. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: ten hours of biological science or ten hours of recreation and/or education, or consent of instructor.
- 402-3 Wildland Hydrology.** Fundamentals of hydrology as related to forest and wildland water resources will be emphasized. Considerations will include the hydrologic cycle with emphasis on soil and groundwater regimes, evapotranspiration, surface and subsurface runoff, and the quantity and timing of water yield. Offered spring semester odd years.
- 403-3 Agroforestry.** This introductory, lecture-discussion course will examine the various agroforestry concepts, systems, technologies and practices. Focus will be on the potential use and benefits of agroforestry, which involves the deliberate combining of woody perennials with herbaceous/agronomic crops and/or animals, on the same land management unit, in some form of spatial arrangement and/or temporal sequence to produce desirable ecological and economical interactions among the different components. Prerequisite: junior standing or consent of instructor.
- 405-2 Forest Management for Wildlife.** Interrelations between forest practices and wildlife populations. Emphasis is on habitat requirements of different wildlife species and ways to manipulate the forest to improve wildlife habitats. Prerequisite: forestry major, or consent of instructor.
- 408-4 Introduction to Remote Sensing and Geographic Information Systems.** Introduction to the important characteristics of platforms and sensor systems used in modern remote sensing applications to forestry and the storage, analysis and display of this information by micro computers using vector and raster GIS configurations. Prerequisite: 414 and advanced standing.
- 409-3 Forest Resources Decision-Making.** Examines management planning decision-making for multiple-use forests particularly in the public sector. Reviews concepts useful for analyzing flow-resource problems, emphasizing systems approaches, introduces use of modern quantitative methods to evaluate resource use alternatives. Case studies. Prerequisite: 411, Mathematics 140.
- 410-3 Forest Resources Administration and Policy.** Nature of administrative organizations and influences on behavior of organization members. Society influences causing changes in forestry related organizations. Policy formation and implementation, including roles of special interest groups.
- 411-3 Forest Resources Economics.** Application of Micro- and Macro-economic principles to forest timber and non-timber production; capital theory, benefit-cost analysis; and economics of conservation. Prerequisite: Mathematics 140 and Economics 240 or Agribusiness Economics 204.
- 412-2 Tree Improvement.** Basic theories and techniques of obtaining genetically superior trees for forest regeneration. Prerequisite: senior standing.
- 414-3 Information Management.** The collection of physical, biological, and social variables in the field of forestry through sampling survey. The procedures of data manipulation and calculation and the presentation of graphs and tables.
- 416-3 Forest Resource Management.** The application of business procedures and technical forestry principles to manage forest properties. Emphasis on integrated resource management for tangible and intangible benefits. Requires field trip transportation fee and supplemental expenditures not to exceed \$40 per course registration. Prerequisite: completion of Forest Resource summer camp or consent of instructor.
- 417-2 Forest Land-Use Planning.** Principles of location theory as a basis for determining land use; supply of forest land; population pressure and demand; conservation principles; determination of forest land values; institutional factors influencing forest land-use; forest taxation; special taxes, and capital gains. Taught in alternate years. Prerequisite: 411 or consent of instructor.
- 418-2 Marketing of Forest Products.** The role of marketing in the forest industries; review of economic principles; product policy, planning the product line, pricing, marketing channels, marketing programs, marketing organization, and marketing research as influences on the marketing of lumber, wood products, pulp, and paper. Taught in alternate years. Prerequisite: 411 or consent of instructor.
- 420-3 Park and Wildlands Management.** The management of state and federal parks and recreation areas. A systems approach toward management and decision-making will be emphasized. Requires field trip

transportation fee and supplemental expenditures not to exceed \$40 per course registration. Prerequisite: Forestry 320c.

421-3 Recreation Land-Use Planning. Principles and methods for land-use planning of park and recreation environments with emphasis on human dimensions of natural resource research. Focus on planning process and types of information to gather and organize. Application in group field projects. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: 220, 420, or consent of instructor.

422C-4 Park and Wildlands Management Camp. A study of park conditions, visitors, and management practices at selected county, state, and federal park systems in the United States, including the federal wilderness preservation system. Offered as summer camp only. Requires field trip and supplemental expenditures not to exceed \$450 per course registration. Summer camp fees and costs are outlined in the Forestry Major-Outdoor Recreation Resources Management Specialization. Prerequisite: 220 and 320c and consent of instructor.

423-3 Environmental Interpretation. (Same as Agriculture 423 and Recreation 423) Principles and techniques of natural and cultural interpretation. Two hours lecture, three hours laboratory. Requires field trip transportation fee not to exceed \$40 per course registration. Prerequisite: ten hours biological science and ten hours of recreation.

428-2 Urban Forestry. An introduction to principles and practices useful in the management of trees and forests in populated settings. Emphasis is placed on the development of comprehensive management strategies consistent with the biological, physical, economic and social constraints of the urban environment. Prerequisite: junior or senior standing or permission of the instructor.

429-2 Watershed Management Field Laboratory. A field intensive laboratory course focused on hydrological and biological methods used to manage watersheds and assess watershed health. Laboratory topics include stream gauging, soil water and ground water sampling, channel morphology, stream benthos measurements, and water quality analysis of stream and lake ecosystems. Requires field trip transportation fee not to exceed \$30 per course registration.

430-3 Wildland Watershed Management. Emphasis is placed on the principles, technical problems, procedures, alternatives, and consequences encountered in managing wildland watersheds for the production of quality water in harmony with other uses. Prerequisite: 331.

431-3 Regional Silviculture. Designed to evaluate the various silvicultural practices as they are commonly employed in various regions of the United States. Offered alternate years. Prerequisite: 310.

451-2 Natural Resources Inventory. Theory and practical problems in biometrics to obtain estimates of natural resource populations. Use of computers and other advanced techniques. Case studies of inventory procedures. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: 351 or consent of instructor.

452-2 Forest Soils. Characterization and fundamental concepts of forest soils and their relationships to forest communities and forest management practices. Emphasis is on the chemical, biological and physical properties of soils as related to forests and forest management. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: Plant and Soil Science 240.

452L-2 Forest Soils Laboratory. Companion laboratory for 452. Emphasis is on methods to characterize and evaluate the chemical, physical, and biological properties of forest soils. Prerequisite: Plant and Soil Science 240 and concurrent registration in Forestry 452. Spring semester even years.

453-2 Environmental Impact Assessment in Forestry. Methods of assessing the environmental impact of land-use systems on forest resources and assessing the impact of forest management systems on environmental quality are presented. Case studies culminating in the preparation of environmental impact statements are emphasized. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: senior standing in a natural resource major.

454-2 to 8 Forest Ecology Field Studies. A study of forest communities, soils, and site conditions in one of the following ecosystems: (a) Boreal; (b) lake states; (c) Southern Appalachians; (d) Southern pine. Course requires a field trip of about 10 days. Each trip is two semester credits; a maximum of 6 credits may be applied toward graduate credit. Requires field trip transportation fee not to exceed \$300 per course registration (a,b,c or d) Prerequisite: senior standing in natural resources or biological sciences, courses in tree identification, forest ecology, and soils, and consent of instructor.

460-2 Forest Industries. Analysis of raw material requirements, the processes and the products of forest industries. The environmental impact of each forest industry will also be discussed.

470-2 Wilderness Management, Policy, and Ethics. Study of current management philosophy and practice in America's wilderness. Analysis of current wilderness policy and its historical evolution. Discussion of the evolution of the wilderness idea and the individuals that have influenced it. Weekend field trip required. Required field trip transportation fee not to exceed \$50 per course registration. Prerequisite: 220 or consent of instructor.

480-3 Natural Resource Advocacy. Examines the role and methods of interest groups in influencing natural resource policies. Emphasis on applied methods, techniques and strategies for achieving interest group objectives in conflict resolution and persuasion theory. Prerequisite: junior standing or consent of instructor.

485-3 Social Influences on Forestry. Study of, and practice in, methods used for effecting social change in forestry and allied natural resource fields. Case studies, readings and survey research methodology are used to develop an understanding of the role of public opinion in ecologically sound natural resource decision making. Prerequisite: senior standing, and a course in statistics.

490A-2 Resources Management Consortium. Intensive field course in resources management decision making. Student serves as team member in solving resource problems in forestry, wildlife management,

recreation, and interpretation at Land Between the Lakes. Enrollment is limited to six. Course taught at Land Between the Lakes. Requires transportation, room and board fee not to exceed \$150 per course registration. Not for graduate credit. Prerequisite: consent of instructor.

492-1 to 4 Special Studies for Honor Students. Research and individual problems in forestry. Not for graduate credit. Prerequisite: consent of the department chair and a 3.0 minimum grade point average.

494-1 to 6 Practicum. Supervised practicum in a professional setting. Emphasis on administration, supervision, teaching and program leadership in community, school, park, forest, institution, and public or private agencies. Students should enroll according to their curriculum specialization: (a) Forest environmental assessment, (b) outdoor recreation resource management, (c) forest resources management. Prerequisite: consent of instructor.

Forestry Faculty

Burde, John H., III, Professor, Ph.D., University of Arizona, 1975.

Carver, Andrew D., Associate Professor, Ph.D., Purdue University, 1998.

Chilman, Kenneth C., Associate Professor, Emeritus, Ph.D., University of Michigan, 1972.

Davenport, Mae A., Assistant Professor, Ph.D., University of Minnesota, 2003.

Fralish, James S., Associate Professor, Emeritus, Ph.D., University of Wisconsin, 1969.

Groninger, John W., Associate Professor, Ph.D., Virginia Polytechnic Institute and State University, 1995.

Mangun, C. Jean, Associate Professor, Ph.D., Purdue University, 1991.

Phelps, John, E., Professor and Chair, Ph.D., University of Missouri, 1980.

Roth, Paul L., Professor, Ph.D., Emeritus, Kansas State University, 1968.

Ruffner, Charles M., Associate Professor, Ph.D., Pennsylvania State University, 1999.

Schoonover, Jon E., Assistant Professor, Ph.D., Auburn University, 2005.

Willard, Karl W. J., Associate Professor, Ph.D., Pennsylvania State University, 1999.

Zaczek, James J., Associate Professor, Ph.D., Pennsylvania State University, 1994.

Futures Markets

(SEE AGRIBUSINESS ECONOMICS)

General Agriculture

(SEE AGRICULTURAL SYSTEMS)

Geography and Environmental Resources

(DEPARTMENT, MAJOR, COURSES, FACULTY)

Geography and Environmental Resources is the study of how humans modify, impact, adapt to, monitor, and manage the natural environment they inhabit. Students will study the dynamic relationship between nature and society in the field and the computer laboratory as well as in the traditional classroom. Students choose among three specializations focusing on different aspects of geography and environmental resources; environmental resources, geographic information science (GIS), and weather and water resources.

A minor is required and the Environmental Studies Program is well designed to fit the needs of Geography and Environmental Resources majors. Community college and transfer students interested in geography and environmental resources are encouraged to visit the department to determine possibilities for waivers, proficiencies, and transfer credit substitution.

Honors in geography and environmental resources are a special three-semester program available to majors with an overall grade point average of 3.0 or better. Interested students should apply during the junior year for departmental consent to initiate an honors program.

The geography and environmental resources core program provides a common background for all majors. The major then selects from among three specializations to satisfy career goals.

Environmental Resources. This option is for those interested in careers in environmental policy and problem solving in government and the private sector. The courses deal with the interaction between people, the natural resources they use,

and the environment. Environmental economics, policy, behavior, risk, and decision-making are emphasized.

Geographic Information Science (GIS). This option focuses on development of computer-based skills in Geographic Information Systems (GIS), including remote sensing and geographic visualization for application in geographic and environmental problem solving and planning.

Weather and Water Resources. This option focuses on atmospheric and hydrological processes, measurement and analysis of those processes, management of water resources and hazards, and human response to climate events and climate change. It is designed for careers in water resources management, climatology and natural disaster preparedness.

Bachelor of Science Degree in Geography, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Requirements for Major in Geography and Environmental Resources</i>	42-43
Geography and Environmental Resources Core Courses 300i, 303i, 304, 401, 404, 433	19
Mathematics 108 or 113 or equivalent	3
Specialization (one of the following)	20-21
Environmental Resources	20
320, 422, 424; and three additional Geography classes at the 400-level	
Geographic Information Science (GIS)	21
406, 408, 416, 420, and three additional Geography classes at the 400-level	
Weather and Water Resources	20
330; 431; 434; 439 and two additional Geography courses at the 400-level	
<i>Minor</i>	15
<i>Electives</i>	7-8
<i>Total</i>	120

Minor

A minor in geography and environmental resources consists of 15 credit hours from a combination of the core courses and any one of the specializations.

Bachelor of Arts Degree in Geography, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	14
<i>Requirements for Major in Geography</i>	41-45
Geography Core Courses 300, 303i, 304, 310, 410, 418	19
Mathematics 108 or 113 or equivalent	3
Specialization	20-22
Environmental Planning	20-22
320; 422; 424; and 3 of 425, 426, 435, 436, 452, 471, 480	
<i>Electives</i>	20-24
<i>Total</i>	120

Minor

A minor in geography and environmental resources consists of 15 credit-hours from a combination of the core courses and any one of the specializations.

Courses (GEOG)

100-3 Environmental Conservation. (University Core Curriculum) Human activity has changed every place on planet Earth. This course explores how and where these changes take place, and practical ways

people can interact with the environment in a more sustainable manner. Themes to be explored include: biodiversity, global climate change, human population growth, and sustainability of food, soil, and water resources. Through lectures, discussions, and field trips students will investigate and map patterns integral to understanding environmental conservation issues. Lab fee: \$20.

103-3 World Geography. (University Core Curriculum) [IAI Course: S4 900N] Examination of the world's major geographic patterns, the diversity of environments, cultures and economic activities, differences between developing and developed nations, interdependence of nations and regions through communication and trade and in-depth assessment of representative environmental issues.

300I-3 Geography, People and the Environment. (University Core Curriculum) An introduction to human and environmental geography with a focus on food production, water and energy resources, and the services provided by Earth's ecosystems are the foundations of human life on Earth. Skillful use of visual information such as maps and satellite imagery and the challenge of sustainability are emphasized.

303I-3 Environmental Geography. (University Core Curriculum) [IAI Course: P1 909L] The course answers the question: How do Earth's systems work, and how do they interconnect? Fundamental concepts underpinning biogeography, geomorphology and climatology lay the groundwork for exploring the ways these systems are linked. Natural hazards serve as a major theme of the course by bridging natural and social systems. Lab fee: \$20.

304-3 Geography of Globalization. Evolution of the world economic system over time and space emphasizing the recent rapid increase in economic inter-dependency among nations, regions, and urban and rural areas. Changing global patterns of production and trade in nature resources, manufactured goods, services, information, and economic control are emphasized. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 300I or consent of instructor.

310-3 Visualizing the Modern World. An overview of the applications of digital technologies in visualizing the modern world. The primary objective of the class is to help students achieve an improved understanding of the Earth and human problems through the use of visualization techniques. Modern technologies such as geographic information systems, global positioning systems, remote sensing, digital photography, cartography, 3-D visualization and simulation, animation, and computer graphics will be introduced through a series of case studies. In the lab sessions students will have the opportunity to make use of on-line geographic information and visualize various natural and human phenomena, Lab fee \$20.

320-3 Introduction to Environmental Management. The course provides students with an introduction to the philosophy, methods and tools of resource and environmental management. The course focuses on decision-making. The aim is to illustrate the use of decision-making techniques, to provide students with practical methods and tools to implement improved land and water management. To avoid undue parochialism, the course takes a deliberate international perspective, examining situations and case studies throughout the world. Students will examine actual catchments, floodplain, river basin and coastal management case studies. A field study compliments class lectures.

330-4 Weather. An examination of the natural processes, which create weather and its temporal and geographic variations and an analysis of the basics of weather forecasting. Current tools and techniques of weather analysis will be applied to weather forecasting of storms, blizzards, hurricanes, tornadoes, drought and flooding. Follows a lecture/workshop-discussion format. Workshops will emphasize weather experiments and forecasting simulations. Satisfies CoLA science requirement.

361-3 Regional Geography of the United States. A survey of environmental, economic, and historical factors and problems in the development of the United States and its regions. Analysis of population trends, assessment of economic activities, and analysis of transportation networks from a geographic perspective are introduced. Some attention is given to the United States in the world economy.

401-3 Introduction to Geographic Information Systems. An introduction to geographic information system (GIS)-related topics, including GIScience (theoretical foundation), GIS technology (software training), and GIS applications (real-world solutions). Provides basic principles, concepts and applications of GIS in the context of GIScience – a basic research field, which seeks to redefine geographic concepts and their use. Three basic areas inform the theoretical foundations of GIS: cognitive models of geographic concepts, computational and implementations of geographic models, and the interaction between GIS and society. Two hours of lecture and classroom presentations, two hours of laboratory exercises each week. Lab fee \$20.

404-3 Spatial Analysis. This spatial analysis course is an introduction to statistical methods for geographers. The course provides an overview of the application of spatial data analysis techniques, with a concentration on spatial statistical theories, concepts and approaches in the general context of the emerging fields of geographic information system (GIS) and science (GISci). The main focus of this course is on how techniques for the analysis of spatial data can effectively be applied in a GIS environment, with a particular emphasis on the study of spatial patterns, distributions, and associations. Two hours of lecture and classroom presentations, one hour of laboratory exercises each week. Prerequisite: 401 or consent of instructor.

406-3 Introduction to Remote Sensing. An introduction to the fundamentals of remote sensing as applied to environmental management. This course will examine the theoretical and practical aspects associated with the use and analysis of aerial photography and satellite imagery. These include how remote sensing data are acquired, displayed, analyzed and how information on our environment can be extracted from such data. Students will be introduced to manual interpretation and digital image processing techniques of remotely sensed imagery. Students will have the opportunity to gain hands-on experience using image processing software. One hour lecture, two hours of lab each week. Lab fee \$30.

408-3 Advanced Remote Sensing. Advanced techniques in the analysis of remotely sensed data. Emphasis is placed on digital image processing using state of the art technology. Students will be expected to develop individual problem-driven projects that use the knowledge, tools and techniques that are developed

in this course. Two hours of lecture, two hours of lab each week. Lab fee: \$30. Prerequisite: 406 or consent of instructor.

416-3 Analytical Cartography. An introduction to computer and analytical cartography. Students examine techniques for the representation, manipulation and display of spatial data using computer mapping techniques and software. Emphasis will be placed on algorithmic solutions to common cartographic problems. Students will be expected to complete a team based project that uses automated cartographic techniques to address a geographic problem. Lab fee: \$20. Prerequisite: 401 or consent of instructor.

420-3 Advanced Geographic Information Systems (GIS) Studies. This course focuses on six emerging themes of geographic information science: geospatial ontologies, enterprise GIS, GIS design, geographic data mining and knowledge discovery, geographic data structure and algorithms, 3D imaging and visualization. A seminar approach will be adapted to organize the class into five groups to capture skills in computer programming, cognitive science, database design and systems, computational and mathematical knowledge, and 3D imaging and visualization. Five studio exercises to provide hands-on training and practice will be conducted in the GIS laboratory. Students will be expected to develop individual problem-driven projects that use the knowledge, tools, and techniques that are developed in this course. Two hours of seminar and classroom presentations, two hours of studio exercises each week. Lab fee \$20. Prerequisite: 401 or consent of instructor.

421-3 Urban Geography. Urban geography is concerned with the spatial interpretations of city centered populations and phenomena. The course uses geographical perspective to focus on the complex relationships among cultural, economic, environmental, political and social phenomena. Considerable time is devoted to identifying, describing, analyzing and explaining selected urban problems. Prerequisite: 300i or consent of instructor.

422-4 Economics in Environmental Management. Economics of natural resources use and environmental policy with a focus on efficiency and sustainability. Cost-benefit, cost-effectiveness, and policy analysis are applied to environmental management problems in water resources, energy, agriculture, global warming, and other problem areas. Concepts addressed include discounting, uncertainty, risk, externalities, market failure, and policy tools available to governments. Prerequisite: 320, graduate standing or consent of instructor.

424-4 Sustainable Development. Analysis of the human, economic, technological, environmental and political dimensions of sustainable development focusing on public and private sector institutions that manage renewable and non-renewable natural resources. Emphasis is sustainable development as applied to: (a) population, (b) energy and the atmosphere, and (c) agricultural impacts on soil and water resources. Prerequisite: 422 or Agribusiness Economics 440 or consent of instructor.

425-4 Integrated Water Management. The course provides students with an understanding of the philosophy, procedures, techniques and products of Integrated Water Resources Management – a coordinated approach to land and water resources management at the strategic, regional scale. The course focuses on the tools to implement IWRM – in the enabling environment, institutional roles and the use of management instruments. Case studies and international experiences are used to illustrate IWRM implementation failures and successes. Prerequisite: 320, 424 or consent of instructor.

426-4 Administration of Environmental Quality and Natural Resources. (Same as Political Science 445.) An examination of institutional arrangements and administrative practices in the protection and use of land, water, air, and mineral resources. The course includes analysis of responsibility and decision-making at all levels of government (federal, state, and local) as well as corporate, interest group, and individual responses to public programs. Particular attention will be given to administration of federal environmental quality legislation including the National Environmental Policy Act, the Clean Air Act, the Water Pollution Control Act, and the Surface Mining Reclamation Act. Prerequisite: 300 or consent of instructor.

428-3 GIS and Environmental Modeling. This course will examine the applications of advanced geographic information system (GIS) techniques in environmental management. Particular emphasis will be placed on how to use spatial modeling techniques to analyze environmental impacts of human activities. Topics include the nature of environmental modeling, acquisition and processing of GIS information, spatial models, GIS and modeling, spatial decision support systems, and model integration. These topics will be introduced with case studies. Students will have the opportunity to work on projects of interest to them. Two hours of seminar and classroom presentation, one hour of lab each week. Prerequisite: 401 and/or 406, or consent of instructor.

429-3 Geography and Organic Farming. (Same as Geography 529) A discussion of geographic topics in organic farming including: spatial distribution of organic farms, agriculture and landscapes, policy influence on agriculture, organic agricultural productivity, food safety and consumer concerns, organic farmers' motivations and decisions, organic marketing, local food systems, and organic certification.

430-3 Environmental Systems Analysis. Exploration of the major environmental systems relevant to planning. Topics include concepts of systems and system behavior; basics of systems analysis and modeling environmental systems; environmental fluxes of energy and materials (e.g., hydrologic cycle, carbon cycle, energy budgets, erosion and sediment transport, role of biosphere in organizing fluxes); environmental variability.

431-3 Climate. This course provides a rigorous treatment of synoptic scale atmospheric circulations in the Northern Hemisphere Westerlies. The course will explore observational and quantitative methods to assess the physical processes driving synoptic scale flows, and develop linkages between synoptic scale patterns and weather across the mid-latitudes. Fronts, cyclones, jet streams, and high and low pressure systems will be among the circulation phenomena discussed. Heavy rainfall, heavy snowfall, droughts, and flooding will be included in discussions of mid-latitude weather. Prerequisite: 330 or 303i or graduate-level status.

433-4 Field Methods in Geography. Quality geographic research depends on obtaining reliable data through an informed research design. Exploring both social and environmental processes, students will actively participate in developing and conducting investigations. Using the SIUC campus and surrounding region as a laboratory, lab exercises will include human geography, geomorphology, climatology and biogeography. Analytical techniques will include introductory statistics and mapping. Lab fee: \$20. Prerequisite: 303i.

434-4 Water Resources Hydrology. Microclimatic factors which affect the hydrologic events of various climatic regions are treated extensively. Methods of estimating geographic variations in hydrologic relations to climatic and microclimatic especially evapotranspiration, are compared and evaluated. Consequences of alternative land uses on climate and hydrology are considered regionally. Prerequisite: 303i or consent.

435-3 Energy Planning. Regional and national differences in energy supply and demand are reviewed followed by a study of current energy resources, the range of demands and environmental impacts. National and international planning strategies for dealing with changes in energy demand and supply are explored and assessed for present and future implementation probability.

436-3 Natural Hazards. This course develops the skills and perspectives needed to effectively manage natural and technological disasters. Major themes include risk analysis, hazard mitigation and preparedness, response and recovery of the economic and social infrastructure in areas impacted by earthquakes, floods, drought, toxic material releases and other catastrophic events. Geographic training places a geographer at the forefront of developing hazard management solutions for society.

438-3 Weather Forecasting. Analysis of meteorological forecasting technique including: (a) interpretation of satellite images and soundings, radar algorithms, severe weather models (NGM, ETA, RUC), and global warming forecasting models; and (b) prediction of air mass/front motion, cloud and precipitation formation, El Nino effects and isentropic effects on the atmosphere. Charges not to exceed \$5 for field trips. Prerequisite: 330 or consent of instructor.

439-3 Global Climate Change. Climate change is emerging as one of the key environmental, economic and social issues of our time. This course explores this complex topic, focusing on its many components. Subjects to be covered include: (a) an overview of climate, climate variability and natural change; (b) man-induced causes of climate change; (c) social and environmental relationships; (d) international policy; and (e) understanding potential impacts. Prerequisite: 330 or 303i or consent.

452-3 Environment and Population. Introduction to population geography. Emphasis is on the relationships between population trends, resource use patterns and environmental impacts. Topics include methods and data used to describe and predict populations, theories of population and policy issues that relate to the interaction between population, quality of life and environment quality. Prerequisite: 320 or consent of instructor.

454-3 Conservation and Environmental Movements. Emphasizes the ways in which humans view and interact with the environment. Conservation literature and the works of influential environmentalists are studied. Specific theories and environmental movements which help to explain society's current perception and use of the environment are studied. Prerequisite: 320 or consent of instructor.

456-3 Geographic Visualization. This course will provide an overview of geographic visualization with a concentration on the theories, concepts and approaches of information visualization. Lectures and laboratory exercises will focus on the practical issues of exploratory data analysis (EDA), cartographic design process, web cartography, data quality and generalization, thematic mapping, map animation and multi-media applications. The course will provide students with a working knowledge of commercial software commonly used for graphic-based applications. Students are expected to utilize their hands on experience gained from the lab exercises to further enhance their proficiency in graphic software. Two hours of seminar and classroom presentations, two hours of studio exercises each week. Lab fee: \$30.

457-3 American Environmental History. (Same as History 457) An exploration of the attitudes toward and the interaction with the natural resource environment of North America by human settlers. Coverage from the Neolithic Revolution to the present.

458-3 Analysis of Risk and Bioterrorism Using GIS. Emphasizes the way in which Geographic Information Systems (GIS) technologies can be utilized to track and detect emergencies such as 911 response, crime, disease, bioterrorism, homeland security, emergency infrastructure, food and water security. Prerequisite: 401, 420, or consent of instructor.

470-3 Interdisciplinary Approaches to Environmental Issues. Application of concepts for the Biological, physical and social sciences, economics, humanities and law, are used to understand the interdisciplinary complexities of environmental issues. Students will develop and demonstrate problem-solving skills as part of a team analyzing a regional environmental issue. Team-taught seminar style discussions. Prerequisite: Plant Biology 301i and admission to Environmental Studies minor program.

471-3 Environmental Impact Analysis. Techniques of assessing the impact of human activities on the environment, including weighting schemes, cost-benefit analysis, linear programming, ecological impact assessment. Emphasis is on placing NEPA and EIS writing in legal, economic, and environmental perspective. **460-3 to 6 Internship in Geography.** Supervised field work in private or public organization dealing with planning, environmental management, or cartography and geographic information management. A written proposal about the planned internship must be submitted to a faculty supervisor prior to beginning of internship. A faculty supervised report on the work is required after the internship. Courses may be repeated, but no more than 3 credit hours of either 480 or 481 may be applied to an undergraduate major. A graduate student may enroll for 3 credit hours. Prerequisite: geography major and consent of department.

481-6 to 12 Cooperative Work Experience in Geography. Placement of advanced undergraduate or graduate student in private or public organization for one or more semesters in paid career-related position. Student gains professional experience, under faculty and on-site supervision. A written proposal about the

planned cooperative work experience must be submitted to a faculty supervisor before it begins. A report summarizing the work experience is required after the work experience ends. Course may be repeated. Three credit hours of either 480 or 481 may apply toward requirements for a Geography major; three additional credit hours may apply toward degree requirements as elective. Prerequisite: geography major and consent.

487-6 (1,2,3) Honors in Geography. (a) honors tutorial; (b) honors reading; (c) honors supervised research. Must be spread over the last two years of the undergraduate's career. May be taken in either a, b, c, or b, a, c sequence. Prerequisite: consent of department.

490-2 to 4 Readings in Geography. Supervised readings in selected subjects. Prerequisite: geography major, advanced standing.

Geography Faculty

Baumann, Duane D., Professor, *Emeritus*, Ph.D., Clark University, 1968.

Beazley, Ronald I., Professor, *Emeritus*, Ph.D., Purdue University, 1954.

Bigler, Wendy, Assistant Professor, Ph.D., Arizona State University, 2005.

Christensen, David E., Professor, *Emeritus*, Ph.D., University of Chicago, 1956.

Denise, Paul S., Assistant Professor, *Emeritus*, Ph.D., University of California at Berkeley, 1974.

Duram, Leslie A., Associate Professor and Chair, Ph.D., University of Colorado at Boulder, 1994.

Dziegielewski, Benedykt, Professor, Ph.D., Southern Illinois University, 1983.

Hooper, Bruce P., Associate Professor, Ph.D., University of New England, Australia, 1994.

Horsley, A. D., Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University Carbon-dale, 1974.

Irwin, Daniel R., Associate Professor, *Emeritus*, Ph.D., Syracuse University, 1972.

Jones, David L., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1960.

Lant, Christopher, Professor, Ph.D., University of Iowa, 1988.

Lieber, Stanley R., Professor, *Emeritus*, Ph.D., University of Iowa, 1974.

Oyana, Tonny J., Assistant Professor, Ph.D., State University of New York at Buffalo, 2003.

Perk, H. F. W., Lecturer, *Emeritus*, A.B., University of California at Los Angeles, 1951.

Poston, Richard W., Professor, *Emeritus*, B.A., University of Montana, 1940.

Sharpe, David M., Professor, *Emeritus*, Ph.D., Southern Illinois University Carbon-dale, 1968.

Sun, Wanxiao, Assistant Professor, Ph.D., University of Mainz, Germany, 1999.

Geology (Department, Major, Courses, Faculty)

Geology is the study of the Earth and encompasses a broad range of topics including Earth's history, composition, physical and chemical processes and the evolution of life. It has a unique perspective of time and scale, extending billions of years in the past and to global-wide events. Because of man's interaction with many Earth systems, geology is an environmental science that is vital to the resolution of such problems as climate change; groundwater supply and pollution; prediction and mitigation of earthquake, flooding and volcanic hazards; and natural resource discovery and utilization. Students majoring in geology acquire knowledge of value to many science and non-science professions.

The geology degree programs consist of a set of core courses that provide a foundation of geological principles and specialization tracks and elective courses that students choose to design a curriculum relevant to their interests. Many courses have a laboratory component where a hands-on, practical problem-solving approach to learning is emphasized. Students are introduced to basic and specialized computer programs and instrumental techniques used to gather and interpret data. Field trips to geological sites or field-based projects are regular features of several courses. Most classes for geology majors are small enough for students to receive individual attention and enjoy close contact with faculty in the classroom.

In the field of geology a student may work toward either a Bachelor of Arts or Bachelor of Science degree.

The Bachelor of Arts degree requires a major in geology but is a flexible program, permitting a student to combine education in geology with courses in other areas, such as other sciences, management or pre-law. A minor is optional. Hav-

ing obtained a Bachelor of Arts degree, students may continue their education toward a Master of Science degree in geology.

The Bachelor of Science degree requires a core of Geology courses and courses in biology, chemistry, mathematics, physics and science electives. This degree requires a specialization to be obtained in one of the following: Geology, Environmental Geology, Geophysics, or Resource Geology. The specializations allow students to pursue specific career goals in the field of geology and related areas. The summer field course, usually taken between the junior and senior years, is part of the geology core. It is taught at a permanent field camp in the Beartooth Mountains near Red Lodge, Montana. Students desiring to do graduate work or to become a professional geologist will ordinarily pursue the Bachelor of Science degree.

Bachelor of Arts Degree in Geology, College of Science

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Academic Requirements</i>	(6) + 11-12
Mathematics 108 and 109 or 111	(3) + 2 - 3
Biological Sciences (Not University Core Curriculum)	(3) + 3
Supportive Skills (choose from the following):	6
Computer Science 200 or 201 or 202 or Engineering 222, English 290, 291 or 491, Mathematics 282 or 283, two semester sequence of a foreign language offered at SIUC	
<i>Requirements for Major in Geology</i>	(3) + 35 - 39
Geology 220 or 222, 221, 223, 224, 302, 310, 315, 325 and 450 or 454	(3) + 26-30
Chemistry 200, 201, 210, 211	8
Physics 203a, 253a or 205a, 255a	4
<i>Electives</i>	19 - 24
<i>Total</i>	120

Bachelor of Arts in Geology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
GEOL 220 or 222, 223 ¹	4	-	GEOL 310, 315	4	4
GEOL 221, 224	-	4	PHYS 203a, 253a	4	-
ENGL 101, 102	3	3	Biological Science	-	3
CHEM 200, 201, 210, 211	4	4	SPCM 101	-	3
MATH 108 ² or 111, 109 ³	3-5	3	UCC Social Science	3	3
UCC Human Health	-	2	UCC Humanities	3	3
<i>Total</i>	14-16	16	<i>Total</i>	14	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
GEOL 302, 325	4	4	Elective	10-12	10-12
Biological Science ⁴	4	-	Supportive Skills	3	3
UCC Fine Arts, Multicultural	3	3	<i>Total</i>	13-15	13-15
UCC Interdisciplinary	-	3			
Elective	4	3			
GEOL 450 ⁵	-	2			
<i>Total</i>	15	16			
<i>SUMMER OF THIRD YEAR</i>					
GEOL 454 ⁶	6				
<i>Total</i>	6				

¹ Subs for Geology 111/112

² Subs for UCC Mathematics 110 or 113

³ Not required if Mathematics 111 taken.

⁴ Subs for UCC Biology

⁵ Not required if Geology 454 taken

⁶ Not required if Geology 450 taken

Bachelor of Science Degree in Geology, College of Science

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Requirements</i>	(6) ¹ + 11 - 12
Mathematics 108 and 109 or 111	(3) ¹ + 2 - 3
Biological Sciences (Not University Core Curriculum)	(3) ¹ + 3
Supportive Skills (choose from the following):	6
Computer Science 200 or 201 or 202 or Engineering 222, English 290, 291 or 491, Mathematics 282 or 283, two semester sequence of a foreign language offered at SIUC	

Requirements for Major in Geology	(3) ¹ + 56 - 57
Required Core Courses:	
Geology 220 or 222; 221, 223, 224, 302, 310, 315, 325, 454	(3) ¹ + 27
Mathematics 150	4
Chemistry 200, 201, 210, 211	8
Physics 203a,b; 253a,b or 205a,b; 255a,b	8
Required Curriculum Specialization	9 - 10
<i>Geology Specialization</i>	9
For students interested in all aspects of the geological sciences. Students desiring to do graduate work in the traditional field of geology ordinarily pursue this specialization. Students should select three courses from the following options: Geology 412, 418, 425, 435 or 436 or 466, 474, 481	
<i>Environmental Geology Specialization</i>	9 - 10
For students interested in geology as it relates to environmental problems such as groundwater contamination, flooding, earthquakes and landscape stability. Students should select three courses from the following options: Geology 418, 421, 434, 470 and 471, 474, 476, 478	
<i>Geophysics Specialization</i>	9 - 10
For students interested in tectonics, geophysics of the earth, earthquakes and geophysical aspects of environmental geology and petroleum or mineral exploration. Students should select three courses from the following options: Geology 435, 436, 437, 466	
<i>Resource Geology Specialization</i>	9
For students interested in geology as it relates to the origin, characteristics, and utilization of energy and mineral resources such as coal, petroleum and metals. Students should select three courses from the following options: Geology 418, 419, 420, 421, 480, 482	
<i>Electives in Geology Science Technology</i>	11 - 12
<i>Total</i>	120 - 121

¹Numbers in parenthesis are hours which may be substituted into the University Core Curriculum.

Bachelor of Science in Geology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
GEOL 221, 224	-	4	GEOL 310	4	-
GEOL 220 or 222, 223 ¹	4	-	GEOL 315	-	4
ENGL 101, 102	3	3	PHYS 203a, 253a	4	-
CHEM 200, 201, MATH 109 ² ..	4	3	PHYS 203b, 253b	-	4
CHEM 210, 211	-	4	SPCM 101	3	-
MATH 108 ² or 111	3-5	-	MATH 150	-	4
UCC Human Health	-	2	UCC Humanities	3	2
<i>Total</i>	14 - 16	13 - 16	<i>Total</i>	14	15
SUMMER OF THIRD YEAR					
GEOL 454	6				
<i>Total</i>	6				
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
GEOL 302	4	-	GEOL Specialization	3	-
GEOL 325	-	4	Geology/Science/Tech Elec-		
GEOL Specialization	3	3	tive	6	6
Biological Science ⁴	3	3	Supportive Skills	3	3
UCC Social Science	3	3	UCC Multicultural	3	-
UCC Fine Arts	-	3	UCC Interdisciplinary	-	3
<i>Total</i>	13	16	<i>Total</i>	15	12

¹ Subs for Geology 111/112
² Mathematics 108 may be used for Core Curriculum Mathematics
³ Not required if Mathematics 111 taken
⁴ Substitutes for Core Curriculum Biology

Minor

A minor consists of 16 hours, determined by consultation with the geology adviser.

Courses (GEOL)

Courses with a laboratory may require purchase of a laboratory manual and a supply fee. Courses requiring field trips may have a field trip cost of approximately \$2 to \$7.

111-2 Geology and the Environment. (University Core Curriculum) [IAI Course: P1 908L] Examines human interaction with geologic processes and hazards, including earthquakes, volcanoes, landslides and flooding; occurrences and availability of geologic resources, such as energy, water and minerals; and human impacts on the environment including global warming, waste disposal, and pollution. Two lectures per week. Must be taken concurrently with or upon completion of Geology 112. If Geology 111 is dropped the laboratory course must also be dropped.

112-1 Geology and the Environment Laboratory Learning. (University Core Curriculum) Laboratory to accompany Geology 111. Hands-on and inquiry-based learning in topics such as earth materials, topographic maps, stream dynamics, floods, coastal processes, landslides, groundwater, earthquakes, volcanoes, and human impacts on the environment. One laboratory session per week. Must be taken concurrently with or upon completion of Geology 111. Lab fee: \$10.

220-3 The Dynamic Earth. (Advanced University Core Curriculum course) [IAI Course: P1 907] Introduction to the materials which form the earth and the dynamic processes that change them. Three lectures per week. One Saturday field trip required. Lab fee: \$5. Prerequisite: with 223 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112.

221-3 Earth Through Time. (Advanced University Core Curriculum course) [IAI Course: P1 907] Concepts and methods of interpreting earth history. Development of earth's major features and environment systems. Emphasis on ancient environments and life forms, major changes in paleoclimate, paleocommunities and biodiversity. With 224 satisfies University Core Curriculum Group I Science requirement in lieu of Geology 111 and 112. Lab fee: \$5.

222-3 Environmental Geology. (Advanced University Core Curriculum course) A study of the environment from a geological perspective. A critical study of geological hazards (earthquakes, floods), earth resources (minerals, water), proper land use (waste disposal), and other environmental concerns. Three lectures per week. One Saturday field trip required. Lab fee: \$5. Prerequisite: with 223 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112.

223-1 Introductory Geology Laboratory. (Advanced University Core Curriculum course) Understanding the earth's processes, materials and environment through hands-on laboratory and field experience. One three-hour session per week. Lab fee: \$10. Prerequisite: completion of, or concurrent enrollment in, 220 or 222, with 220 or 222 satisfies University Core Curriculum Science Group I requirement in lieu of 111 and 112.

224-1 Earth Through Time Laboratory. (Advanced University Core Curriculum course) Concepts and methods of interpreting earth's history. One two-hour laboratory per week. Weekend day field trip required. Lab fee: \$10. Prerequisite: completion of or concurrent enrollment in 221. With 221 satisfies University Core Curriculum Group I Science requirement in lieu of Geology 111 and 112.

302-4 Fundamentals of Structural Geology I. An introduction to structural geology including a study of the forces involved in the deformation of the earth's crust, with special emphasis on the recognition and interpretation of the resultant geologic features. Laboratory required. Lab fee: \$15. Prerequisite: 220 or 222; Mathematics 111. Recommended: Physics 203, or 205 or concurrent enrollment.

310-4 Mineralogy. Introduction to the internal structure morphology and chemistry of crystals. Study of the properties, chemistry, occurrence and identification of rock-forming and economically important minerals. Rudiments of the use of a petrographic microscope and the optical properties of common-rock forming minerals. Lab fee: \$15. Prerequisite: 220 or 222; 223; Chemistry 200, 201 recommended.

315-4 Petrology. Introduction to the classification, nature, origin and processes of igneous, sedimentary and metamorphic rocks. Hand specimen and thin-section analysis of rocks. Lecture-laboratory. Week-end field trips required. Lab fee: \$15. Prerequisite: 310.

325-4 Sedimentology and Stratigraphy. An overview of the relationship between tectonics and climate, and the origin of sedimentary rocks; the course outlines: the plate-tectonics setting of sedimentary basins, their geometry, and subsidence mechanisms; the relationship between sediment supply, basin subsidence, and global sea-level change in determining the sequence stratigraphy of sedimentary-basin fill; and principles of interpretation of environment of deposition within a sequence stratigraphic framework. Lab and field trips required. Lab fee: \$15. Prerequisite: 220 or 222, 221, 223, 224, 310 and 315 may be taken concurrently.

327I-3 The World's Oceans. (University Core Curriculum) The world's ocean comprises up to 80% of the earth's surface. It plays a significant role in global climate, contains mineral resources and harbors a wealth of plant and animal life. "The World's Oceans", through the scientific method, will provide a greater understanding of the processes and components of the oceans and their importance to our every day life. The course will include lectures, discussion sessions, readings and exercises from the text, laboratory exercises and short field excursions.

328I-3 Dinosaurs and the Age of Reptiles. (University Core Curriculum) What we know about dinosaurs - their fossils, morphologies, origin, types, relatives, relationships, lifestyles, distributions (in time, in space,

in paleoenvironments, biotic associates and extinction; and how we know it - interdisciplinary application of basic scientific concepts of geology, paleobiology, paleoecology and paleoenvironmental analysis.

330I-3 The Planets. (University Core Curriculum) The geology of the planets and moons of the solar system, their origin and history, the origin of the universe and the solar system and the search for other planetary systems and life in the universe. The geologic processes of vulcanism, tectonism, weathering and meteorite impact on the various planets will be examined and compared. A main focus of the course will be examining the methods of discovering information about the solar system involving the interdisciplinary application of pertinent basic scientific concepts of geology, geochemistry, geophysics, meteorology and cosmology.

390-3 Introduction to Mining Geology. Structure and composition of the earth as these impact specifically on mining engineering problems; geologic time, sequence of events, major geologic provinces, types of ore deposits, use of core data, preparation and interpretation of geologic cross-sections. Two lectures and one three-hour lab. Two Saturday field trips required. Prerequisite: 220 or 222; 223, restricted to mining engineering.

412-3 Advanced Petrology. In-depth study of the rock forming processes. The relations of rock forming processes to petrographic analysis will be emphasized. Laboratories will deal with hand-specimen and thin-section analysis from selected rock suites with genetic modeling of the resulting data. Prerequisite: 310, 315.

413-3 Quantitative Methods of Geology. An introduction to quantitative methods in a geological and earth sciences context. Topics introduced include sampling plans for geologic studies, non-parametric test of geological data, comparisons of geological samples, analysis of sequential geological data. Laboratories will deal with numerical examples from all areas of geology. Prerequisite: advanced standing and consent of instructor.

414-3 Paleobotany. (See Plant Biology 414.)

415-3 Optical Mineralogy. The optical properties of minerals and the use of the petrographic microscope for identification of crystals by the immersion method and by thin section. Lecture, laboratory. Prerequisite: 310, Physics 203b or 205b.

417-3 Isotope Geochemistry. Stable and radioactive isotopes and the applications of isotopic studies to igneous and metamorphic petrology, ore deposits, sedimentology, surface processes, geothermometry, and geochronology. Introduction to isotopic techniques and mass spectroscopy. Lab or research project required. Prerequisite: 310, 315, and 325 or consent. Recommended: Physics 203, Mathematics 150, and Geology 419.

418-3 Low Temperature Geochemistry. The application of chemical principles to geologic processes that occur on and near the earth's surface. Lecture, laboratory. Prerequisite: 310, Chemistry 200, 201, 210, 211 or equivalent.

419-3 Ore Deposits. Overview of the occurrence, geology and origin of metalliferous mineral deposits. Geologic principles and research techniques important to the understanding of mineral deposits. Introduction to exploration and mining methods. Lectures, laboratories and field trips. Lab fee: \$15. Prerequisite: 302, 315 or consent of instructor.

420-3 Petroleum Geology. The geological occurrences of petroleum including origin, migration and accumulation; a survey of exploration methods, and production problems and techniques. Laboratory study applies geological knowledge to the search for and production of petroleum and natural gas. Prerequisite: 221, 224.

421-3 Organic Geochemistry. The nature, origin and fate of natural and artificial organic materials in rocks and sediments. Topics include characterization of fossil fuels using biological marker compounds, petroleum source rock evaluation, and organic pollutants in the environment. Prerequisite: 325 or consent of instructor.

423-3 Geomicrobiology. (Same as Microbiology 423 and Molecular Biology, Microbiology and Biochemistry 423). The course will focus on the role that microorganisms play in fundamental geological processes. Topics will include an outline of the present understanding of microbial involvement of weathering of rocks, formation and transformation of soils and sediments, and genesis and degradation of minerals. Elemental cycles will also be covered with emphasis on the interrelationships between the various geochemical cycles and the microbial tropic groups involved. Prerequisite: Microbiology 301 and Chemistry 210 and 211. Recommended: Geology 220, 221 or 222.

425-3 Invertebrate Paleontology and Paleoecology. Concepts of paleontology and paleoecology. Emphasis on functional morphology, lifestyles and habitats of fossil invertebrates and algae. The nature and evolution of marine and coastal paleocommunities. The effects of extinction events on paleocommunities and biodiversity. Laboratory. Lab fee: \$15. Prerequisite: 325 or a biology course.

428-3 Paleoecology and Environments of Deposition. Characteristics, distribution, and classification of recent and ancient environments. Criteria for recognizing ancient environments. Sedimentological and paleoecological approaches. Recognition of ancient environments and environmental associations. Laboratory. Field trips required. Prerequisite: 425, 325, or concurrent enrollment.

434-3 Engineering and Environmental Geophysics. Geophysical methods used in engineering and environmental site characterization and assessment and the geophysical detection of environmental hazards. Field trips required. Prerequisite: Physics 203a or 205a, 203b or 205b, Mathematics 150.

435-3 Solid-Earth Geophysics. Earth's size, shape, mass, age, composition, and internal structure are reviewed in detail as understood from its volcanism, gravity and magnetic fields, seismicity, and motion of continents and ocean basins; plate tectonics. Prerequisite: 302, Mathematics 150, or consent of instructor.

436-4 Elementary Exploration Geophysics. Theory and practice of geophysics as applied to the exploration and development of natural resources. Laboratory involves use of geophysical instruments and interpretation of data. Field trips required. Prerequisite: 220 or 222; 223; Mathematics 150.

437-3 Field Course in Geophysics. Use of geophysical equipment for collection, analysis and interpretation of seismic, gravity, magnetic, electrical, and other types of geophysical data. Lab fee: \$30. Prerequisite: 436 or consent.

440-1 to 8 Advanced Topics in the Geological Sciences. Individual study or research or advanced studies in various topics. Prerequisite: advanced standing and consent of instructor.

445-3 Museum Studies in Geology. History, nature and purpose of geology in museums, relationships of geology to other museum disciplines, application of geologic methods to museum functions, preparation and preservation of specimens; nature, acquisition and utilization of geologic collections in museums, role of research in museums.

450-2 Introduction to Field Geology. Introduction to field techniques, principles of geologic mapping and map interpretation. Field trip fee \$5.00. Prerequisite: 302, 315 or concurrent enrollment.

451-1 to 12 Field Experience in Geology. Preparation for and participation in academically rigorous field trips guided by faculty members. Trips will be to areas of geological interest and will occur during official breaks within or between semesters. Expense will vary in proportion to distance traveled and duration of trip and will be determined before each trip. A student may only take a specific trip once for credit. Prerequisite: consent of instructor.

454-6 Field Geology. Advanced field mapping in the Rocky Mountains, including problems in stratigraphy, structure, petrology, paleontology, geomorphology, and economic geology. Lab fee: \$250. Prerequisite: 302, 315, 325; 450 recommended.

460-3 Geological Data Processing. Computer applications to geological problems including the processing and programming of data and the interpretation and evaluation of results. Lecture, laboratory. Lab fee: \$250. Prerequisite: Engineering 222 or Computer Science 202.

462-3 Fundamentals of Structural Geology II. Intermediate topics in structural geology including strain theory, field strain analysis, geometry of complex mesoscopic structures and introduction to dislocations, deformation history, and microfabric analysis. Hypotheses and orogenesis are discussed and evaluated. Lecture and assigned problems only. Prerequisite: 302 or equivalent.

466-3 Tectonics. Fundamentals of geodynamics applied to plate tectonics: mantle composition and rheology, deformation of the lithosphere, structural characteristics of plate margins, stability of triple junctions, diachronous tectonics, and orogenesis will be examined in detail. Prerequisite: 302, Mathematics 150, or consent.

470-3 Hydrogeology. Study of the distribution, origin, and movement of groundwater, and the properties of geologic materials that control groundwater flow and contaminant transport. Geology majors must also take 471 concurrently. Prerequisite: 220 or 222; 223; Mathematics 150; or consent of instructor.

471-1 Hydrogeology Laboratory. Problem sets, laboratory experiments, and field exercises in hydrogeology. Majors must take concurrently with 470. Prerequisite: 220 or 222; 223; Math 150; or consent of instructor.

474-3 Geomorphology. Study of erosional and depositional processes operating at the earth's surface and landforms resulting from these processes. Relationship of processes and landforms to the geologic framework is examined. Laboratory. Prerequisite: 220 or 222; 223.

476-3 Quaternary Geology. Methods used to identify, map, date and correlate Quaternary deposits and interpret Quaternary history. Covers glacial, fluvial, coastal, lacustrine and eolian chronologies, oxygen-isotope records from ocean sediments and continental ice cores, volcanic activity, and Quaternary climate change. Field trips required. Prerequisite: 220 or 222; 221, 223, 224; or consent of instructor; 474 recommended.

478-3 Advanced Environmental Geology. Application of principles of geomorphology and Quaternary to environmental problems and geologic hazards. Lectures and case studies emphasize neotectonics, volcanic hazards, landslides and other mass movements, floods, river channel changes, and coastal erosion. Prerequisite: 474; 476 recommended.

480-3 Geology of Coal. Geology as related to exploration, development and mining of coal; stratigraphy, sedimentation and structure of coal deposits; type of coal basins and their tectonic setting; concepts of cyclical deposition in coal basins; origin of splits and partings in coal seams; relationship of modern environments and ancient coal-forming environments; structural problems relevant to exploration and mining of coal; methods of resource evaluation. Three 1-hour lectures a week; five half-day field trips. Prerequisite: 220 or 222; 221, 223, 224, 302, 325, or consent of instructor.

481-3 Sedimentary Basin Analysis. The use of stratigraphy, structure, sedimentology and geophysics to determine the paleogeographic evolution of sedimentary basins. Topics include the study of the relationships between host strata and both primary and post-depositional non-renewable resources, plate tectonics and basin evolution and subsurface geologic methods. Lab fee: \$10. Prerequisite: consent of instructor.

482-3 Coal Petrology. Structural features and microscopy of coal seams. Origin and alteration of coal constituents. Includes field trips, study of coal specimens, and techniques. Prerequisite: 220 or 222; 221, 223, 224; or consent of instructor.

483-3 Forensic Geology. An introduction to the use of geological materials and techniques in criminal investigation. Details from actual criminal cases will be used as examples in all the topics covered which include rock and mineral types, geological and topographic maps, fossils, sand, soil, spores and pollen, geological building materials, art fraud and gemstones. Techniques covered will include optical microscopy, scanning electron microscopy and x-ray diffraction. Lab fee: \$10.

484-3 Geologic Remote Sensing. Applications of remote sensing using aerial photographs, multi-spectral imagery, hyperspectral imagery, thermal infrared imagery, and radar imagery, in structural geology, stratigraphy, geomorphology, oil and mineral exploration, geologic hazard analysis and planetary exploration. Lab fee: \$25. Prerequisite: 220 or consent of the instructor.

490-1 to 3 Internship. Credit for supervised practical experience with an external geological agency or company; prior approval of the sponsoring agency and the department is required. Not for graduate credit. Prerequisite: advanced standing; minimum 2.70 cumulative gpa.

Geology Faculty

Anderson, Ken B., Associate Professor, University of Melbourne, Australia, 1989.

Crelling, John C., Professor, *Emeritus*, Ph.D., The Pennsylvania State University, 1973.

Dutcher, Russell R., Professor, *Emeritus*, Ph.D., The Pennsylvania State University, 1960.

Esling, Steven Paul, Associate Professor and Chair, Ph.D., University of Iowa, 1984.

Ferre, Eric C., Associate Professor, Ph.D., University of Toulouse, France, 1989.

Fifarek, Richard H., Associate Professor, Ph.D., Oregon State University, 1985.

Frank, Charles O., Assistant Professor, *Emeritus*, Ph.D., Syracuse University, 1973.

Harris, Stanley E., Jr., Professor, *Emeritus*, Ph.D., University of Iowa, 1947.

Ishman, Scott E., Associate Professor, Ph.D., Ohio State University, 1990.

Lefticariu, Liliana, Assistant Professor, Northern Illinois University, 2004.

Marzolf, John E., Associate Professor, Ph.D., University of California at Los Angeles, 1970.

Pinter, Nicholas, Professor, Ph.D., University of California, Santa Barbara, 1992.

Ravat, Dhananjay, Professor, Ph.D., Purdue University, 1989.

Sexton, John L., Professor, Ph.D., Indiana University, 1974.

Utgaard, John E., Professor, *Emeritus*, Ph.D., Indiana University, 1963.

Zimmerman, Jay, Jr., Professor, *Emeritus*, Ph.D., Princeton University, 1968.

Grain Merchandising

(SEE AGRIBUSINESS ECONOMICS)

Health Care Management (Major, Courses)

The Health Care Management (HCM) major provides coursework and experience across the spectrum of health care supervision and management. Many Health Care Management graduates obtain supervisory and administrative positions in various health and medical facilities such as hospitals, nursing homes, public health departments or health insurance companies. The Bachelor of Science degree in Health Care Management accommodates beginning students as well as students who have professional preparation in health-oriented fields from colleges and universities, technical institutes, community colleges, proprietary institutions or military schools. Graduates of diploma programs also may be eligible for admission. Students with health care education build upon background through a combination of major core courses, electives within HCM, approved electives and the SIUC University Core.

Students in the major must meet with the HCM academic advisor to plan their courses of study. Prospective students may complete their University Core Curriculum requirements and career electives at approved institutions, provided that four-year school and residence requirements are met.

Completing courses at any accredited college or university may satisfy the 41-hour University Core Curriculum requirements; credit received through CLEP, USAFI, DANTES; or through proficiency examinations. The Capstone Option is available to students who have obtained a business or health care-related Associate of Applied Science degree or its equivalent, and who have a gpa of at least 2.25 on a 4.0 scale (SIUC calculation) on all work prior to the completion of the Associate of Applied Science degree. Application to the Capstone Option must be made no later than the end of the student's first semester or 12 semester hours in the baccalaureate degree program. More information about the Capstone Option may be found in Chapter 3.

Students also may receive credit for previous educational, military and occupational experience. Credit is established by program evaluation after approval by the faculty advisor. Application for this experience credit must be made no later than the end of the student's first semester or 12 semester hours of HCM coursework.

Field internships and independent study opportunities are available upon approval by the student's faculty advisor.

In addition to University requirements, students must successfully complete all major core courses with a grade of C or better and attain a minimum gpa of 2.0 within the Health Care Management major for graduation.

Students who participate in internship may be required to undergo a criminal background check and drug screening.

Bachelor of Science Degree in Health Care Management, College of Applied Sciences and Arts

<i>University Core Curriculum Requirements</i>	41
(Choose microeconomics, psychology, health and biology or anatomy/background courses)	
<i>Required Prerequisite/background courses</i>	14-15
Health Care Professions 105; Information Systems and Applied Technologies 229; Accounting 210 or 220; Economics 240 or Health Care Management 382; and Mathematics 282 or Sociology 308 or Health Care Management 365 or equivalent,)	
<i>Requirements for Major in Health Care Management</i>	48
Core Requirements: 340, 360, 364, 375, 381, 385, 388, and 401	
Selected 300 and 400 electives	
Select four courses from 320, 384, 390, 410, 420, 413; Economics 334, Health Education 493, Information Systems Technologies 301 or 307; or one aging course [Health Education 440 or Rehabilitation 405 or 446])	
Health Care Management 422 or 349 off-Campus	3
Health Care Management electives or approved substitutions	9
<i>Electives</i>	16-17
(Business and Administration, Psychology or Information Technology Minors are encouraged)	
<i>Total</i>	120

Health Care Management Suggested Curricular Guide

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
HCM 360, University Core	3	3	HCM 388, 401	3	3
HCM 364, 381	3	3	HCM approved 300-400-Elec	0-12	0-12
HCM 340, 385	3	3	Independent Study,		
HCM 375	3	-	Internship or 349 Off-		
Independent Study, approved			Campus	0-12	0-12
equivalent or electives	0-12	0-12			
<i>Total</i>	15	15	<i>Total</i>	15	15

Courses (HCM)

258-1 to 30 Work Experience Credit. Credit granted for job skills, management-worker relations and supervisory experience for past work experience while employed in industry, business, the professions, or service occupations. This credit may be applied only to the approved career electives requirement of the health care management degree, unless otherwise determined by the school director. Credit will be established by school evaluation. Prerequisite: Allied Health majors.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. This credit may be applied only to the approved career electives requirement of the health care management degree, unless otherwise determined by the school director. Credit will be established by school evaluation. Prerequisite: Allied Health majors.

298-1 Multicultural Applied Experience. (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student who elects the credit. Difference can be manifested by things such as age, gender, ethnicity, nationality, political affiliation, race or class. The student can sign up for the one credit experience in the same semester he or she fulfills the multicultural requirement for the University Core Curriculum or the credit can be coordinated with a particular core course on American diversity, although neither is a requirement. Students should consult the School of Allied Health for course specifications regarding grading, work requirements and supervision. Prerequisite: Allied Health Professions major only and junior standing.

301-3 Introduction to Health Care Management Research. An introduction to library resources, electronic media resources and formal academic writing styles common to Health Care Management research. Introduction to basic theories, concepts and practices pertinent to Health Care Management. May be independent study. Prerequisite: Health Care Management major or consent of school.

320-3 Health Policy. An introductory course with a focus on the U.S. health policy-making process within the context of the political marketplace. Emphasis is upon the ways in which health policy affects the determinants of health. Through real world cases in health policy the health care management students analyzes the public policy environment and gains an understanding of how to exert influence in this environment. Prerequisite: Economics 240, Health Care Management major or consent of school.

340-3 Marketing for Health Care Organizations. Introduction to principles of marketing as applied to health care as a service industry. Analysis of local demographics and of current market trends in healthcare. Design of plans to include pricing, promotion, distribution channels and evaluation of strategies. This course is writing intensive and reflects the college's communication-across-the-curriculum initiative. Prerequisite: English 101, Health Care Management major or consent of school.

349-3 Readings in Health Care Management. The use of written and electronic media resources relevant to Health Care Management and the development of a Health Care Management research bibliography. The use of bibliographic resources to produce written comparative or persuasive research reports. May be independent study. Prerequisite: 301 and Health Care Management major or consent of school.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Prerequisite: consent of instructor.

360-3 The U.S. Health Care System. A study of the major components which comprise the U.S. health care system. This course will focus primarily on basic terminology, history, settings, personnel and utilization of services.

364-3 Health Care Supervision. A course dealing with the problems of management of the small working unit (division, department, section, etc.) within a larger health care agency. Included items will be unit goals, identification of problems, staffing needs, monitoring of work progress, unit communications and interpersonal relations within the unit. Prerequisite: Allied Health majors or consent of school.

365-3 Data Applications for Health Professions. A course designed for students beginning their major in health care to examine and apply data to their profession. Emphasis will be placed upon the understanding of the basic principles, techniques and applications involved with analysis, synthesis and utilization of data. Prerequisite: University Core Curriculum Mathematics requirement and Allied Health major or consent of school.

366-3 Technical Information for Health Managers. A course designed to increase student competence in utilization and analysis of the various types of technical information encountered in the health professions. Emphasis will be placed on library and electronic media research techniques, writing styles, formal report writing, letters, memos, and email and instructions. To successfully complete the course a communication competency exam must be passed with at least 70% accuracy. May be independent study. Prerequisite: English 101 or consent of school.

375-3 Analysis and Evaluation of Health Care Services. An examination of theory and practices in evaluation of health care programs. Special attention is given to identifying program objectives, measuring performance, and designing evaluation studies. Both quantitative and qualitative methods of analysis and evaluation are covered (quasi-experiments, cost-effectiveness analysis and participant observation). Prerequisite: University Core Curriculum mathematics, an approved statistics course, and Health Care Management 381 or consent of school.

380-3 Seminar in Health Care Services. Seminar on the various existing and emerging issues which affect control and implementation of health care services to consumers. Topics include but are not limited to ethics, professionalism, credentialling, marketing, and future trends. Senior status or consent of school

381-3 Health Care Management. This course introduces basic theories of organization and management as applies to the variety of health care organizations. Focus is on the organizational (macro) level of analysis, with strong emphasis on characteristics of the external environment. The student is provided with ideas, concepts and ways of thinking and interpreting how the contemporary health care organization works. Prerequisite: 360, 364 and Allied Health major or consent of school.

382-3 Health Economics. An analysis of the economics of health care in the United States and its effect on society and the health care profession.

384-3 Equipment and Materials Management in Health Facilities. A focus on the preparation of health care administrators with the necessary management tools to assure comfort, safety, and well-being of patients, hospital personnel, and visitors, and to focus their attention on sound maintenance management practices, materials procurement, storage and preservation, records keeping, and the utilities systems needed in a health care facility.

385-3 Fiscal Aspects of Health Facilities. An introduction to the fiscal problems in the administration of health care facilities. Special emphasis is placed on health care reimbursement, working capital, financial statements, and accounting/monetary control for the health care industry. Prerequisite: Health Care Management major, University Core Curriculum Mathematics, Accounting 210 or 220, or consent of school.

388-3 Legal Aspects of Health Care. Principles of law and the United States legal system are applied, in large part through case study, in the various areas of health care administration; range of legal issues include malpractice, contracts, corporate liability of health care organizations, liability by health care professionals, patient rights, and consent, along with a specific focus on legal aspects of managed care. Concepts of

risk management are introduced with the goal of reducing clinical risk to the patient and financial risk to the organization.

390-3 Managing Human Resources and Labor Relations in Health Care Organizations. This course introduces students to the major issues related to developing and implementing human resource management strategies, with specific emphasis on their applications within health care organizations. Emphasis in the course will be given to issues related to the following aspects of human resource management: the strategic role of human resource management in health care organizations; recruiting and selecting health care employees; equal opportunity issues; orienting, training, and developing employees; appraising and managing performance; ensuring fair treatment of all employees; providing a safe workplace; developing and administering compensation plans; managing labor relations; and implementing HRM's role in reengineering processes. Incorporated within the course is an explanation of the human resource functions that are part of all health care managers' responsibilities. May be independent study. Prerequisite: HCM major and HCM 364 or consent of school.

398-3 Risk Management in Health Care Organizations. A study of the process and principles of risk management in health facilities. This course demonstrates methods used in controlling, reducing, or eliminating financial loss in health care facilities due to employee negligence, medical mal-practice, workman's compensation and property loss. It examines pertinent legal principles, occupational health and safety, insurance, and related case studies. Prerequisite: junior standing and permission of instructor. Restricted to Health Care Management majors.

401-3 Analysis of Issues in the Health Care Industry. The identification and study of current economic, regulatory or operational issues impacting the health care industry. The use of both written and oral reports to present a critical analysis of selected topics. May be independent study. Not for graduate credit. Prerequisite: 349 and Health Care Management major or consent of school.

410-3 Quality Management in Health Care Facilities. Study of determinants to achieve quality management in health care facilities, utilizing analytical methods of systematic monitoring and evaluation. Describes concepts and application of Continuous Quality Improvement (CQI) and Total Quality Management (TQM). Includes impact on quality of accreditations, credentialing, liability and governmental regulations. Not for graduate credit. Prerequisite: 360, 381, and an approved statistics course or consent of school.

413-3 Long Term Care Administration. A study of the principles of nursing home management and assisted living services which examines administrative and staffing functions relating to clients, community, public policy, programming and financing. Not for graduate credit. Prerequisite: junior standing or consent of school.

420-3 Ethical Issues in Health Care Organizations. This course introduces students to the various existing and emerging ethical issues that arise in the management and delivery of health care services. Emphasis in this course will be placed on the examination of organizational ethics in health care organizations and on the ethical dilemmas confronting the individuals who manage them. Attention will be given to the relationship among ethics and organizational structure, culture, and mission and with the external environment. Students will apply ethical principles and decision making processes to a series of cases involving ethical dilemmas encountered by individual managers as well as by health care organizations. May be independent study. Not for graduate credit. Prerequisite: Allied Health major or consent of school.

421-1 to 3 Professional Practice in Health Care Management. Introduces the students to topics of professionalism, with emphasis on elements involved in obtaining a position within the health care industry. Career development activities include personal inventories, placement services, interviewing techniques, resumes, letters of application, references and employment tests. Each student will develop a portfolio of professional information related to career goals. Not for graduate credit. Prerequisite: Health Care Management major or consent of school.

422-1 to 12 Health Care Management Internship. Each student will be assigned to a University approved health care organization engaged in activities related to health care management and to the student's career objectives. The student will perform duties and services as assigned by the preceptor. Each student will have a project(s) assigned that is a work project, is managerial/analytical, and is of value to the organization. Report, log, and evaluations are required. Hours and credits are to be arranged individually. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: minimum grade of C in all Health Care Management courses or consent of school.

450-3 Management Problems in the Health Care Industry. The identification and study of problems related to management within the health care industry. The application of health care management theories, concepts and practices to the identified management problems. The use of written and electronic media research resources to produce a written problem solving report. May be independent study. Not for graduate credit. Prerequisite: 401 and Health Care Management major or consent of school.

Health Education (Major, Courses, Faculty)

Health Education offers two specializations within the health education major and two programs of minimal professional preparation. The two specializations are:

1. Community Health Education. For those planning to conduct health education and health promotion activities in non-classroom settings.
2. School Health Education. For those planning to teach health education in the secondary schools.

The two minimal professional preparations are:

- 1. School Health Education. For those planning to teach or supervise health education in the secondary schools.
- 2. Driver Education. For those planning to teach driver education in Illinois secondary schools.

These specializations, in general, constitute minimal preparation for the positions listed. Consequently, all candidates are strongly urged to complete additional work in the field.

A 2.25 grade point average is required for admission into the undergraduate health education program.

Psychomotor and verbal skills are required for students enrolled in Health Education 334 and 434. If questions arise concerning a student's ability in these areas, an assessment will be made prior to the end of the first week of the semester to determine whether the student possesses the necessary skills to remain in the course. The first aid coordinator in the Department of Health Education and Recreation will make the final decision.

A student in the community health education specialization must have a 2.5 grade point average in the major before clearance to do an internship. A student in the school health education specialization must have a 2.75 grade point average in the major before clearance to do student teaching.

Health Education 101, Foundations of Human Health, and Health Care Professions 241 or appropriate anatomy and/or physiology course are required for all undergraduate health education majors.

A C or better grade is required for all major courses in the undergraduate health education program.

Bachelor of Science Degree in Health Education, College of Education and Human Services

HEALTH EDUCATION MAJOR — COMMUNITY HEALTH EDUCATION SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
Health Education 101 must be included in University Core Curriculum.	
<i>Requirements for Major in Health Education</i>	55
Health Education 300, 312, 313s, 325, 326, 330, 334, 355, 407, 410, 414, 488, 490, 491, 493	
Health Care Professions 241 or appropriate anatomy and/or physiology course	3-4
<i>Recommended Health Education Electives</i>	20-21
<i>Total</i>	120

HEALTH EDUCATION MAJOR — SCHOOL HEALTH EDUCATION SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
Health Education 101, Psychology 102, and an acceptable non-western civilization/third world culture course must be included in University Core Curriculum	
<i>Requirements for Major in Health Education</i>	40
Health Education 300, 312, 325, 326, 330, 334, 355, 407, 410, 414, 491, and two courses from the following 313s, 450, 484, or 488	
Additional courses to meet certification requirements: Health Care Professions 241 or equivalent anatomy and/or physiology course.....	3-4
<i>Professional Education Requirements</i>	28
(See Teacher Education Program.)	
<i>Other Electives</i>	7-8
<i>Total</i>	120

¹Required to meet non-western civilization/third world culture requirement.
The two minimal professional preparation requirements for Illinois teachers are:

School Health Education: Health Education 300, 330, 355, 407, 410, 414, 491 and one course from the following: 312, 313s, 450, 484, 488, or 493.

Driver Education: Health Education 302s, 313s, 442s, 443s, and one course from the following: 334, 445, 470s, and 480s.

Courses (HED)

101-2 Foundations of Human Health. (University Core Curriculum) This course is designed to examine contemporary health-related issues for all dimensions of the individual — physical, mental, social, emotional and spiritual — through focus on health promotion and disease prevention. Emphasis is placed on maintaining or improving quality of life by developing personal and social skills (decision-making, communication, stress management, goal setting) across health education content areas, as well as identifying and accessing appropriate health-related resources.

302S-3 Driver Task Analysis: An Introduction to the Driving Task. An introduction to the task of the driver within the highway transportation system (HTS) with emphasis on risk perception and management and the decision-making process. A content based driver and traffic safety education course. Prerequisite: valid driver's license.

311-3 Human Growth and Development. An overview of human development from conception through senescence. Designed for professional personnel who will be concerned with planning health programs for groups representing broad age ranges. Emphasis will be on physical, mental, and social dimensions of growth and development.

312-3 Emotional Health. Introduces knowledge and skills needed to acquire and maintain emotional health. A variety of individual and community issues that occur across the lifespan in our diverse, complex world will be examined.

313S-3 Injury Prevention and Safety. Introduces the concepts and topics of injury prevention and safety. Course areas include: school, farm, consumer, fire, home, traffic, occupational, recreational and disaster.

325-3 Planning and Implementing Health Education Programs. Current theories and models related to planning and implementation of health education programs in schools, communities, medical care, work-site, and college/university settings will be examined. Steps to program planning, including needs assessment, recruiting community organizations, developing program plans, designing program objectives and selecting appropriate implementation programs will be discussed. Prerequisite: 301 and 305.

326-3 Evaluation in Health Education. Principles and methods for monitoring the implementation of health education and for assessing its impact. Development and selection of valid and reliable measures. Use of standardized scores and other appropriate statistics. Applications in classroom and community settings. Prerequisite: 301, 305 and 325 for undergraduate health education majors or consent of instructor.

330-3 Consumer Health. An overview of the health marketplace and the processes involved in becoming an intelligent consumer of health information, products, and services. Topics will include health-related advertising, fads, fraud, legislation, watchdogs, health care options, self-care, complementary and alternative medicine, drugs, devices, major health problems, nutrition, and physical activity.

334-3 First Aid and CPR. Provides students with first aid and cardiopulmonary resuscitation knowledge and skill competencies necessary to care for injuries and provide assistance in emergencies. A nationally recognized First Aid and CPR certification may be obtained with successful completion of the course. Purchase of first aid kits and protective equipment are necessary. Students will be required to pay a lab fee of \$15.

346-4 Motorcycle Rider Education Instructor Training. Provides prospective teachers with on-cycle teaching experience with beginner riders. Addresses program administration, scheduling, public information techniques, equipment procurement, evaluation and instructional technology. Certification as Motorcycle Rider Course Instructor can be obtained. Materials purchased from the Motorcycle Safety Foundation are required in this course. Prerequisite: consent of instructor.

351-3 Health Education in Early Childhood. A study of essential factors of health, nutrition and safety as they apply to school environments of children birth through age eight. Emphasis will be given to nutritional needs, health routines, health appraisals, safety, hygiene, childhood illness, social-emotional needs and first aid. Students will examine the relationship of the child, family, school and community on the child's health and well-being. The course will include information on program planning, classroom curriculum, current issues and parent education around health and safety issues.

355-3 Introduction to Community Health. Organization and administration in local, state, and national official and non-official health agencies, their purposes and functions, and an overview of methods for meeting community health needs and for solving community health problems.

400E-2 to 3 Health Appraisal of School Children - Special Topics. Includes the screening, testing, and evaluation for numerous health conditions related to hearing, vision, the cardiovascular system, skin, spine, and such diseases as diabetes, tuberculosis, herpes, and other ailments. Included will be classroom lectures and presentations, a supervised practicum, and all students will develop a viable program in a particular problem area in a public school program.

401-3 Epidemiological Approaches to Disease Prevention and Control. Principles and practices in the cause, prevention and control of diseases in various community settings. Prerequisite: 301 and 305 for undergraduate health education majors.

402-3 Death Education. Designed to prepare educators to conduct learning experiences about death and dying in a variety of school, college, medical care, and community settings. Stress will be placed on developing brief, functional curricula and usable, imaginative teaching-learning materials, and on evaluating resource materials for use in educating at various levels of maturity.

403-3 Health Advocate Training. Provides students with knowledge and skills in the areas of peer health education, health advocacy, and referral. Instruction includes health care information from a wellness point of view. Prepares students for practicum in health advocate program. Credit will not count toward a master's degree in health education. Prerequisite: consent of instructor.

405-3 Sex Education. Examines various programs of sex and family life education in schools, recognizing a range of community attitudes. Prerequisite: 301 and 305 for undergraduate health education majors.

407-3 Substance Use Prevention. Designed to prepare educators to plan, implement and evaluate substance use prevention programs in school and community settings. Emphasizes incidence/prevalence, etiology, risk factors, motivations and short/long term effects related to substance use. Based on current research, key elements of effective prevention programs are reviewed. Meets requirements of Illinois state law concerning education about alcohol and other drugs for grade K-12.

410-3 Human Sexuality. Provides detailed information on dimensions of sexuality; characteristics of healthy sexuality; anatomy and physiology; gender roles; relationships; sexually transmitted infections/diseases; contraceptive issues and concerns; sexual victimizations; and sexuality through the life cycle.

411-6 Emergency Medical Technician in the Wilderness. Placement of trained emergency medical technicians into a wilderness situation and having them adopt previously learned skills and newly developed skills. Prerequisite: 310 or 434.

430-3 Health and Injury Control in A Work Setting. (Same as Industrial Technology 430.) Assesses the health and injury control programs present in a work setting. Emphasis given to employee programs in health, wellness, and injury control that are effective. Field trips to work sites are included.

434-4 Advanced First Aid and Emergency Care. Meets the needs of those in positions where advanced first aid and emergency care is required. A nationally recognized First Aid and CPR *First Responder* certification may be obtained with successful completion of the course. Purchase of first aid kits and protective equipment are necessary. Students will be required to pay a lab fee of \$20. Prerequisite: 334 or consent.

440-3 Health Issues in Aging. Course content includes demographic trends; physiological changes associated with aging; health care and consumer challenges; cultural differences; psychological effects of aging; housing; long-term care; retirement; care giving; and formal, informal, and community-based supports systems.

441-3 Women's Health. The course deals with a wide variety of health concerns of American women as consumer in the current health marketplace. Major categories of topics include health products, health services, and sources of health information of particular interest to women. Emphasis is also placed on current health related issues of women. The major purpose of the course is to provide a basis for informed decision-making by the female consumer.

442S-5 Developing Vehicle Operational Skills: Driver Education Laboratory Experiences. Learning activities will focus on preparing the prospective driver educator to conduct activities which develop vehicle operational skills for a novice driver. Emphasis is placed on laboratory organization and administration, maintaining a learning environment, developing laboratory instructional modules and the conduct of learning experiences. Student will be required to pay a laboratory fee of \$25. Prerequisite: 302s.

443S-3 Developing Classroom Skills: Driver Education Classroom Experiences. Learning activities will focus on preparing the prospective driver educator with the skills to teach in the driver education classroom with application to classroom organization, maintaining a learning environment, developing instructional modules, and the conduct of learning experiences. Prerequisite: 302s.

445-3 Advanced Driver Education Instructor Training. Prepares prospective instructors of advanced driving techniques. Emphasis is placed upon safe driving practices, vehicle dynamics, emergency vehicle operation, in-car response to simulated driving emergencies, and instructional techniques. Prerequisite: consent.

450-3 Health Programs in Elementary Schools. Designed to present current health-related knowledge and skills to deliver culturally-sensitive, developmentally-appropriate, performance-based instruction to elementary children. Will also provide an overview of coordinated school health programs and their relationship to academic achievement.

455-3 Computer Applications in Health Education. Designed for students with little or no previous experience with computers. The course will be applications oriented, with an introduction to the potential uses of computers in the field of health education.

461-1 to 12 Health Education Workshop. A different focal theme each year; e.g., mood modifying substances, ecology, human sexuality, emotional and social health dimensions. Information, ideas, and concepts are translated into teaching-learning materials and approaches; continuing opportunity for interaction between prospective and experienced teachers.

470S-3 Highway Safety as Related to Alcohol and Other Drugs. Relationship between alcohol and other drugs and traffic accident causes. A review of education programs designed to minimize drug related accidents. Prerequisite: advanced standing or consent of instructor.

471-2 Health Education Instructional Strategies. This course is designed for graduate students who are teaching assistants in Health Education. The purpose of the course is to enhance professional skills of those who are responsible for teaching health education, general education, and first aid.

476-3 Stress Management. A study of the physiological, emotional and sociological stressors and their underlying mechanisms in states of disease and health. Particular emphasis is placed upon prevention and control of stress via self assessment techniques and proficiency in self control techniques such as biofeedback, autogenic training, meditation and progressive muscle relaxation.

480S-3 Traffic and Driver Education Program Development. Acquaints students with curriculum innovation, current philosophy, learning and teaching theories, and instructional designs. Students will develop learning packages and modules. Prerequisite: 443s or consent of instructor.

483-3 Health Care Systems. Background and development of health administration structures in the United States; the dynamics and trends evolving from current medical care programs and practices; interaction between trends and policy-making processes. Prerequisite: 355.

484-3 Preventing Violence in Educational Settings. Designed to prepare educators, administrators, and other professionals to plan, implement, and evaluate violence prevention, conflict resolution, and crisis intervention programs in educational settings. Incidence/prevalence, etiology, and risk/protective factors related to youth violence will be examined. Current theories and models related to program planning and implementation will be applied to design coordinated, integrated school/community programs. Based on current research, key elements of effective curricula and other program components will be reviewed.

485-3 Global Health. This course will present introductory principles and practices related to public health on a global basis. In this course we will analyze various public health aspects of global health, including: public health problems (chronic disease, infectious disease, injury, disability, malnutrition, etc.) affecting foreign countries, prevention and control efforts in foreign countries, United States involvement in global health problems, economic and social impact of global health problems, structure and function of health care systems, and the future of global health.

488-3 Environmental Health. Application of the principles of learning to understanding people interacting with their environment. Emphasis placed upon individual and community responsibilities for promoting environmental health. Rural and municipal sanitation programs and practices are included.

489-3 Introduction to Biostatistics. An introduction to bio-statistics; examination of theories of population projections; collection, organization, interpretation, summarization, and evaluation of data relative to public health happenings with emphasis on graphic presentation.

490A-2 to 12 Field Experiences in Schools, Community Health Field observation, participation, and evaluation of current school or community health education or safety programs in agencies relevant to student interests. Prerequisite: all required health education courses and consent of instructor.

490B-2 to 6 Advanced Field Experience in School, Community Health or Injury Prevention Education. Advanced field observation, participation and evaluation of current school or community health education or injury prevention programs in agencies relevant to student interests. Prerequisite: grade B or better in 490a; consent of instructor.

491-3 Health Teaching/Learning: School and Community. Teaching and learning strategies at secondary school levels and in other community group settings. Opportunities to examine and observe a variety of educational strategies applicable to health education. Prerequisite: 301 and 305; 405 and 407 or concurrent enrollment in 405 and 407 for undergraduate health education majors.

493-3 Health Informatics. The application of technology to engage communities and individuals in behavior and environmental change processes. The course will focus on the use of technology to describe the magnitude of health problems and their sources; analyze risk factors; identify community strengths from which strategies may be defined and tools created to intervene, prevent problems, and promote health and well-being; and continuously evaluate, refine, and implement what works.

496-4 Industrial Hygiene. Provides a background in the recognition, evaluation, and control of toxic materials and hazardous physical agents in the work environment. Prerequisite: consent of instructor.

499-3 Rx: Education in Health Care Settings. Designed for members and potential members of the health care team to explore educational concepts and strategies applicable to a variety of health care settings. Includes rights and responsibilities of consumer and professional, determinants of health behavior, contrasting models of health care, communication skills, media and materials and planning, implementing and evaluating educational programs. Open to medical and dental personnel, nurses, health educators, dietitians, therapists, pharmacists, social workers, and related professionals.

Health Education and Recreation Faculty

Aaron, James E., Professor, *Emeritus*, Ed.D., New York University, 1960.

Abernathy, William, Assistant Professor, *Emeritus*, M.S. ED., Southern Illinois University, 1963.

Birch, David A., Professor and *Chair*, Ph.D., Pennsylvania State University, 1990.

Boydston, Donald N., Professor, *Emeritus*, Ed.D., Columbia University, 1949.

Brown, Stephen, Assistant Professor, Ph.D., University of Maryland, 2001.

Drolet, Judy C., Professor, Ph.D., University of Oregon, 1982.

Fetro, Joyce V., Professor, Ph.D., Southern Illinois University, 1987.

Glover, James, Associate Professor, Ph.D., University of Maryland, 1980.

Glover, Regina, Associate Professor, Ph.D., University of Maryland, 1983.

Grissom, Deward K., Professor, *Emeritus*, Ed.D., Columbia University, 1952.

Hailey, Robert, Assistant Professor, *Emeritus*, M.Ed., University of Missouri, Columbia, 1959.

Hammig, Bart J., Assistant Professor, Ph.D., University of Kansas, 1997.

Kittleson, Mark J., Professor, Ph.D., University of Akron, 1986.

Lacey, Ella P., Associate Professor, *Emerita*, Ph.D., Southern Illinois University, 1979.

LeFevre, John R., Professor, *Emeritus*, Ed.D., Teachers Colleges, Columbia University, 1950.

Malkin, Marjorie J., Professor, Ed.D., University of Georgia, 1986.

McEwen, Douglas, Professor, *Emeritus*, Ph.D., Michigan State University, 1973.

Ogletree, Roberta J., Professor, H.S.D., Indiana University, 1991.

Rice, Brian, Instructor, M.S., Southern Illinois University, 1996.

Ritzel, Dale O., Professor, Ph.D., Southern Illinois University, 1970.

Russell, Robert D., Professor, *Emeritus*, Ed.D., Stanford University, 1954.

Sliepcevich, Elena M., Professor, *Emerita*, D.P.E., Springfield College, 1955.

Teaff, Joseph, Professor, *Emeritus*, Ed.D., Columbia University, 1973.

Vaughn, Andrew T., Professor, *Emeritus*, D.Ed., Columbia University, 1958.

Vitello, Elaine, Professor, *Emerita*, Southern Illinois University Carbondale, 1977.

Welshimer, Kathleen J., Associate Professor, Ph.D., University of North Carolina, 1990.

Wilken, Peggy A., Clinical Assistant Professor, Ph.D., Southern Illinois University, 1995.

Zunich, Eileen M., Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1970.

History (Department, Major, Minor, Courses, Faculty)

A major in history consists of thirty-six semester hours of history courses in addition to core curriculum requirements. Core Curriculum history courses do not count toward the major. Students who plan advanced study in preparation for college teaching or other professional work are advised to take additional work in their proposed specialty.

A number of different patterns are available for students anticipating various futures. Students should consult with departmental advisers to choose the pattern that fits their needs. They should also consult with college and career services advisers for assistance in planning for career goals.

Advisers are available in the Department of History to assist students in planning their programs in accordance with current University and departmental regulations. Normally course selection should represent three areas of history (United States history, European history, and either Asian, African or Latin American history) and be distributed chronologically as well as geographically. Students must also complete a minimum of four courses at the 400 level and they must write two research papers in history. The first paper is done in History 392, and the second paper is done in History 499—Senior Seminar. History 499 counts as one of the four required 400-level courses. Both papers meet the College of Liberal Arts Writing-Across-the-Curriculum (WAC) requirement.

All history majors should meet with the department's undergraduate advisers each semester to keep up to date the records of their progress toward the degree and to receive advance approval of their courses. A C average in the major is required for graduation. A 2.75 average in the major is required before the department will approve student teaching.

Transfer students should report to the department prior to their first semester of attendance. Normally the department will accept a substantial part of the credits in history taken at other accredited institutions. In every case, transfer students must take at least 18 semester hours in history at Southern Illinois University Carbondale.

Bachelor of Arts Degree in History, College of Liberal Arts

University Core Curriculum Requirements	41
College of Liberal Arts Academic Requirements (See Chpt 4)	11
Requirements for Major in History	36 ¹
History 205a or 207a and History 205b or 207b or equivalent	6
History 300 and 301 or equivalent	6
History 392 or equivalent	3
History 499	3
History electives, 300 level or above distributed in two fields of history	18
Electives	33
These may include courses required for teaching certification in Social Sciences. ²	
Total	121

Bachelor of Science Degree in History, College of Education and Human Services³ (History Designation for the Illinois Social Sciences Teaching Certificate)

University Core Curriculum Requirements 41

To include English 101, 102; Speech Communication 101; Mathematics 113 or approved substitute; any Core Fine Arts (History 201 recommended); any Core Human Health; History 101a or 207a and History 101b or 207b; Psychology 102 and one course from Economics 113, Political Science 114, or Sociology 108; any Core Science – Group 1, and any Core Science – Group 2; Political Science 278; and one of Economics 302i, Geography 303i, Sociology 304i or 306i.

Requirements for Major in History 36¹

History 205a or 207a and History 205b or 207b and two additional world history courses⁴ 12
 History 300 and 301 and two additional U.S. history courses 12
 History 367 3
 History 392 or equivalent 3
 History 499 3
 History electives 3

Additional Requirements for the Social Science Teaching Certificate⁵ 9

Students must complete three additional courses from the social science disciplines of economics, geography, political science, or sociology to include Geography 300i. Two additional courses must be chosen from Economics 113, Political Science 114, or Sociology 108. Additional social science courses are recommended if a student's program permits.

Education Requirements 34

Professional Education Requirements 28
 (See Teacher Education Program, College of Education and Human Services in Chapter 4)
 Additional Certification Requirements 6
 Curriculum and Instruction 360, 469

Total 120

¹ At least twelve hours must be taken at the 400 level. Three of the 12 hours must be History 499.

² Students in CoLA seeking teacher certification should select courses as described under the College of Education and Human Services

³ This degree leads to certification in social science with a designation in history.

⁴ World History study must include at least three hours other than European and U.S. history.

⁵ The Social Science certificate allows a teacher to teach courses on the secondary level. If a student wishes to teach on the middle school level in grades 6, 7, or 8, Curriculum and Instruction 462 and 473 are required to earn the Middle School endorsement.

Minor

A minor consists of eighteen semester hours. The student is advised to balance courses between at least two of the three fields of American, European, or Third World history. Transfer students, in order to have a minor in history, must have taken at least nine semester hours in history at Southern Illinois University Carbondale. Core Curriculum history courses do count toward the minor.

Courses (HIST)

101-6 (3,3) The History of World Civilization. (University Core Curriculum) (a) To Industrialization; (b) Since the Age of Encounter. A survey of various civilizations in the world from prehistory to the present with particular attention to non-western cultures.

110-3 Twentieth Century America. (University Core Curriculum) The history of the United States since 1900. Surveys cultural, social, economic and political development, with special emphasis on domestic pluralism and changing international roles.

112-3 The Twentieth Century World. (University Core Curriculum) [IAI Course: S2 913N] The history of Europe, Asia, Africa and Latin America since 1900. Emphasis on political conflict, economic development, social change and cultural transformation in an increasingly integrated world.

201-3 Art, Music and Ideas in the Western World. (University Core Curriculum) [IAI Course: HF 902] The historical evolution of the visual arts, architecture and music in the context of society and literature, from ancient Greece to the present. It emphasizes the fundamental historical relationship of the different genres of human expression in Western culture.

202-3 America's Religious Diversity. (University Core Curriculum) [IAI Course: H5 905] An introduction to the basic concepts and histories of the world's religions and their place in American society. The purpose is to increase our understanding of cultural and religious diversity and how the various religious traditions inform our worldviews.

205-6 (3,3) History of Western Civilization. [IAI Course: (a) S2 902 (b) S2 903] (a) From ancient times through the sixteenth century; (b) The seventeenth century to the present. A brief survey of the major developments and trends in European history from ancient times through the 20th Century.

207-6 (3,3) World History. (Advanced University Core Curriculum course) (a) [IAI Course: S2 912N] From pre-history through the fifteenth century; (b) [IAI Course: S2 913N] Fifteenth century to the present. A brief survey of major developments and issues in historical societies of the world from pre-history through the 20th century, with a focus on primary source interpretation. Satisfies University Core Curriculum Humanities requirement in lieu of 101a and b

210-3 American Heritages (University Core Curriculum) [IAI Course: S2 901] The American experience as expressed in key texts written prior to the Twentieth Century. Emphasis on American pluralism and controversies related to race, ethnicity, gender and class.

300-3 The Origins of Modern America, 1492-1877. (Advanced University Core Curriculum course) [IAI Course: S2 900] A general survey of political, social, and economic development of the United States from 1492 to 1877. Satisfies the University Core Curriculum Multicultural requirement in lieu of 210.

301-3 Modern America from 1877 to the Present. (Advanced University Core Curriculum course) [IAI Course: S2 901] A general survey of the political, social and economic development of the United States from 1877 to the present. Satisfies the University Core Curriculum Social Science requirement in lieu of 110.

303-1 to 9 Topics in History. Topics will vary with instructor. May be repeated for a maximum of nine semester hours, provided registrations cover different topics.

311-3 The Ancient Near East and Mediterranean. A comparative study of ancient near eastern and classical civilizations of the Fertile Crescent and the Mediterranean Basin: Mesopotamia, Egypt, Palestine, Greece and Rome.

312-3 History of Italy. An examination of the major societies which have occupied the Italian Peninsula from the Roman era to the present, with emphasis on ancient times, the middle ages and Renaissance and the unification movement of the Nineteenth Century.

313-3 Ancient and Medieval Spain. Investigation into the societies and cultures of the Iberian Peninsula from the Roman conquest to the Inquisition. Focus on cultural interchange and conflict between pagans, Christians, Jews and Muslims.

315-3 Medieval Europe. The emergence of Europe from the Age of Constantine to the Black Death, with emphasis on the political, socio-economic, and cultural forces which were at work creating Europe.

320-3 Early Modern Europe. The development of Europe from the Renaissance through the Age of the French Revolution.

324-3 Women in Western Society: 1600 to Present. (Same as Women's Studies 348.) The legal, social, economic, and political position of women in Western society during the past 350 years are examined against the backdrop of industrialization, political democratization, world wars, and totalitarianism. Emphasis is on women in England, France, and the US.

326-3 Europe: 1789 – 1914. Changing social and political structure of Europe caused by the impact of industrialization and the French Revolution. The consequences of these developments in terms of the emergence of new social forces and the development of movements for social and political revolution.

328-3 History of France. A survey of main themes (social, cultural, economic, political) in French history from the middle ages to the present.

329-3 Nazi Germany. This course explores politics, culture, and society in National Socialist Germany. Themes include Adolf Hitler's rise to power, conformity and resistance under a dictatorship, propaganda, war and persecution, and the legacy of Nazism after World War II. Using a variety of media, including novels and films, the course asks how a modern, industrialized country could transform itself into what one historian has called "the racial state".

330-6 (3,3) British History. (a) Britain to 1688; (b) Britain since 1688. Political, social, economic, and cultural history of Britain.

333-3 British Empire. A survey of the British Empire, from the loss of the American colonies to the onset of decolonization at the end of the Second World War. It focuses on the intersections between the histories of Britain and of its imperial possessions in Africa, Asia and the British West Indies. Special attention will be given to the role of the nation and of race, class, gender and sexuality in the making of the British Empire.

334-3 History of Modern Germany. This course considers the important historical and moral questions posed by modern Germany history. It begins with the unification of Germany and explores such themes as World War I, the Weimar Republic, national socialism, the Holocaust, East Germany and reunification.

335-3 20th Century Peace and War. A survey of peace and war as a 20th Century phenomenon with emphasis on relationships between war and society, technology, and culture.

336-3 Twentieth-Century Dictatorships and Global Conflict 1919-1945. The emergence of the Axis dictatorships in Europe and the Far East, their ideology, expansion, aggression and their defeat in World War II.

337-3 Modern Russia. Russia from Peter the Great with main emphasis on 19th and 20th centuries. Emphasis on political history.

338-3 Eastern Europe. An historical survey of the East European area from the Baltic to the Balkans, with emphasis on the modern era.

340-3 International History of the Cold War. This course is designed to acquaint students with the themes, events and figures prominent in the Cold War era. The origins of the Cold War and the global ramifications of sustained tension among the rival powers will be discussed. The events and the people within the context of their times will be evaluated.

352-3 Social History of the United States. The historical development of social interaction and relationships among America's various ethnic, religious, racial, economic and sexual groups. Covers colonial America to the present.

354-3 The Contemporary United States. A survey of the social, economic, political and cultural changes in the United States since the end of World War II, focusing on such topics as the Cold War, changes in the lives of women and minorities, the Vietnam War, the social movements of the 1960s, the imperial presidency, and the Reagan revolution.

355-3 The Radical View in American History. A survey of American radicalism from the revolution to the present, with an emphasis on twentieth century movements for social change.

356-3 U. S. Women's History. (Same as Women Studies 356.) This course will survey the role of women in US history from colonial times to the present. Students will be introduced to contributions made by women to US society, politics and culture.

357-3 Women and Work in the United States. (Same as Women's Studies 357) An introduction to the diversity of women's experiences as workers in the home, the household economy, and the labor market segregated by race, ethnicity and gender.

360-3 American Rural History. (Same as Women's Studies 360) An examination of America's rural history from the 17th to the 20th centuries, focusing especially on social and economic relationships and attitudes, the role of ethnicity and gender, environmental and technological issues, agrarian radicalism and governmental activities.

361-3 Race and History in the United States. (Same as Black American Studies 360.) This account of racial attitudes and race relations begins with the 16th century European racial experience and covers subsequent developments in the U.S. to the present time. The problem of race is treated in its several dimensions, but principal emphasis falls upon the historical consequences of Caucasian confrontations with blacks, Hispanics, and native Americans.

362-6 (3,3) Black American History. (Same as Black American Studies 311.) (a) Black American history to 1865; (b) black American history since 1865. The role of blacks and contribution in the building of America and their ongoing fight for equality.

363-3 History of Working Americans. Survey of historical changes in work patterns from colonial times to the present, and the historical impact of working Americans on United States society, culture and politics.

364-3 The Great Depression in the United States. Causes and effects of the Great Depression and of governmental measures for relief, recovery, and reform during the years 1929-1942.

365-3 American Immigration. A history of American immigration and ethnicity from colonial times to the present, with primary attention upon the peoples of the United States and the diverse lands from which they have come.

366-3 American Indian History. A survey of American Indian history from the Paleolithic age to the present. Emphasis upon interactions and relationships among cultural groups during pre-colonial, colonial and modern era.

367-3 History of Illinois. The history of the state from 1818 to the present.

368-3 American Religious History. (Advanced University Core Curriculum course)(Same as Women's Studies 347) A chronological and thematic history of religion in America focusing on (1) the diversity of American religions from the religions of the Amerindian to the development of new religious movements, and (2) the unity of American religion mediated through mainstream Protestantism and civil religion. Satisfies University Core Curriculum Multicultural requirement in lieu of 202.

370-6 (3,3) History of Latin America. (a) Colonial Latin America. (b) Independent Latin America. An introduction to the political, economic, social, and cultural development of Latin America from Pre-Columbian times to the present.

371-3 History of Cuba. A general overview of the history of Cuba, this class will focus on the close and complex relationship between the politics, economy and culture of the island with those of the United States. To this end, we will work as a group to understand how events in Cuban history were viewed both by the people who lived through them and by later historians.

380-6 (3,3) History of East Asia. (a) To 1600; (b) Since 1600. A broad survey of the history of China, Korea and Japan from early times to present.

381-3 Colonial India. This course is a survey of modern Indian history, from the advent of British colonialism in India to Indian independence. The emphasis of the course is on the impact of colonialism on India and the Indian struggle against British rule.

385-3 Islam and the West. A history of the religious and cultural interaction between the Islamic and Western world. Surveys the changing image of Islam in western literature, the Muslim response to secularism, and the Islamic presence in Europe and America.

387-6 (3,3) History of Africa. (Same as Black American Studies 314) (a) To 1800; (b) Since 1800. A chronological study of African peoples from earliest times to the present, including ancient Egypt, Ethiopia, the Era of the African Kingdoms, the role of Islam, the slave trade, African-European relations, colonialism, African nationalism and independence.

390-3 History in Fiction. A comparative study of fictional accounts and of analyses written by historians over selected periods or topics.

- 392-3 Historical Research and Writing.** Methods of historical investigation, criticism and composition. Restricted to undergraduate majors in history. May not be taken more than twice without completion. Fulfills the CoLA Writing-Across-the-Curriculum (WAC) requirement. Prerequisite: history majors.
- 393-3 Twentieth Century Military History.** An introduction to the problems of armed conflict throughout history with particular emphasis on the twentieth century and the transformation of warfare during the era of the World Wars. Prerequisite: sophomore standing or consent of instructor.
- 395-3 Honors.** Great ideas and works of history, with discussion of conflicting interpretation of major historical problems. Prerequisite: junior standing and consent of department.
- 400-3 American Political History.** An analysis of American political history, focusing especially on the origins and development of major political institutions, including Congress, the Presidency, political parties and the electoral systems.
- 401-3 Atlantic History.** This course examines the origins and development of the Atlantic basin as an intercommunication zone for African, European and American societies from the mid-15th century through the early-19th century. Themes include transformation of environments, forced and voluntary migrations, emergence of distinct Atlantic culture communities, development of Atlantic economics and formulation and implementation of Atlantic revolutionary ideologies.
- 402-3 Greek History.** (Same as Classics 402) History of ancient Greece, focusing on ancient sources and modern scholarship. No language requirement. Prerequisite: consent of instructor.
- 405-3 Ireland since 1600.** A survey of the history of Ireland and the Irish diaspora since 1600. Coverage of the major events and themes in the history of Ireland in the modern period, with special attention to the crucial experiences of emigration and immigrant destination.
- 406-3 Family, Gender and Sexuality in Pre-Modern Europe.** (Same as Women's Studies 406) A discussion of the history of family, creation of gender roles, and importance of sexuality from ancient times to the Industrial Revolution.
- 412A-3 Empire and Social Conflict in the Roman Republic.** The social, political and cultural consequences of Roman expansion during the Republican period (c. 700-44 BCE). Focus on reading and analyzing primary sources.
- 412B-3 Religion and Society in Imperial Rome.** Religious, social, and cultural conflict and change in the Roman Empire, first through third centuries. Focus on reading and analyzing primary sources.
- 413-3 Christianization of Power and Society in Late Antiquity.** An investigation into the political and social changes involved in the rise of Christian leadership in Western Europe following the fall of the Roman Empire. The course will focus on reading and analyzing primary sources from the fourth through the eighth centuries.
- 414-3 Europe in the Age of the Crusades.** This course examines the development of institutions, society and culture in the Central and Late Middle Ages with a special emphasis on the Crusades and other interactions with Europe's neighbors.
- 417-3 Ritual and Revolt in Early Modern Europe.** This course examines political practices on different levels of European society from the later middle ages through the Enlightenment: court ritual, popular revolts, patronage networks, representative assemblies and family politics are among the topics covered.
- 418-3 The Renaissance Exchange.** Course employs the traditional Renaissance themes of economic, political and cultural developments in Italy and Europe from 1300-1550 as the framework for detailed examination of European interactions – economic, ideological, religious – with Asia, the Middle East and the Americas.
- 420-3 Reformation.** Concentrates on the movement of religious reforms in the 16th Century. Emphasis on its roots in the past, particularly in earlier expressions of popular piety and to the wider social and political effects in the 16th and 17th centuries.
- 422-6 (3,3) Intellectual History of Modern Europe. (a) 1600-1815; (b) Since 1815.** The first semester will cover the Age of Reason, the Enlightenment, and Early 19th Century Romanticism. The second semester will cover the period from Marx and Darwin to the Contemporary World.
- 425-6 (3,3) Twentieth Century Europe. (a) Europe 1914-1945; (b) Since 1945.** Political, social, cultural and economic development of the major European states during the present century.
- 426-3 Cities and Culture in Europe 1870-1914.** Cultural and social history focusing on four European cities (Paris, Berlin, Vienna, St. Petersburg) in the *Fin-De-siècle* period (1870-1914).
- 427-3 World War I.** The first World War (1914 - 1918) from a variety of perspectives: military, cultural, social and political. Seminar-type format with discussions of topics such as the war's causes, nature of trench warfare, the home front, and political and cultural impact of the war.
- 442-6 (3,3) British Culture and Society, 1660-1914. (a) from 1660 to 1780; (b) 1780 to 1914.** An examination of British society and values using such sources as novels, memoirs, music and paintings. The first semester analyzes the emergence of national identities, empire and a more secular society. The second semester explores industrialization, urbanization, the democratization of politics, growth of empire and changing roles for women and the family.
- 444-3 The Holocaust.** An introduction to Nazi German's systematic mass murder of Europe's Jews and other minorities. Using works of history, literature, and film, we will examine such topics as anti-Semitism, the behavior of "ordinary Germans" during the 30s and 40s, Jewish resistance, Holocaust denial and memory after the Holocaust.
- 446-3 Cultural Encounter Between China and the West.** A study of the history of cultural encounters between China and the West within the contexts of Eurasian transcontinental and maritime trade, religious and diplomatic missions, military conquests, colonialism, travel and migration. The focus is on the period after 1500.

- 447-3 Culture and Imperialism.** This course will focus on the culture of modern British imperialism. It will examine the impact that the people and commodities of the empire as well as the practices of imperial rule had on modern British culture. The emphasis of the course will be on the implications of "imperial culture" in mediating gender, race and class relations within Britain.
- 448-3 Gender and Family in Modern United States.** This course explores the history of gender and the family in the United States from the late 19th century to the present. Themes to be explored include: the family and the state; motherhood; race and family life; and the role of "the family" in national politics.
- 449-3 Race and Media in United States History.** (Same as Black American Studies 449 and Mass Communication and Media Arts 449) This course explores the history of race in the modern United States by focusing on moments of racial crisis that garnered media attention. The course asks what these moments reveal about the shifting status of "race", as well as how spectacles have changed with the transformation of modern media.
- 450-6 (3,3) Early America.** The evolution of American society from European settlement through the Age of Jefferson, with special emphasis on social and political institutions and thought.
- 451-3 Antebellum America, 1815-1860.** The struggle to define the nation in the political, economic and social realms; the emergence of women's rights, slavery, sectional conflict from 1815 to 1860.
- 452-6 (3,3) United States History 1850-1896.** (a) Civil War era; (b) the origins of modern America; reconstruction and nationalization; 1865-1896. The study of the background to the Civil War, the Civil War, Reconstruction, and the Gilded Age.
- 453-6 (3,3) United States History, 1896-1945.** (a) 1896-1921; (b) 1921-1945. The history of the United States since the 1890's with emphasis upon politics, political ideas and diplomacy.
- 454-3 Cold War United States, 1945-1990.** The impact of the Cold War on United States society. Major topics include foreign policy debates, domestic anti-Communism, and the cultural effects of the Cold War.
- 455-3 The Conservative View in American History.** Readings in American conservative thought, from the eighteenth-century to the present day, including traditionalist, neoconservative and libertarian writers.
- 456-3 The United States in the 1960s.** Examines the roots, events, ideas and legacies of the 1960s through readings in history and literature, and through films and music. Focus will be on the social protest movements of the era and their impact on American society.
- 457-3 American Environmental History.** (Same as Geography 457) An exploration of the attitudes toward and the interaction with the natural resource environment of North America by human settlers. Coverage from the Neolithic Revolution to the present.
- 458-3 North America to 1880.** A history of the North American continent beginning with the native peoples and continuing through the European contact, the emergence of Euro-American societies, and the establishment of modern states.
- 459-3 History of American Communism.** History of the communist movement in the United States, from the founding of the Communist Party to its weakening in the McCarthy era. Special emphasis on how communists affected labor, civil rights, and peace movements, as well as American culture.
- 460-3 Slavery and The Old South.** (Same as Black American Studies 460) This course examines slavery and southern distinctiveness from the colonial period to 1861. Discussion topics include the plantation system, race relations, women and slavery, and southern nationalism.
- 461-3 Black Americans on the Western Frontier.** (Same as Black American Studies 461) This course examines the history of African Americans in the American West. Taking both a chronological and thematic approach, it begins with a discussion of early black explorers in the age of encounter, and ends with a focus on black western towns established in the United States by the 1880's.
- 462-3 History of American Health and Medicine.** Readings and discussion about the development of modern medicine as it affected patients and doctors in the United States. Health care will be traced historically, with discussions of the development of medical science as well as medical organizations and institutions. Approved as a Writing-Across-the-Curriculum course.
- 463-6 (3,3) History of American Diplomacy.** (a) To 1900; (b) Since 1900. General consideration of American foreign policy and the emergence of the United States as world power.
- 464-3 U.S. Economic and Business History.** This course examines the growth of the American economy, economic thought, the evolution of the firm, and the changing place of women and minorities in American business society. It also explores the intersection between business and other institutions in American life, including labor, law, literature, government, education and religion.
- 466-6 (3,3) History of the American West.** (a) Trans-Appalachian Frontier; (b) Trans-Mississippi Frontier. The American frontier and its impact on American society from the colonial period to the 20th century.
- 467-6 (3,3) History of American Thought to 1865 and Since 1890.** (a) To 1865; (b) since 1890. Major themes include Puritanism, the Enlightenment, Romanticism, Darwinism, Pragmatism, Voices of Discontent, Neo-orthodoxy, liberalism, conservatism and formulating the modern conscience. Both (a) and (b) approved as Writing-Across-the-Curriculum courses.
- 468-3 Law and the Social Control of Women in American History.** (Same as Administration of Justice 468 and Women's Studies 468) An examination of the ways in which the law affects the behavior, life chances, identities and experiences of women, from colonial times to the present. Team taught by faculty from History and Administration of Justice.
- 469-3 Darwin and the Darwinian World.** Readings and discussion on the impact of Charles Darwin on American thought and culture. Focus areas include religion, social ethics, political criticism, social critics, economics, the genteel tradition, utopian writers, race, and imperialism. Approved as a Writing-Across-the-Curriculum course.

470-3 Continuity and Change in Latin America. An in-depth examination of major topics in the history of Latin America since pre-Columbian times, especially themes that have been prominent in recent scholarship. Lectures will be supplemented by outside readings and class discussion.

471-3 History of Modern Japan. An examination of Japanese History from the early Tokugawa period to the present. Major topics include the creation of the Japanese bureaucracy, commercialization and industrialization, and cultural experimentation.

472-3 African States in Crisis. Main focus on African nationalism and the process of decolonization; major social, political and economic developments in independent Africa and the challenges of nation-building; the super-powers and Africa in the politics of the Cold War.

473-3 Comparative Slavery. (Same as Black American Studies 473) A comparative study of slavery from antiquity to its abolition in the 19th century with the differing socio-cultural, political and economic contexts; organized chronologically, regionally and thematically.

474-3 Andean South America. The political, economic, social, and cultural development of the Andean nations from pre-Columbian times to the present.

475-3 Disease, Public Health, and Empire. The aim of this course is to provide a broad introduction to the history of disease, public health, and medicine in colonial and postcolonial contexts, with an emphasis on the period from the late nineteenth century to the present. We will be studying the historical impact of formal and informal empire on sickness and health over the last century and a half.

476-3 Women in Chinese History. A social, cultural history of women's lives in China from antiquity to the present reconstructed on the basis of official and unofficial records, artistic representations, literary works, and films.

477-3 Democracy and Development in the Caribbean. The relationships of Latin American countries with the United States have profoundly shaped their economic development and their struggles for democracy. Together, we will work to understand the complex effects that proximity to the United States has had on the political and economic experiences of the countries of the Caribbean and how they have been interpreted by later historians.

479-3 The Cultural Revolution. This course explores the origins, major developments, and social, economic, cultural and psychological legacies of the Great Proletarian Cultural Revolution in China from 1966 to 1976 by critically examining relevant official documents, personal memories, oral histories, literary and artistic works, and films and material objects. All required readings are in English. Open to both graduate students and advance undergraduate students. Prior knowledge of modern Chinese history helpful but not required.

480-6 (3,3) History of China. (a) Late Imperial China, 1350 to 1890; (b) Twentieth Century China, 1890 to the present. An in-depth examination of political, economic, social and cultural history of China from 1350 to the present. The first semester examines the imperial state, gentry and peasants, commercialization and social change in China from 1350 to 1890. The second semester focuses on nation building, ideology and rural-urban culture in 20th Century China.

483-3 Gandhi and Indian Nationalism. This course will focus on the history of Indian nationalism, with a special emphasis on Gandhian nationalism. It will examine the nature of the particular "imagining" of the Indian nation in late colonial India and its implications for the eventual independence and partition of the Indian sub-continent. The emphasis of the course will be on the relation between anti-colonial nationalism and other social movements for justice and equality.

486-3 Arab-Israeli Conflict. This course focuses on the background to, and current dimensions of, the continuing conflict between Israel, the Palestinians and the rest of the Arab world. Beginning with origins of Zionism in the late nineteenth century, it examines, the foundation of Israel, Palestinian responses, and relations between Israel and its Arab neighbors.

490-1 to 4 Special Readings in History. Supervised readings for students with sufficient background. Prerequisite: registration by special permission only.

491-3 Historiography. Writings of historians from Herodotus to the present.

492-1 Senior Paper. A research paper to be done in conjunction with a regularly scheduled 400-level history course. Students may also complete 492 in conjunction with a 300-level course (excluding History 300, 301 and 392), but only with the instructor's consent. Fulfills the CoLA Writing Across the Curriculum (WAC) requirement. Not for graduate credit. Prerequisite: 392.

493-1 to 6 Topics in History. Topics vary with instructor. May be repeated for a maximum of six semester hours provided registrations cover different topics. Topics announced in advance.

494-3 Quantitative Research in History. An introduction to the application of quantitative data and social science methods to historical research.

495-4 History Honors. Principles of historical method, research, and writing for senior honor students only. Not for graduate credit. Prerequisite: consent of department.

496-1 to 9 Internship in History. Supervised field work in public or private agencies or operation where history majors are frequently employed, such as archives and libraries, government offices, communications media, historic sites, and museums. Only three hours may be applied to the major and six hours toward the M.A. degree. Prerequisite: consent of department.

497-3 Historical Museums, Sites, Restorations and Archives. The development of museums from antiquity to the present, with emphasis on the United States. Additional topics include historical sites such as battlefields, historic buildings, restorations, monuments and archives. Also examines the purposes and functions of the museum and the tasks of professionals employed in museums or interpretative centers. Given in cooperation with the University Museum.

499-3 Senior Seminar in History. Seminar for senior undergraduate students to examine in-depth a particular historical topic. Topics will vary with instructors. Students will engage in discussion, and produce

a research paper. Not for graduate credit. Open to history majors only. May not be taken more than twice without completion. Fulfills the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 392.

History Faculty

Adams, Jane, Associate Professor, Ph.D., University of Illinois, 1987.

Allen, Howard W., Professor, *Emeritus*, Ph.D., University of Washington, 1959.

Allen, James S., Professor, Ph.D., Tufts University, 1979.

Ammon, Harry, Professor, *Emeritus*, Ph.D., University of Virginia, 1948.

Argersinger, Jo Ann E., Professor, Ph.D., The George Washington University, 1980.

Argersinger, Peter H., Professor, Ph.D., University of Wisconsin, 1970.

Barton, H. Arnold, Professor, *Emeritus*, Ph.D., Princeton University, 1962.

Batinski, Michael C., Professor, Ph.D., Northwestern University, 1969.

Bean, Jonathan J., Professor, Ph.D., The Ohio State University, 1994.

Bengtson, Dale R., Assistant Professor, *Emeritus*, Ph.D., Hartford Seminary Foundation, 1971.

Benti, Getahun, Assistant Professor, Ph.D., Michigan State University, 2000.

Brown, Ras Michael, Assistant Professor, Ph.D., University of Georgia, 2004.

Carr, Kathryn, Associate Professor, Ph.D., University of Chicago, 1987.

Carrott, M. Browning, Associate Professor, *Emeritus*, Ph.D., Northwestern University, 1966.

Conrad, David E., Professor, *Emeritus*, Ph.D., University of Oklahoma, 1962.

Detwiler, Donald S., Professor, *Emeritus*, Dr. Phil., Göttingen University, Germany, 1961.

Dotson, John E., Professor, Ph.D., Johns Hopkins University, 1969.

Espinosa, Mariola, Assistant Professor, Ph.D., University of North Carolina at Chapel Hill, 2003.

Fanning, Charles F., Professor, Ph.D., University of Pennsylvania, 1972.

Fladeland, Betty L., Distinguished Professor, *Emerita*, Ph.D., University of Michigan, 1952.

Gold, Robert L., Professor, *Emeritus*, Ph.D., University of Iowa, 1964.

Haller, John S., Professor and Vice President for Academic Services, Ph.D., University of Maryland, 1968.

Hurlburt, Holly, Assistant Professor, Ph.D., Syracuse University, 2000.

Lieberman, Robbie, Professor, Ph.D., University of Michigan, 1984.

Murphy, James B., Associate Professor, *Emeritus*, Ph.D., Louisiana State University, 1968.

O'Day, Edward J., Associate Professor, *Emeritus*, A.M., Indiana University, 1956.

Shelby, Lon R., Professor, *Emeritus*, University of North Carolina, 1962.

Simon, John Y., Professor, Ph.D., Harvard University, 1961.

Stocking, Rachel L., Associate Professor, Ph.D., Stanford University, 1994.

Vyverberg, Henry S., Professor, *Emeritus*, Ph.D., Harvard University, 1950.

Weeks, Theodore, Associate Professor, Ph.D., University of California-Berkeley, 1992.

Werlich, David P., Professor, *Emeritus*, Ph.D., University of Minnesota, 1968.

Wiesen, S. Jonathan, Associate Professor, Ph.D., Brown University, 1997.

Wilson, David L., Professor, Ph.D., University of Tennessee, 1974.

Yilmaz, Hale, Assistant Professor, University of Utah, 2006.

Zaretsky, Natasha, Assistant Professor, Ph.D., Brown University, 2002.

Zhang, Qiong, Assistant Professor, Ph.D., Harvard University, 1996.

Horse Management

(SEE ANIMAL SCIENCE)

Hospitality

(SEE FOOD AND NUTRITION)

Hotel Management

(SEE FOOD AND NUTRITION)

Industrial Technology (Major, Courses, Faculty)

The industrial technology major has as its objective the training of qualified personnel who can develop and direct the production and distribution of products and services. The major is designed to prepare management-oriented technical professionals in the economic-enterprise system. Industrial technology professionals will be involved with:

- 1. The application of significant knowledge of theories, concepts, and principles found in the humanities and the social and behavioral sciences, including a thorough grounding in communication skills.
- 2. The understanding and ability to apply principles and concepts of mathematical and physical sciences.
- 3. The application of concepts derived from, and current skills developed in, a variety of technical disciplines including, but not limited to, robotics, processes, computer-aided manufacturing, quality control, motion and time study, plant layout, facilities planning, industrial safety, production and inventory control, human relations, and computer-aided drafting.

The industrial technology curriculum is flexible enough to provide the means whereby graduates of two-year occupational programs may obtain a Bachelor of Science degree. A graduate of a two-year industrially-oriented occupational program, such as aviation, construction, drafting, data processing, electronics, machine tool, mechanical, and mining may have an appropriate preparation to pursue a Bachelor of Science degree with a major in industrial technology.

Students with work related experience might receive credit toward the degree via Industrial Technology 258. Additional flexibility in earning credit toward the degree is possible through cooperative work experience provided meaningful employment is available.

A Capstone option may be available in the industrial technology major and is explained in Chapter 3 of this bulletin. Students holding associate degrees of at least 60 semester hours in non-baccalaureate-oriented programs or equivalent certification with a minimum grade point average of 2.25 are qualified. For the industrial technology major, the associate degree or equivalent certification should be in an industry-related field. This option permits qualified students to fulfill their degree requirements by completing 60 semester hours of work approved by the Capstone adviser. Each individual's program of study may differ according to the previous academic work.

The National Association of Industrial Technology accredits the industrial technology program. For each curriculum, a minimum of 30 hours in industrial technology courses must be taken in residence at Southern Illinois University Carbondale.

Bachelor of Science Degree in Industrial Technology, College of Engineering

INDUSTRIAL TECHNOLOGY MAJOR — MANUFACTURING TECHNOLOGY SPECIALIZATION

The manufacturing technology specialization is designed to prepare graduates for supervisory and technical management positions in manufacturing. Curriculum requirements are broad based to enable the graduate to obtain employment in manufacturing areas such as quality control, processes, safety, methods analysis, and computer-aided manufacturing/robotics. The Capstone Option feature is available for students and is described in Chapter 3 of this bulletin.

<i>University Core Curriculum Requirements</i>	41
Foundation Skills	12
English 101, 102	6
Mathematics (substitute Mathematics in major)	3
Speech Communication 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health	2
Humanities	6
Science (substitute Physics in major for 3 hours)	6
Social Science	6
Integrative Studies	6
Multicultural	3

Interdisciplinary	3
<i>Requirements for Major in Industrial Technology with a Specialization in Manufacturing Technology</i>	(6) + 79
Industrial Technology Core Requirements	28-29
Physics 203a,b, 253a,b	(3) + 5
Mathematics 111	(3) + 2
Mathematics 140 or Industrial Technology 307	4
Psychology 323 or Industrial Technology 240	3
Computer Science 200b or Industrial Technology 270	3
Industrial Technology 105, 305, 382, 475	12
Specialization in Manufacturing Technology	50-51
Industrial Technology 208, 375, 390, 392, 440, 445, 485	21
Technical Electives	20-21
Electives	9
Total	120

Courses (IT)

Safety glasses, a suitable scientific calculator, and textbooks are required for most of the following courses.

105-3 Computer-Aided Drafting. (Same as Engineering Technology 103). Links the components of technical sketching with current CAD software. Sketching to include: orthographic projection, sectional views and dimensioning. Employ these elements with current CAD software in creating drawing entities, managing layers, displaying and modifying drawings, annotating and dimensioning, and file management.

208-3 Fundamentals of Manufacturing Processes. Introduction to the basic processes, equipment, and material used in manufacturing. Includes plastics, metal removal, materials joining, casting, and some of the newer processes.

209-3 Manufacturing Process Laboratory. (Same as Engineering Technology 209.) Laboratory experiments to familiarize the student with the theory and operation of manufacturing processes. Laboratory. Prerequisite: 208 or consent of instructor.

240-3 First-Line Supervision. Analysis of problems of first-line supervisors. Topics include leadership, motivation, communication, grievances, training, discipline, group and individual effectiveness, and labor relations.

258-2 to 30 Work Experience Credit. Credit granted for past work experience while employed in fields related to the student's educational objective. Credit is established by departmental evaluation.

259-2 to 60 Occupational Credit. For occupational credit earned at junior colleges and technical institutes. Credit is established by departmental evaluation.

270-3 Computational Methods for Industrial Technologists. Introduces the student to a problem-oriented computer language that is used to solve relevant problems that occur in industry.

305-3 Industrial Safety. Principles of industrial accident prevention; accident statistics and costs; appraising safety performance; recognizing industrial hazards and recommending safeguards. Includes a study of the Occupational Safety and Health Act and the Coal Mine Health and Safety Act.

307-3 Applied Calculus for Technology. Applying mathematical techniques to technology problems, including the analysis, formulation, and problem solutions. Techniques of differentiation, max-min problems, and elementary techniques of integration. Prerequisite: Mathematics 111 or equivalent.

319-2 to 16 Industrial Internship. Industrial experience includes job skills, manufacturing processes, technical information, and labor-management relationships with supervised instruction, conferences, and examinations. Prerequisite: consent of instructor. Mandatory Pass/Fail.

320-3 Surface Mining Operations. The elements of surface mining, methods and equipment, surface mine terminology, pit development, and equipment selection. Field trips. Prerequisite: appropriate background.

321-3 Underground Mining. Study of terminology, mining methods, equipment selection, ventilation, haulage, coal handling, and safety parameters associated with underground coal extraction technology.

330-1 Current Mining Problems. Guest lecturers provide timely information on current mining technology problems. Special investigations of mining techniques. Emphasis on state and federal regulations.

341-3 Maintenance. Principles and practices of maintenance department organization, preventative procedures, and typical equipment problems. Also, includes related topics such as plant protection, custodial services, and maintenance of powerplants.

342-1 to 12 Industrial Technology Cooperative Education. Supervised work experience in industry with an emphasis on manufacturing. Students will gain first-hand knowledge of the various aspects of Industrial Technology. Work experience is supervised by a faculty. Reports will be required from the student and employer. Hours may count toward technical electives. Mandatory Pass/Fail. Prerequisite: junior standing.

351-3 Industrial Metrology. Methods and equipment of industrial measurement and inspection. Includes 3-D measuring machines, lasers, and non-destructive testing.

- 360-3 Mine Production and Inventory Control.** Study of mine production and inventory control through the exploration, development, and production phases. Includes topics in planning, process control equipment, scheduling, inventory control, and cost analysis.
- 362-3 Industrial Packaging.** Analysis of packing principles, equipment, and processes such as paper, glass, metal containers, and plastics.
- 375-3 Production and Inventory Control.** Production and inventory control systems. Includes topics in forecasting, master production scheduling, material requirements planning, capacity requirements planning, inventory management, production activity control, and applicable operations research techniques.
- 382-3 Motion and Time Study.** Principles and practices of motion and time study including process charts, operation charts, motion summary, and time standards.
- 386-3 Total Quality.** Application of quantitative methods and human resources to improve product quality, enhance productivity, customer satisfaction, manufacturing organizational effectiveness and ability to compete in a global market.
- 390-3 Cost Estimating.** (Same as Engineering Technology 390.) Study of the techniques of cost estimation for products, processes, equipment, projects, and systems. Prerequisite: Mathematics 111.
- 392-3 Facilities Planning.** The analysis of data to produce a complex facilities plan which maximizes the efficiency of the operation. Methods and equipment of material handling are an important part of the course. Students are assigned an extensive facilities planning project. Prerequisite: 208, 382 or consent of instructor.
- 395-3 Technology Design.** An elective project on a technical subject selected by the student with advice from the instructor. Stimulates original thought and creativity. Prerequisite: consent of instructor.
- 410-3 Mining Reclamation.** Study of reclamation techniques associated with underground and surface coal mining. Emphasis is placed on the integration and cost trade-offs associated with coal extraction and reclamation as well as federal, state, and local regulations. Prerequisite: consent of instructor.
- 420-3 Coal Preparation and Analysis.** Study of coal preparation and blending in association with coal analysis. Design and operation of preparation plants including water management, waste management, coal storage, loading, and transportation.
- 425-3 Advanced Process Design and Control.** Extension of other process courses offered. Meets the need of those students who enter the field of manufacturing by giving more emphasis on planning, estimating, and control of industrial processes. Laboratory. Prerequisite: 208, 209.
- 430-3 Health and Injury Control in A Work Setting.** (Same as Health Education 430.) Assesses the health and injury control programs present in a work setting. Emphasis given to employee programs in health, wellness, and injury control that are effective. Field trips to work sites are included.
- 439-3 Bulk Materials Handling.** Study of the various types of equipment used in the mining industry. Estimation of costs and output of equipment used for excavating and transporting earth materials. Prerequisite: appropriate background.
- 440-3 Manufacturing Policy.** Review of all areas covered by the industrial technology program. Includes problems which simulate existing conditions in industry. Students present their solutions to the class and to the instructor in a formal manner. Prerequisite: 375, 382, 392 and 475.
- 441-3 Mine-Safety Technology.** An in-depth study of the technological implications of the Federal Coal Mine Health and Safety Act. Emphasis is placed on the technology required to operate safely underground coal mines. Prerequisite: appropriate background.
- 445-3 Computer-Aided Manufacturing.** (Same as ET 445.) Introduction to the use of computers in the manufacture of products. Includes the study of direct and computer numerical control of machine tools as well as interaction with process planning, inventory control, and quality control. Laboratory. Prerequisite: Engineering Technology 103 or Industrial Technology 105, Industrial Technology 208 or Engineering Technology 209 and computer programming.
- 455-3 Industrial Robotics.** (Same as ET 455.) Study of industrial robots and their applications; pendant and numerical programming of robots. Robotics design including tactile and visual sensors. Technical and psychological problems of justification, installation, and management of robotic systems. Prerequisite: 445.
- 460-3 Mining Technology.** A capstone course to include all aspects of coal mining. Group projects are assigned on the design and development of a mine with emphasis on cost, productivity, yield, equipment, and staffing. Prerequisite: 320, 321, 420, or consent of instructor.
- 465-3 Lean Manufacturing.** This course will cover the principles and techniques of lean manufacturing. Major topics covered include lean principles, 5S, value stream mapping, total productive maintenance, manufacturing/office cells, setup reduction/quick changeover, pull system/Kanbans, continuous improvement/Kaizen, lean six sigma, lean simulation, and other modern lean manufacturing techniques and issues.
- 475-3 Quality Control.** Study the principles and techniques of modern quality control practices. Topics include total quality management, fundamentals of statistics, control charts for variables and other quality related issues and techniques.
- 485-3 Quality Control II.** Study the principles and techniques of modern quality control practices. Topics include fundamentals of probability, control charts for attributes, acceptance sampling systems, reliability and other quality related issues and techniques. Prerequisite: senior standing.
- 490-3 Six Sigma.** Six Sigma is a data-driven management system with near-perfect-performance objectives that has been employed by leading corporations. Its name is derived from the statistical target of operating with no more than 3.4 defects per one million chances, but its principles can be applied in business of all types to routinely reduce costs and improve productivity. This overview describes what Six Sigma is, and what is techniques and tools are. Prerequisite: 475.
- 492-1 to 6 Special Problems in Industry.** Special opportunity for students to obtain assistance and guidance in the investigation and solution of selected industrial problems. Not for graduate credit. Prerequisite: consent.

494-1 to 9 (1 hour per section) Applied Project. Selected applied project. Requires the students to apply knowledge learned in various courses to the solution of industrial problems. (a) Motion and time study, (b) Cost estimating, (c) Materials handling and plant layout, (d) Production and inventory control, (e) Quality control, (f) Manufacturing policy, (h) Fundamentals of industrial processes, (i) Industrial safety, (k) Computer-aided manufacturing. Not for graduate credit. Prerequisite: consent of instructor.

Technology Faculty

Barbay, Joseph E., Jr., Associate Professor, *Emeritus*, Ph.D., University of Missouri, Columbia, 1971.

Besterfield, Dale H., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1971.

Chang, Feng-Chang (Roger), Associate Professor and Chair, Ph.D., Ohio State University, 1985.

Chen, Han Lin, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1958.

Cantor, Keith L., Associate Professor, *Emeritus*, M.S., State College of Washington at Pullman, 1960.

Cross, Bud D., Visiting Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1965.

DeRuntz, Bruce D., Associate Professor, Ph.D., Southern Illinois University Carbondale, 2005.

Dunning, E. Leon, Professor, *Emeritus*, Ph.D., University of Houston, 1967.

Dunston, Julie K., Associate Professor, Ph.D., Florida State University, 1995.

Ferketich, Robert R., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1980.

King, Frank H., Visiting Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University, 1981.

Marusarz, Ronald K., Associate Professor Ph.D., Southern Illinois University Carbondale, 1999.

Meyers, Fred E., Associate Professor, *Emeritus*, M.B.A., Capitol University, 1975.

Orr, James P., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1983.

Savage, Mandara D., Assistant Professor, Ph.D., Iowa State University, 1999.

Velasco, Tomas, Associate Professor, Ph.D., University of Arkansas, 1991.

Information Systems & Applied Technologies

(School, Courses, Faculty)

The School of Information Systems and Applied Technologies in the College of Applied Sciences and Arts offers the following technically related courses. These courses serve as common requirements for various majors. Selected courses are available to students enrolled in other academic units.

Courses (ISAT)

101-3 Introduction to Information Processing. The successful student should be able to demonstrate an understanding of basic terminology, procedures, applications and equipment used in information processing. Topics covered will range from simple computer processing techniques to advanced contemporary applications. Credit cannot be given for both 101 and Information Systems Technologies 109. Lecture three hours.

105-4 (2,2) Technical Mathematics. Will enable the student to solve problems within the context of engineering technologies. Lecture-discussion, four hours per week for eight weeks. The use of an electronic calculator with scientific functions is required. (a) Emphasizes the use of algebraic equations and geometric relationships and formulas, and right triangle trigonometry. Prerequisite: one year of high school algebra or equivalent as determined by school. (b) Emphasizes the application of trigonometric relationships to problems in applied technologies and contains additional topics in algebra, including linear systems, quadratic equations and exponential and logarithmic functions. Prerequisite: 105a or equivalent as determined by school.

107-4 (2,2) Applied Physics. Places emphasis on basic and applied physics at a level consistent with technical education objectives. The student will learn laws and principles and solve problems pertaining to (a) mechanics and the structure of matter, (b) heat and electricity. Lecture-discussion four hours per week for eight weeks for both (a) and (b). Prerequisite: 105a or equivalent as determined by school. 107a is prerequisite to 107b.

114-3 Office Software Applications. Upon successful completion of this course, the student will be able to identify concepts and terminology used with various office application software programs such as databases, spreadsheets, graphics, and computer-aided transcription. The student will be able to create, format, edit, store, retrieve, and print different types of documents as well as apply advanced features of the software to expand basic documents. Lecture three hours and additional lab hours required. Prerequisite: school approval.

120-3 Fiscal Aspects of Applied Sciences and Arts I. An individualized program of instruction designed to acquaint students enrolled in the various technical programs of the College of Applied Sciences and Arts with applications and procedures common to their area of specialization. Students will be able to demonstrate a basic working knowledge of the standard documents and procedures related to their specific area through the use of business working papers and practice sets. Open to students in the College of Applied Sciences and Arts and other with consent of school. Lecture three hours.

121-3 Installing and Upgrading Computer Systems. This course introduces students to the process of installing and upgrading personal computer systems. Topics include identification, selection, and installation of hardware, operating system, peripherals, and basic networking. Introduction to basic electrical measurements and numbering systems are also included. Lecture and Laboratory. Prerequisite: Information Systems Technologies or Electronic Systems Technologies major or consent of school.

213-3 Application Programming Projects. This course will enable the student to use advanced techniques in the design and implementation of application programs. The student draws upon knowledge gained in previous courses and develops an understanding of the interrelationship of subject matter. Topics will include structures, classes, overloading, inheritance and exception handling. Prerequisite: Information Systems Technologies 209.

220-3 Fiscal Aspects of Applied Sciences and Arts II. A continuation of 120 for selected curriculum areas. Emphasis on continued development of knowledge and skills typically involved in small business management, ownership, partnerships and corporations. New areas of study will include automated data processing, cost estimating and payroll tax procedures through the use of business working papers and a practice set. Prerequisite: 120.

224-3 LAN Installation and Administration. This course takes a lab/lecture approach which leads the student through a series of activities involved in the installation of a local area network (LAN) capable of sharing information and a variety of electronic input/output devices. The student will be introduced to various LAN designs, communication protocols, network certification requirements, as well as the procedures for selecting, installing and managing a LAN. Lecture and lab. Prerequisite: 121 or consent of school.

229-3 Computing for Business Administration. The successful student will acquire an understanding of information systems concepts and of the use of computers to process business data through solving a variety of business related problems. Emphasis on the computer as a management tool. Lecture one hour, lab two hours.

258-1 to 30 Work Experience Credit. Credit granted for job skills, management-worker relations and supervisory experience for past work experience while employed in industry, business, the professions, or service occupations. Credit will be established by departmental evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the school's director. Prerequisite: majors in the School Information Systems and Applied Technologies.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by departmental evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the school's director. Prerequisite: majors in the Information Systems and Applied Technologies.

292-1 Introduction to Microcomputers. A short course introduction to concepts and procedures related to using microcomputer hardware and software. Lecture one hour. Mandatory Pass/Fail.

299-1 to 16 Individual Study. Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the school is required.

316-3 Ethics and Security in Information Systems. This course focuses on the ethical and legal responsibilities associated with being an information technology (IT) professional with an introduction to security policy, procedures and tools. The course covers conceptual and ethical issues as well as practical problem-solving techniques, including security threats and solutions, principles of authentication, security architecture issues, and intrusion detection. Prerequisite: 224 or equivalent; Information Systems Technologies or Electronic Systems Technologies major or consent of school.

320-1 to 12 Office Systems and Specialties Cooperative Education. Each student will participate in a school approved cooperative education program that includes formal instruction, training and/or career-related work experience. Students receive a salary or wages and engage in pre-arranged assignments related to their academic program and career objectives. School faculty evaluations, cooperative agency student performance evaluations and student reports are required. Hours and credit to be individually arranged. Prerequisite: consent of school.

335-3 WAN Network Installation and Administration. The installation and integration of multiple network operating systems in a wide area network (WAN). Students will be introduced to a variety of WAN networking devices, protocols, and procedures for installing and configuring a WAN. A variety of applications and hardware will be used to simulate telecommunication and network functions found in typical business enterprise systems. Lecture and Laboratory. Prerequisite: 224 or consent of school.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credits to be individually arranged. This course may be classified as independent study. Prerequisite: consent of school.

365-3 Data Applications and Interpretation. (Same as Technical Resource Management 383.) This course will give students an understanding of the basic principles and techniques involved in the statistical treatment of data, including the selection of data sources, the design of statistical studies, the analysis and synthesis of data, and the utilization of data. Students will gain experience in using data for decision-making in their respective professions. Information Systems Technologies majors must earn a grade of C or better. Prerequisite: University Core Curriculum mathematics requirement or consent of school. Restricted to Applied Sciences and Arts majors.

366-3 Applications of Technical Writing. (Same as Technical Resource Management 316.) The course will increase students' abilities in communicating various types of workplace documents common to technical disciplines. Oral presentations will use computerized presentation software. The course is designed to

meet the writing portion of the college's Communication-Across-the-Curriculum initiative. Prerequisite: junior standing and English 101; restricted to Applied Sciences and Arts major or school.

381-1 to 9 Special Topics. Intensive study of selected topics relevant to the contemporary information management systems environment. Offered as need exists and as time and interests permit. May be repeated for up to nine hours total. Prerequisite: consent of school.

392-1 to 6 Special Projects. Advanced undergraduate information management systems' students will work with current technology to solve problems and develop projects in a team environment. Prerequisite: junior standing in the School of Information Systems and Applied Technologies and consent of school.

415-3 Enterprise Network Management. Examines interior gateway protocols (IGPs) and exterior protocols (EGP). Routing principles of both distance vector and link-state routing protocols; advanced IP addressing techniques; theory behind routing protocols and route redistribution are discussed. Laboratory exercises allow student to acquire the skills necessary to configure and troubleshoot various routing protocols in enterprise networks. Not for graduate credit. Prerequisite: 335 or consent of school.

416-3 Advanced Enterprise Networking Management. Examines complex networking concepts, troubleshooting tools and techniques, and sophisticated networking configurations. The course focuses on developing skills necessary to implement scalable networks, build campus networks using multi layer switching technologies, create and deploy intranet, and troubleshoot an environment using routers and switches for multi protocol client hosts and services. Not for graduate credit. Prerequisite: 415 or consent of school.

419-1 to 12 Occupational Internship. Each student is required by the department to secure an internship at a business/industry work site, which engages in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the work supervisor and internship coordinator. Reports and assignments are required to be completed by the student. Information Systems Technologies majors are required to enroll for a minimum of four hours. Not for graduate credit. A grade of C or better is required.

491-3 Seminar. Students will examine a variety of information management systems topics and/or problems. Not for graduate credit. Prerequisite: majors in the School of Information Systems and Applied Technologies and consent of school.

Information Systems and Applied Technologies Faculty

Asoh, Derek A., Assistant Professor, Ph.D., University of Albany, N.Y., 2004

Caldera, Cavinda T., Assistant Professor, M.S., Western Michigan University, 2000.

Caldwell, Paul N., Associate Professor, *Emeritus*, M.S. ED., Southern Illinois University, 1965.

Coffman, Michael G., Assistant Professor, M.S., Central Missouri State University, 1988.

Cook, F. Roger, Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1987.

Davis, Diane, Professor, Ph.D., Southern Illinois University Carbondale, 1990.

Devenport, William R., Associate Professor and *Director*, M.S., Southern Illinois University, 1985.

Dotson, Michael, Assistant Professor, M.S., Southern Illinois University Carbondale, 1986.

Einig, Raymond G., Jr., Assistant Professor, *Emeritus*, M.S., St. Louis University, 1962.

Elkins, Gregory S., Assistant Professor, M.A., Southern Illinois University Carbondale, 1999.

Evans, Candy Duncan, Associate Professor, *Emerita*, Information Management Systems, Ph.D., Southern Illinois University Carbondale, 1992.

Fisher, Valerie, Assistant Professor, *Emerita*, M.S., Southern Illinois University Carbondale, 1975.

Gonzenbach, Nancy, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1990.

Harre, Paul A., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1995.

Hebel, Martin A., Assistant Professor, M.S., Southern Illinois University Carbondale, 1998.

Henry, Janice Schoen, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1987.

Hertz, Vivienne, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1980.

Kearney, Brian, Assistant Professor, M.S., Southern Illinois University Carbondale, 1990.

Magney, John, Assistant Professor, Ph.D., University of Michigan at Ann Arbor, 1977.

Morgan, Barbara, Assistant Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1992.

Morse, H. Pauletta, Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1989.

Novak, Mary Ann, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1987.

Novick, Jehiel, Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1970.

Preece, Linda, Assistant Professor, M.S., Southern Illinois University Carbondale, 1984.

Rehwaltdt, Susan S., Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1982.

Richard, Harold, Associate Professor, *Emeritus*, Ed.D., Pennsylvania State University, 1976.

Robb, James A., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University Carbondale, 1974.

Sheets, Joyce, Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1999.

Sheets, Leslie P., Associate Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1976.

Shih, Stephen C., Assistant Professor, Ph.D., Pennsylvania State University, 1992.

Shin, Wangshik, Associate Professor, *Emeritus*, M.A., Southern Illinois University, 1963.

Shupe, William G., Associate Professor, *Emeritus*, M.S., Southern Illinois University Carbondale, 1978.

Sissom, James D., Assistant Professor, M.P. Ad., Southern Illinois University Carbondale, 1996.

Stitt, Beverly A., Associate Professor, *Emerita*, Ph.D., Southern Illinois University Carbondale, 1980.

Tate, Ralph, Assistant Professor M.S., Air Force Institute of Technology, 1991.

Thakkar, Minal, Assistant Professor, M.S., University of Missouri-St. Louis, 2000.

Vaughn, F. Eugene, Associate Professor, *Emeritus*, M.S. ED., Southern Illinois University Carbondale, 1961.

Woodward, Belle S., Assistant Professor, M.A., Webster University, 1997.

Information Systems Technologies (Major, Courses)

Information Systems Technologies is a baccalaureate degree major designed to prepare students for careers in a wide variety of work settings that rely on computerized information technologies to accomplish organizational goals. The curriculum recognizes that graduates must have good computer application skills as well as an understanding of the principles of organizations and systems, including an awareness of technological, economic, political, social and cultural factors. Many courses require significant hands-on computer activities related to applications software, networking communications and computer troubleshooting and maintenance. Students may also choose five courses from an approved list to reflect their personal interests in Information Systems Technologies.

Significant computer resources are available to students in this program for instructional purposes and for completion of assignments. The courses are based on a nationally recognized model curriculum, *Organizational and End-User Information Systems* by Organizational Systems Research Association (OSRA). Graduates of this program will meet the continuing needs of business and industry for personnel to use computer systems technologies within organizations utilizing end-user information systems. They will be able to supervise the planning and implementation of information systems in work/office environments, and deal with people, and procedures and equipment resources of companies in this country or abroad.

Students entering the Information Systems Technologies degree must be able to keyboard at a competency level adequate enough to complete a variety of computer related tasks and assignments (generally considered at 30 wpm or above). The Capstone Option is available to qualified students entering these programs. More information about the Capstone Option can be found in Chapter 3 of the *Undergraduate Catalog*.

All applicants must satisfy standard University baccalaureate entrance requirements in order to be admitted to the University and be considered for the Information Systems Technologies (IST) major. Enrollment in the Information System Technologies program will be based upon the selective admission criteria. Applicants to the University requesting the IST major will be evaluated for a 2.7 or better cumulative gpa for transfer students with at least 26 hours of transferable college credit. High School graduates will be evaluated for an ACT score of 23. Any student transferring from other SIUC programs into the Information Systems Technologies major will be evaluated on post secondary course work and gpa as calculated by SIUC and information obtained from ISAT faculty for students who have taken any department courses.

Information Systems Technologies offers an option for place-bound transfer students to complete the degree by taking advanced career and elective courses online. Refer to the department's website below for detail.

The Information Systems Technologies program has signed a number of Program Articulation Agreements with computer/word/information processing-related community college degree programs in order to facilitate the transfer of

community college students to SIUC. These agreements take full advantage of the Capstone Option for admission to the Bachelor of Science in Information Systems Technologies. The colleges with which SIUC has signed such an agreement include: Southwestern Illinois College (IL), Frontier Community College (IL), Heartland Community College (IL), Illinois Central College (IL), John A. Logan College (IL), Kaskaskia College (IL), Lake Land College (IL), Lewis and Clark Community College (IL), Lincoln Trail College (IL), Olney Central College (IL), Parkland College (IL), Ranken Technical College (MO), Rend Lake College (IL), Richland Community College (IL), Shawnee Community College (IL), Southeastern Illinois College (IL), Vincennes College (IN), Wabash Valley College (IL). Other schools are pending. If you have questions about how these agreements apply to your personal situation, contact the school's program representative or contact the academic advisor in Information Systems Technologies at (618) 453-7200 or <<http://www.siu.edu/~isat/>>.

Bachelor of Science Degree in Information Systems Technologies, College of Applied Sciences and Arts

INFORMATION SYSTEMS TECHNOLOGIES MAJOR

<i>University Core Curriculum Requirements</i> ¹	41
To include Philosophy 104 or 105; two from the following: Economics 113, Psychology 102 or Sociology 108; and Economics 302i or Speech Communication 301i	
<i>Career Course Requirements</i> ²	24
Information Systems Technologies 109, 209, 232, 234	12
Information Systems and Applied Technologies 120, 121, 224, 229	12
<i>Requirements for Major in Information Systems Technologies</i>	55
Required Major Courses	12
Information Systems Technologies 208, 301, 305 (old 205)	9
Information Systems and Applied Technologies 366.....	3
Required Information Systems Courses	43
Information Systems Technologies 307, 334, 336, 412, 414, 415	18
Information Systems and Applied Technologies 365, 419	7
Approved Major Electives (Note: Six hours must be at the 300 or 400 level) ³	18
<i>Total</i>	120

¹ Students may meet these requirements through an approved AA/AS degree from an accredited community college.

² Students may meet these requirements through an articulated approved AAS degree from an accredited community college.

³ The current approved list is on file in the school office.

Information Systems Technologies Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
IST 109	3	-	ISAT 121, 224	3	3
ISAT 229, IST 208	3	3	IST 234, UCC Science	3	3
ISAT 120, SPCM 101	3	3	IST 209, 232.....	3	3
ENGL 101, 102	3	3	ECON 113, PSYC 102 or SOC 108	-	3
UCC Math, Health	3	2	UCC Fine Arts, Humanities	3	3
ECON 113, PSYC 102 or SOC 108, UCC Science	-	3	PHIL 104 or 105	3	-
<i>Total</i>	15	14	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
IST 307	3	-	IST 412	3	-
IST 334, 305	3	3	IST 414	3	-
IST 336, ISAT 365	3	3	IST 415	-	3
IST 301, ISAT 366	3	3	ISAT 419	-	4
ECON 113, PSYC 102 or SOC 108, UCC Science	-	3	ECON 302i or SPCM 301i.....	3	-
Elective	3	3	UCC Multicultural	-	3
<i>Total</i>	15	15	Elective.....	6	6
			<i>Total</i>	15	16

Courses (IST)

109-3 Introduction to Computer Concepts. This course is designed to introduce students to basic computer concepts and vocabulary. The students will learn what computers are, what they can do, and how they impact their lives. Lab assignments will cover a variety of areas, including using files, trouble-shooting, e-mail and the Internet. Lecture two hours and lab one hour.

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources and facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor and school.

208-3 Applied Law for Technical Careers. This course is designed to introduce students to fundamental legal practices and procedures. Student will be able to identify the legal and social environment of business including crimes and torts, contracts, personal property and bailments, negotiable commercial paper, debtor-creditor relations and risk management, business organizations and estates.

209-3 Introduction to Programming. This course is designed to introduce students to the design and development of logical solutions to business information processing problems. Upon completion, students will be able to develop algorithms, draw flowcharts and process files and tables using an appropriate computer programming language. Lecture two hours and lab one hour. Prerequisite: 109 (may be taken concurrently) or consent of school.

211-3 COBOL Programming I. This course is designed to introduce the student to COBOL Programming. Fundamentals of COBOL programming concepts will be covered using a microcomputer COBOL compiler. Topics will include: four phases of program development, four divisions of COBOL coding techniques, flow-charting, screen I/O design, batch and interactive processing, arithmetic and conditional operations, reports, control breaks, data validation and one-dimensional tables. Lecture and lab. Prerequisite: 209.

232-3 Systems Analysis & Design Tools. This course is designed to introduce participants to the principles and fundamentals of information systems design. Emphasis will be placed on the various techniques and practices used for problem definition and analysis, information gathering, project management and project presentation. Computer assisted tools will be introduced and utilized. Prerequisite: Information Systems and Applied Technologies 229 or equivalent.

234-3 Database Concepts and Applications. This course is designed to introduce the student to database design, database implementation, and database application development. Fundamental database concepts and technical database vocabulary will be discussed and then reinforced using a microcomputer-based database application package to analyze data and solve real-life business problems. Lecture and laboratory. Prerequisite: Information Systems and Applied Technologies 229.

240-3 Desktop Publishing Applications. This course is designed to introduce students to basic and advanced desktop publishing concepts and applications. The student will develop an understanding of terms related to page assembly, topography and other desktop publishing elements. The student will be able to describe basic desktop publishing design principles and apply them to the creation and production of documents including newsletters, flyers and brochures. Lecture and lab. Prerequisite: Information Systems and Applied Technologies 229 or equivalent.

258-1 to 30 Work Experience Credit. Credit granted for job skills, management-worker relations, and supervisor experience for past work experience while employed in industry, business, the professions or service occupations. Credit will be established by school director evaluation. This credit may be applied only at the 100 and 200 level of the information systems technologies degree unless otherwise determined by the school director. Prerequisite: Information Systems Technologies major.

259-1 to 60 Occupational Education Credit. A designation for credit granted for past occupational educational experiences related to the student's educational objectives. Credit will be established by school director evaluation. This credit may be applied only at the 100 and 200 level unless otherwise determined by the department chair. Prerequisite: Information Systems Technologies major.

299-1 to 16 Individual Study. Provides student with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resource and facilities of the entire institution. Each student will work under the supervision of a sponsoring faculty member and school director. Prerequisite: approval of the sponsor and school director.

301-3 Information Systems and Technologies. The course provides an overview of information systems technologies. It focuses on the use of computer technology and business information systems used to meet the goals of an organization and achieve a competitive advantage. Topics of discussion include characteristics of organizational systems, hardware devices and software programs, database design and development, telecommunication and networking technologies, and analysis, design and implementation of systems. A grade of C or better is required. Prerequisite: Information Systems Technologies major or Information Technology minor or consent of school.

305-3 Supervision and Management of Information Systems. Introduces leadership and management applications for the information technology professional. Includes analysis of classical organizational, management, and leadership theory in knowledge-based environments. Study of dynamic environments including business acumen, motivational and communication techniques, leadership skills, team development, productivity, customer service, and decision-making. Prerequisite: 301 or concurrent enrollment.

307-3 Principles of Records Information Management. This course is designed to provide a comprehensive understanding of the field of records information management with emphasis on the application of management techniques needed to control recorded information in an organization. The student will understand all of the elements of records information management from creation through maintenance and pro-

tection to final disposition. A grade of *C* or better is required. Prerequisite: Information Systems Technologies major or consent of school.

308-3 Forms Analysis, Design and Control. This course is designed to provide the student with an understanding of the concepts of forms management as applied to the procedures for implementing a program within an organization; analyzing and designing and/or redesigning business forms; and forms construction, printing technology, paper types, forms procurement, forms specifications and inventory control. Lecture and lab. Prerequisite: 307 with a grade of *C* or better or concurrent enrollment.

309-3 Micrographics & Image Management. This course is designed to provide the students with an understanding of the fundamental principles involved in micrographic and image technology including the technical aspects of the micrographic process, principles involved in systems design and development, and practical uses of micrographic systems particularly as they relate to the information management field. Prerequisite: 307 with a grade of *C* or better.

310-3 Archival Management. Upon successful completion of this course, the student will understand the archival profession as a segment of the broader field of records/information management, its institutions and collections; the methodologies and issues in the field; and the archival field's relationship to records management under the life cycle concept of comprehensive records management. Prerequisite: 307 with a grade of *C* or better.

312-3 Programming II. This course is designed to enable the student to use advanced programming techniques in the design and implementation of business application programs. Topics will include object-oriented programming, classes, inheritance, graphic user interfaces, and database access. Lecture 3 hours. Prerequisite: 209.

334-3 Database Processing. This course is designed to provide students with an understanding of advanced database processing concepts and various database management systems. Topics will include data modeling, database design, database implementation using a relational database management system, database administration, and distributed processing. A grade of *C* or better is required. Prerequisite: 234 or equivalent; and Information Systems Technologies major or Information Technology minor or consent of school.

335-3 Data Communications. The successful student will demonstrate by examination an understanding of concepts and vocabulary related to designing, implementing, and maintaining communication networks. Lecture three hours. Prerequisite: 301 with a grade of *C* or better and Electronic Systems Technologies 224. Information Systems Technologies major or consent of school.

336-3 Web-based Applications in Information Systems. This course is designed to assist students in utilizing powerful web application software products and the fundamentals of Hypertext Markup Language (HTML). Students will create complex business documents, informational documents, and entertainment presentations for on-line use within graphical user interface (GUI) environment (web browsers). Students will learn to import and export items; perform net searches; and scan, manipulate, and create images. Students will utilize critical analysis and thinking skills to examine and evaluate current on-line web pages and become aware of what constitutes a "good" web presence. A grade of *C* or better is required. Prerequisite: 209 or equivalent, Information Systems Technologies major or Information Technology minor or consent of school.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions and health service occupations offered through various workshops, special short courses and seminars. Hours and credit to be individually arranged. Course may be classified as independent study. Prerequisite: Information Systems Technologies major or consent of school.

351-1 to 6 Readings. Selected readings in specific information systems' topics not ordinarily covered in depth in other courses. Prerequisite: consent of instructor.

360-3 Network Security. This lecture/lab course focuses on design, documentation and implementation of network security solutions that will reduce the risk of revenue loss and vulnerability. It is designed to enhance the student's skills and knowledge in three key areas of network security; firewalls, intrusion detection systems, and virtual private networks. The course combines instructor led, group-paced, classroom delivery, and learning models with structured hands-on activities. Prerequisite: Information Management Systems 316, Electronic System Technologies 315; Information Systems Technologies or Electronic Systems Technologies major or consent of school.

370-3 Introduction to Oracle: SQL and PL/SQL. This course is designed to introduce students to SQL and PL/SQL functions of the Oracle database management system. Students will learn how to create and maintain database objects, and how to store, retrieve and manipulate data. Students will also create PL/SQL blocks of application code that can be shared by multiple forms, reports and data management applications. Prerequisite: 334; Information Systems Technologies major or consent of school.

372-3 Oracle Database Administration. This course is designed to give students a thorough conceptual understanding of the Oracle database architecture. Students will gain the necessary knowledge and skills to set up, maintain and troubleshoot an Oracle database. Basic database administrative tasks will be performed. Prerequisite: 370; Information Systems Technologies major or consent of school.

392-1 to 6 Special Projects. Students will work with current technology to solve problems and develop projects in a team environment. Prerequisite: Information Systems Technologies major and consent of instructor.

405-3 Installation and Configuration of Internet Services. This course provides technical information and hands-on experiences in managing Internet services, including HTTP, FTP, NNTP, SMTP and others. Topics of discussion will include administration, security, hardware and software requirements of these services on a minimum of two current platforms, Windows NT and Linux, as examples. A grade of *C* or better is required. Not for graduate credit. Prerequisite: Electronic Systems Technology 224; Information

Systems Technologies 301 or concurrent enrollment; Information Systems Technologies major or consent of school.

406-3 Assistive Technologies and Accessible Web Design. This course examines how people with disabilities use computer technology and access electronic information. Topics include the history, characteristics, and service delivery of assistive technologies, web site evaluation and repair, design of universally accessible web resources, and major legislative initiatives applied to ameliorate problems faced by persons with disabilities. Not for graduate credit. Prerequisite: 336 or consent of school.

412-3 Planning, Implementing and Evaluating Information Systems. This course examines planning for office systems development through investigation of procedures and systems used in various types of offices, including a study of work flow, the processing of information and employee and work group interactions. Topics will detail information systems from the perspective of the end users by studying development and implementation processes, tactics and strategies based upon systems planning results through a field-based product. A grade of C or better is required. Prerequisite: 232 or equivalent and 301, 334, both with a grade of C or better; Information Systems Technologies major or consent of school.

414-3 Trends and Issues in Information Systems. Explores special topics related to the nature, types, role, and impact of information systems in organizations and methodological concepts for understanding information systems in the future. Students will envision, identify, evaluate, select, and recommend computer-based technologies/solutions for organizational problems. Not for graduate credit. A grade of C or better is required. Prerequisite: 301, Information Systems and Applied Technologies 366; Information Systems Technologies major or consent of school.

415-3 Cases in Information Systems Technology. This course is the capstone course in the study of information systems technology. Using case studies, this course involves the analysis, syntheses, application and evaluation of advanced concepts related to information systems technology, organizational function areas, technological training, leadership needs and strategy planning for human aspects of technological change. Not for graduate credit. A grade of C or better is required. This course is writing intensive and reflects the college's Communication-Across-the-Curriculum initiative. Prerequisite: 412 and 414 with a grade of C or better in both. May be enrolled concurrently in 414. Information Systems Technologies major or consent of school.

426-3 Application Development Environments. This course is designed to allow students to develop computer applications using an object-oriented programming language. Topics will include the usage of an application development environment, subprocedures, menus, database files and graphics. Not for graduate credit. Prerequisite: 209 or consent of instructor; Information Systems Technologies major or consent of school.

436-3 Advanced Web-based Application Development. In this course the students will design and develop highly interactive and distributed database driven web applications based on current web technology. Students will also learn about the web-based application architecture, web client and server interaction, and installation and configuration of a web server. Lab and Lecture. A grade of C or better is required. Not for graduate credit. Prerequisite: 209, 336 or consent of school.

441-3 The Information Systems Technologies Profession. This course engages students in research and advanced study related to the Information Systems Technologies (IST) profession. Topics include, but are not limited to: the historical development of the profession; trends and future directions of information systems technologies in the global economy; professional standards and ethics; related professional organizations; and employment opportunities for information systems professionals. Each student is required to complete a separate research report that is related to the student's career goals. Concurrent enrollment in one semester hour of 350 is required. Prerequisite: Information Systems Technologies major or consent of school.

452-1 to 6 Research. The selection, investigation, research and writing on a specific topic approved by a faculty member. Not for graduate credit. Prerequisite: consent of school.

491-3 Seminar. Students will examine a variety of information systems technologies topics and/or problems. Not for graduate credit. Prerequisite: Information Systems Technologies major and consent of school.

Information Technology (Minor)

The Information Technology minor at Southern Illinois University Carbondale allows students to graduate with a portfolio of skills in information technology that includes the understanding of information and communication technologies; learning how policies on information and technologies are established and how they will affect individuals and society; and mastering basic skills and concepts. The basic skills and concepts include but are not limited to knowledge of how to meet the changing technology needs of business and industry as well as the latest equipment and software technology; how to continue to be a life-long learner in the information technology world; knowledge of software applications that are used in the work environment; how to use computers effectively as a tool to accomplish a given task at hand; how to use networked communication systems to gather news and information; and how to participate in political/cultural discussion.

There is a required core of nine hours (CS 200 or ISAT 229 or CS 201, MGMT 345, and MCMA 360). Three elective courses must be chosen from the following list: MGMT 360, 380, 411, 421, 422, MCMA 361, 362, 363, 364, IST 301, 334, 336, ISAT 335 and EST 310.

Students may enroll in the information technology minor no earlier than their sophomore year. Students must have a cumulative grade point average of 2.5 to enroll in the minor and must maintain at least a 2.5 average or better in the courses for the minor to be awarded.

Interior Design (Major, Courses, Faculty)

The Interior Design program is continually responsive to the demands and standards of qualification of the profession and its related fields. The program is accredited by the Foundation for Interior Design Education Research, 146 Monroe Center NW, #1318, Grand Rapids, MI. 49503-2822, (618) 458-0400. A four-year curriculum is offered resulting in a Bachelor of Science degree in Interior Design that is a FIDER Accredited Professional Level Program.

Students receive a comprehensive, interdisciplinary education in preparation for design and administrative positions in the fields of residential, commercial, and contract design. The successful candidate is qualified to practice professionally in a wide range of positions with interior and architecture firms, corporations, government agencies, or independently.

The approach toward interior design education at Southern Illinois University Carbondale provides a comprehensive technical emphasis as the basis for problem solving. At the core of the required course work are classes and studios which provide knowledge of design and the design process including programming, schematic design, design development, and construction documents. Support courses to complement and enhance the core consist of drawing, presentation, furniture, materials, history, lighting, plumbing, acoustics, mechanical systems, professional practice and current topics.

The amount of material to be covered, the fast pace of assignments, and the pressure of critical reviews combine to produce a highly charged and energetic atmosphere. Successful students must be able to handle multiple projects simultaneously and demonstrate an ability to manage their time wisely.

To support students in their educational endeavors, sophomores, juniors and seniors are provided dedicated studio space. Program facilities include a resource library, model/furniture shop and a dedicated computer graphics laboratory. The computer graphics laboratory will provide access to input/output devices. However, each student is required to purchase or lease a laptop computer and software that meets program specifications prior to the start of the second year for those on the four-year plan or prior to the start of the first year for those on the three-year plan. Laptop and software specifications will be supplied during the registration process.

While facilities are provided for use, costs for supplies, individual equipment, and required field trips necessary to the successful completion of the program are borne by the student. Due to the variation in individual materials use, it is impossible to predict the exact costs for each student. A reasonable estimate of additional expenses is in the range of \$1000 to \$2000 per academic year.

The interior design program maintains the right to retain student work for exhibition or for records and accreditation purposes. Students are advised to assemble photographic files of their work for their portfolios.

Students are encouraged to participate in professional related student organizations which include the American Society of Interior Designers, Illuminating Engineering Society, and Construction Specifications Institute. Other activities designed to enhance the overall quality of education include the University Honors Programs, travel study programs, workshops and guest lectures.

All applicants must satisfy standard University baccalaureate entrance requirements in order to be admitted into the University and included in the interior design applicant pool. Enrollment in the interior design program will be based upon selective admission criteria. High school graduates will be evaluated on ACT results and class rank. Transfer and change of major students will be evaluated on grade point average as calculated by Southern Illinois University Carbondale.

Prospective students attending another college or university prior to transferring to Southern Illinois University Carbondale should concentrate on completing courses articulated or approved as substitutes for Southern Illinois University Carbondale's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with the school director or designated representative.

Students must pass all Architectural Studies and Interior Design Prefix courses with a grade of *C* or better in order to satisfy prerequisites and to graduate. If a student receives a grade of *F* three times in the same course, the course cannot be taken again. Students cannot repeat Architectural Studies or Interior Design Prefix courses in which they received a grade of *C* or better.

Bachelor of Science Degree, College of Applied Sciences and Arts

<i>University Core Curriculum Requirements</i>	41 ¹
As per University requirements for baccalaureate degrees, but must include History 101a,b.	
<i>Requirements for Major in Interior Design</i>	(9) + 80
MATH 111	(3) + 1
PHYS 203a,b	(3) + 3
PHYS 253a,b	2
FDM 241	3
<i>Required Major Courses</i>	
Architectural Studies 101, 102, 121, 122, 231, 232, 242, 251, 252, 271, each with a minimum of <i>C</i>	
Interior Design 252, 272, 274, 331, 351, 382, 391, 392, 432, 451, 471, 481, 491, 492, each with a minimum grade of <i>C</i>	
(3)+71_____	
<i>Total</i>	121

¹ARC 231, 232, PHYS 203a and MATH 111 will apply toward nine hours of University Core Curriculum requirements making a total of 41 in that area.

Interior Design Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
ARC 101, 102	1	1	ARC 231, 232	3	3
ARC 121, 122	3	3	ARC 251, 252	4	4
ENGL 101, 102	3	3	ARC 271, 242	3	3
HIST 101a,b	3	3	PHYS 203a,b	3	3
Select Core, MATH 111	3	4	PHYS 253a,b	1	1
Select Core	3	2	Select Core, SPCM 101	3	3
<i>Total</i>	16	16	<i>Total</i>	17	17
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
ID 331, 272	3	3	ID 471, ID 432	3	3
ID 252, 274	3	3	ID 481	3	-
ID 351, 382	3	3	ID 451	3	-
ID 391, 392	4	4	ID 491, 492	4	4
FDM 241	3	-	University Core	-	6
<i>Total</i>	16	13	<i>Total</i>	13	13

Courses (ID)

111-4 Basic Design Studio I. Introduction to the elements and principles of design: point, line, balance, form, rhythm, and texture through the application of purposeful experiments in 2D/3D models, both traditionally created and computer generated. Lecture and studio.

112-4 Basic Design Studio II. Introduction to the elements and principles of design: scale, proportion, emphasis, light, color, and unity. Elements and principles previously learned will be used extensively. Ex-

perimentation using 2D and 3D models, both traditionally created and computer generated, will be applied to course work. Lecture and Studio. Prerequisite: 111, 121.

121-3 Basic Interior Design Drawing I. The development of drawing skills for interior spaces to include lettering, linework, geometric construction, orthographic projections, sections, axonometric drawings, shades and shadows, systems graphics, interior elevations and computer-aided design. Lecture and studio.

122-3 Basic Interior Design Drawing II. Three dimensional visualization drawing methods, both interior and exterior, with an emphasis on spacial quality. Various methods of visualization will be studied, to include both manual and computer assisted. Lecture and studio. Prerequisite: 111 and 121.

199-1 to 10 Individual Study. Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor and school director.

211-3 Color Theory in Design Applications. The study of color theory and application relative to the interior environment. Emphasis will be placed on human response to color, science of color/light and color/pigment, principles of color design, and implementation through design projects. Prerequisite: Architectural Studies 252 and major in interior design or consent of school director.

231-3 History of Interior Design and Architecture I. Summary of interiors, their furnishings and buildings from antiquity to 19th century including the socio-economic, psychological and philosophical rationales. Lecture. Prerequisite: Art and Design 101.

232-3 History of Interior Design and Architecture II. Summary of interiors, their furnishings, and buildings from the 19th Century to the present from the point-of-view of socio-economic, psychological and philosophical rationales. Lecture. Prerequisite: 231.

251-3 Presentation, Media and Technique. The use of drawing as a means to communicate concepts and ideas and the methods, materials and media used to present interior design projects. Lecture and studio. Prerequisite: 112, 122, AD 120.

252-3 Interior Design Programming I. Introduction to the design process used in interior design with emphasis on the study of methods for gathering data and analysis of project information for the design synthesis. Prerequisite: Architectural Studies 252 and major in interior design or consent of school director.

271-3 Interior Construction I. Introduction and development of the construction knowledge and drafting skills needed to produce a set of architectural drawings for a single-story structure. Emphasis will be placed upon materials and methods of interior construction in addition to the preparation of working drawings. Lecture and studio. Prerequisite: 112 and 122.

272-3 Interior Construction. The development of interior construction knowledge to solve interior architectural problems in new construction with an emphasis upon high-rise structures. Special concern in the adherence to building, fire and handicapped accessibility codes is to be observed in the preparation of the working drawings. Prerequisite: Architectural Studies 242 and major in interior design or consent of school director.

274-3 Materials and Specifications. A study of materials and finishes applicable to the interior environment including production methods, limitations, quality control, application, and uses. Emphasis is on specification for commercial interiors and liability issues for designers. Lecture. Prerequisite: concurrent enrollment in 272.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: approval of the sponsor and school director.

300-1 to 3 Resources in Practice. Participation in the operation of the division resource library provides students the opportunity to become familiar with resources used in the profession. Emphasis is placed on gaining knowledge of practices necessary to competently organize and maintain a professional working resource facility. Prerequisite: consent of instructor.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

331-3 History of Interior Design. Study of interiors, furnishings, buildings, and the language of interior design from antiquity to the present with the context of aesthetic, philosophical, psychological, socio-economic, and environmental rationales. Lecture format. Prerequisite: Architectural Studies 232, History 101a and b and major in interior design or architectural studies or consent of school.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Prerequisite: consent of instructor.

351-3 Furniture Design. Study of furniture through evaluation of historic furnishings as well as contemporary furnishings. Issues include ergonomics, anthropometrics, quality of materials and methods of construction. Prerequisite: Architectural Studies 232, 242, 252, Fashion Design and Merchandising 241 and major in interior design or consent of school director..

370-1 to 3 Special Topics in Lighting Design. A seminar course which explores current issues in the area of lighting design. Emphasis is placed upon supervised readings, discussion and creative projects directed toward individual research. Prerequisite: 371 and consent of instructor.

382-3 Environmental Design II: Lighting and Acoustics. (Same as Architectural Studies 382) A comprehensive overview of the luminous and sonic environment with consideration to energy-conscious design. Content includes human physiological and psychological perceptions of light in the built environment, natural and electric light sources, daylighting design techniques, lighting measurements and controls, light and form, computations for quantity and quality light, and the use of illuminated models for daylighting and electric lighting design, the basic principles of acoustics impacting room acoustics, mechanical system noise, sound absorption and isolation, and the basic principles of electrical systems. Prerequisite: 391, Mathematics 111, Physics 203a and b, and major in interior design or consent of school director.

390-1 to 4 Special Project in Interior Design. Investigation of a project-type specialization. Includes application of design process principles with emphasis on programming and preliminary design. Studio. Prerequisite: 391 and consent of instructor.

391-4 Interior Design Studio I. Interior design of the personal environment at the individual level. Emphasis is on residential design. Prerequisite: Architectural Studies 232, 252, Interior Design 211, 252 or concurrent enrollment and major in interior design or consent of school director.

392-4 Interior Design Studio II. Interior design of the environment at the multi-user level when client/owner and client/user are different. Emphasis is on public access spaces, e.g., restaurants, stores, museums, professional offices and future facilities. Prerequisite: 351, 391 and major in interior design or consent of school director.

432-3 Interior Design Seminar. Study of the current trends and topics in interior design. Not for graduate credit. Prerequisite: 491, major in interior design or consent of school director.

451-3 Interior Design Programming II. Preliminary stage of senior design project includes project research, data gathering, and analysis. Lecture and studio. Not for graduate credit. Prerequisite: 392 and major in interior design or consent of school director.

471-3 Professional Practice I: Office Practice. (Same as Architectural Studies 491) Introduction to the organization, management, and practice of Architecture and Interior Design as a business and profession. Emphasis is placed on the range of services provided, professional ethics, business management, marketing, contracts and negotiations, design cost analysis/control, and other aspects of professional practice. Not for graduate credit. Prerequisite: Interior Design 272, 274, 392 and major in interior design or consent of school director.

481-3 Environmental Design III: Energy and Systems. (Same as Architectural Studies 481) The study of the influences of energy, human comfort, climate, context, heating, cooling and water on the design of buildings and sites. The design of passive and active environmental systems with continued emphasis on daylighting, acoustics and design strategies for sustainability. Not for graduate credit. Prerequisite: 272, 392, Mathematics 111, Physics 203a and b, and major in interior design or consent of school director.

491-4 Interior Design Studio III. Interior design of the environment at the corporate or institutional level where client/owner and client/user are significantly different. Emphasis is on design. Furniture systems, particularly in the area of office planning are to be included. Facility types include financial institutions and institutional facilities. Not for graduate credit. Prerequisite: 272, 274, 382, 392, and major in interior design or consent of school director.

492-4 Interior Design Studio IV. Completion of an interior design project of approximately 5,000 square feet as initiated in Interior Design 451. Emphasis is on design process from schematic design through completion of annotated construction document with estimate of cost. Facility types include Health Care or Recreation/Hospitality. Not for graduate credit. Prerequisite: 451, 481, 491, and major in interior design or consent of school director.

Architectural Studies and Interior Design Faculty

Anz, Craig K., Assistant Professor, M. Arch., University of Texas at Arlington, 1991.

Bramlet, James E., Assistant Professor, *Emeritus*, M.A., Western Illinois University, 1970.

Brazley, Michael D., Assistant Professor, Ph.D., University of Louisville, 2002, BARCH, Howard University, 1978.

Davey, Jon, Associate Professor, M.S., Southern Illinois University Carbondale, 1987.

Dobbins, John, Associate Professor, M. Arch., University of Illinois, 1986.

Gimenez, Atilio M., Assistant Professor, *Emeritus*, M. Arch., University of Buenos Aires, 1961.

Hays, Denny M., Associate Professor, *Emeritus*, M. Arch., University of Utah, 1971.

Lach, Norman, Assistant Professor, M.Arch., University of Illinois Champaign, 1974.

Ladner, Joel Brooks, Associate Professor, *Emeritus*, M.Arch., University of Houston, 1984.

LaGarce, Melinda, Associate Professor, M.F.A., Texas Technology University, 1972.

Owens, Terry A., Associate Professor and *Chair*, M.S., Southern Illinois University Carbondale, 1984.

Poggas, Christy, Assistant Professor, M.S. Ed., Southern Illinois University Carbondale, 1990. B.Arch., University of Arizona, 1975.

Sharabi, Shai Y., Assistant Professor, M. Arch., The Ohio State University, 1996.

Smith, Peter B., Assistant Professor, M. Arch., University of Illinois, 1980.

Swenson, Robert, Assistant Professor, M. Arch., Yale University, 1969.

Tully, Timothy R., Assistant Professor, M.S., Southern Illinois University Carbondale, 1990. B.S., Architectural Studies, University of Illinois Champaign, 1974.

Wessel, Stewart P., Associate Professor, M.F.A., University of North Texas, 1992.

White, David J., Associate Professor, M.S. Ed., Southern Illinois University Carbondale, 1991.

Wright, James K., Assistant Professor, *Emeritus*, M. Arch., University of Pennsylvania, 1966.

International Trade

(SEE AGRIBUSINESS ECONOMICS)

Journalism (School, Major, Courses, Faculty)

The School of Journalism at Southern Illinois University Carbondale occupies a national leadership role in mass communication education with a comprehensive program combining a broad knowledge of the liberal arts with a detailed understanding of the practice of journalism in modern society. After completing the University's liberal arts core, undergraduate students learn about the integral connections between the various components of today's mass media in the college-wide core courses. They then acquire the specific skills necessary to become professionals in advertising/integrated marketing communications, news-editorial, photojournalism or other communication fields. Students are encouraged to develop in-depth knowledge by completing the requirements of a structured minor in a subject area outside the College. The curriculum prepares students for positions of responsibility in advertising and related marketing communications fields, news-editorial journalism, photojournalism or other fields in which the ability to communicate is essential. The School of Journalism also prepares students for graduate studies in mass communication, the social sciences, and the law.

The School of Journalism is accredited by the Accrediting Council on Education in Journalism and Mass Communication, University of Kansas, School of Journalism Stauffer-Flint Hall, Lawrence, Kansas 66045, the agency formally recognized by the Council on Postsecondary Accreditation and the U.S. Office of Education.

Prospective students should be aware that excellent written and oral language skills are essential for successful careers in the journalism field. With this in mind, the School of Journalism has adopted admission and retention standards that emphasize language facility and academic proficiency.

Admission Standards

To be admitted to the School of Journalism, applicants must meet the following requirements:

Beginning freshmen must meet the University's regular admission requirements, as described in Chapter 2.

Transfer students who have completed fewer than 26 semester hours must meet the requirements for beginning freshmen and have earned an overall collegiate grade point average of at least 2.00 (4.0 scale).

Transfer students who have completed more than 26 semester hours must have earned an overall collegiate grade point average of at least 2.00.

Students currently enrolled or who were previously enrolled at SIUC in another major must meet the same requirements as transfer students. If they have completed more than 26 semester hours they must have an overall grade point average of at least 2.00. Students with fewer than 26 semester hours must meet beginning freshman requirements as well as have a grade point of at least 2.00.

Grade point average is calculated for purposes of admission to the School of Journalism by using all grades earned at SIUC and other collegiate institutions. This includes repeated courses.

Retention Policies

Students majoring in journalism must meet these retention requirements to continue their enrollment in the major:

Students who have completed 26 semester hours or more must have an accumulative SIUC grade point average of 2.00 or higher.

A grade of C or better is required in all journalism courses and Mass Communication and Media Arts 201 in order to be counted toward the major or minor and to satisfy prerequisite requirements.

Students may enroll for a maximum of two times in any journalism course. Students who repeat a course in an attempt to earn the required letter grade of C or higher are limited to this two-time enrollment maximum.

Strong skills in the use of the English language are required to enter the first writing course in the School of Journalism: Journalism 302 or 310. Students may demonstrate proficiency in the use of the English language with an English ACTE subscore of 22 or higher, or by earning a grade of C or higher in English 290 or Linguistics 290 (for international students). This prerequisite must be successfully completed prior to registration for any course for which the prerequisite is required.

Students who are unable to meet these retention requirements will be placed in probationary status within the School of Journalism. These students will be given one semester to correct their deficiency prior to dismissal. Those who are dismissed from the School of Journalism but are eligible to continue in the University will be placed in Pre-Major advisement or may request permission to enter another collegiate unit.

Other Requirements

Journalism students must demonstrate typing ability of 30 words per minute by receiving a passing grade in a typing course or on a typing examination specified by the School of Journalism before registering for Journalism 302 or 310. Those who cannot meet requirement must enroll in a typing course and receive a grade of C or better.

Enrollment in Journalism courses may be canceled for students who do not attend the initial class session of the semester.

Fees will be assessed for supplies and materials in some courses. Students should inquire about amounts before registering.

Subject to the approval of the School's director, undergraduate students may receive as many as 9 hours of journalism credit toward their degrees for courses not taken in residence.

Prior to the junior year the student must decide upon a specialization described below or obtain approval of a faculty sponsor and the school's director for another coherent combination of courses tailored to individual interest from the general requirements of the School of Journalism.

Academic Advisement

A student planning to major or minor in Journalism should consult the school's academic adviser as early as possible in order to discuss the degree requirements for the specialization chosen. After admission to the major in journalism, the student will be expected to visit the academic adviser each semester until all major requirements have been completed. A progress record for each student will be on file in the school and on-line in SalukiNet.

Bachelor of Science Degree, College of Mass Communication and Media Arts

The academic requirements for the Bachelor of Science degree in journalism include (1) 30 to 39 hours in journalism and Mass Communication and Media Arts courses as approved by the School of Journalism and (2) a minimum of 28 hours in junior-senior level course work in the College of Liberal Arts (excluding speech communication courses), the College of Science or other areas approved by the faculty.

Students will also complete a 15-hour minor in an area approved by the School of Journalism. Students who select a minor within the College of Liberal Arts or

another approved area may include those hours in their minimum of 28 junior-senior level hours.

The School of Journalism is accredited by the Accrediting Council on Education in Journalism and Mass Communication (ACEJMC). As a result, there are ACEJMC requirements that must be met. A major must complete a minimum of 80 semester hours outside of journalism and mass communication courses, with a minimum of 65 of those semester hours in liberal arts courses. The student, with the assistance of the journalism academic adviser, should exercise care in course selection to assure that these requirements are met.

While most students are best served by one of the following specializations, other programs of study in the major may be designed to meet special needs. Individualized programs might address such student interests as agricultural journalism, international communication, mass media institutions, and communication research. Such a specialized program of study must be sponsored by a journalism faculty member and approved by the director. Further information on specialized programs of study is available from the academic adviser.

ADVERTISING/INTEGRATED MARKETING COMMUNICATION SPECIALIZATION

Students in the advertising/integrated marketing communications specialization learn to analyze problems in, and identify solutions for, the promotion of goods and services through integrated marketing communications. They develop skills in verbal and visual communication and presentation of IMC materials. The program prepares students to enter a wide variety of positions with marketing communications firms (including advertising, sales promotion, public relations and direct marketing agencies), in the communications media and with retail or manufacturing firms.

NEWS EDITORIAL SPECIALIZATION

As the communication revolution expands the ways in which news and information can be presented, the need increases for individuals with the ability to prepare and present news and information precisely and accurately for a variety of media. Students in the news-editorial specialization receive practical training in the theory and practice of identifying, gathering, processing, interpreting, writing and presenting news for traditional print and broadcast/cable media, and for new computer-based media. The program prepares students for professions in which the ability to communicate to mass audience is essential.

PHOTOJOURNALISM SPECIALIZATION

Students in the photojournalism specialization develop the photographic and news reporting skills necessary to communicate visually with a mass audience through contemporary media outlets - both printed and electronic. Photojournalism students receive practical training in gathering, writing, photographing, editing and presenting news and feature stories in which the essential information is photographic. The program prepares photojournalists that are fully aware of the power of photography, that are well grounded in the legal and ethical traditions of the profession and are practically prepared to make a significant contribution to contemporary journalism.

Bachelor of Science Degree in Journalism, College of Mass Communication and Media Arts

<i>University Core Curriculum Requirements</i>	41
<i>Mass Communication and Media Arts Core Courses</i>	6
<i>Requirements for a Major in Journalism</i>	30
Specialization Requirements	30

Advertising/Integrated Marketing Communication Specialization:
301, 302, 303, 304, 405, 406, 407, Speech Communication 281,
plus selected approved electives to bring the total to 30 hours.

News-Editorial Specialization: From the University Core Curriculum take five courses from: Political Science 114, Economics 113, History 110, Sociology 108, Psychology 102 (University-approved departmental substitutions will be accepted). Journalism 310, 311, 312, 332, 434, 335, two of either 411, 416, 417 or 419 and two additional courses in Journalism at the 300-level or higher.

Photojournalism Specialization: Journalism 310, 311, 313, 413, 414, 434; Cinema and Photography 310, 320, 322; and either Cinema and Photography 404 or Journalism 419.

Minor	15
Approved Non-Journalism Electives	28
Must include Marketing 304 for Advertising/Integrated Marketing Communication Specialization. Speech Communication courses may not be used for this requirement.	
Total	120

Journalism Suggested Curricular Guide

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
ENGL 101, 102	3	3		UCC Science	3	3	
UCC Math.....	-	3		UCC Multicultural	3	-	
UCC Humanities.....	3	3		UCC Interdisciplinary	-	3	
UCC Social Science	3	3		UCC Fine Arts	3	-	
UCC Human Health	2	-		MCMA 202, Liberal Arts Elect	3	3	
SPCM 101, MCMA 201	3	3		Major Course	3	6	
Total	14	15		Total	15	15	
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
Journalism Courses	6	6		Journalism Courses.....	6	6	
Liberal Arts Courses	6	6		Liberal Arts Courses	3-4	6-7	
Minor.....	3	3		Minor	6	3	
Total.....	15	15		Total	15-16	15-16	

Minor

A total of 15 hours of journalism courses at the 300 level or higher, at least one of which must be a writing course (302 or 310), approved by the journalism academic advisor constitutes a minor for nonjournalism majors. For those students wishing to specialize in photojournalism for their minor, the following courses are recommended: CP 320, JRNL 310, JRNL 313, JRNL 413, JRNL 434, and one journalism elective course at the 300 level or higher. All courses for minors in Journalism must be completed with a grade of C or higher.

Courses (JRNL)

- 160-3 Mass Communication in Society.** Acquaints non-journalism students with the history and development of the American mass media. Examines media roles in society, potential for development, weak points, and the roles consumers can and should play regarding the media. This course may not be applied toward major or minor credit in Journalism.
- 300-3 Mass Media in Modern Society.** Develops an awareness of the pervasive nature of the mass media in our society and an understanding of how the media operate, with emphasis on contemporary social and economic problems in the media.
- 301-3 Principles of Advertising/IMC.** An introduction to integrated marketing communications elements, including advertising, direct response, sales promotion and marketing public relations, and their functions in today's communication environment. Explores research, media and message elements involved in the creation of a campaign; governmental regulations; and social and economic considerations.
- 302-3 Copywriting for Advertising/IMC.** Study of the principles and practice in the writing of copy and visual design of persuasive messages such as advertising, sales promotion, direct response, marketing public relations and others. Includes writing for print and broadcast media, across products and services and oral presentation of materials. Lab fee: \$42. Prerequisite: ACTE English subscore of 22 or higher or grade of C or higher in English 290 or Linguistics 290 and Journalism 301 and typing speed of at least 30 words per minute.

- 303-3 Creating Advertising/IMC Messages.** Examination of and practice in the development of persuasive message strategies and the writing and design of messages for all media advertising, direct response, sales promotion and marketing public relations, and oral presentations of IMC materials. Prerequisite: 301, 302 and ACTE English subscore of 22 or higher, or grade of C or higher in English 290 or Linguistics 290.
- 304-3 Placing Advertising/IMC Messages in the Media.** Examination of the various media systems/types available to carry advertising/IMC creative messages. Emphasis is given to both the development of advertising/IMC media objectives and strategies in the context of a media plan, as well as the steps involved in the actual negotiation of specific media vehicles. Prerequisite: ACTE English subscore of 22 or higher or minimum grade of C in English 290 or Linguistics 290 and Journalism 301 and Marketing 304.
- 305-3 Direct Response Advertising/IMC.** Overview of direct response advertising and its measurability; the media involved; and the strategic, tactical and creative approaches. Introduces topics such as database management, mailing lists, telemarketing, lead generation program, catalog marketing, sales promotion and business-to-business marketing communications. Prerequisite: 301, 302 and Marketing 304.
- 306I-3 International Media Systems.** (University Core Curriculum) An overview of the mass media systems of the world; comparison of theoretical models and actual practice. Explores differing conceptual models of the mass media and their underlying philosophies; actual operations of different press systems with specific economic, political and cultural structures including historical development and current status. Not open to students with credit in 401.
- 307-3 Interactive Advertising/IMC.** Explores the development of interactive media and their impact on integrated marketing communication and consumer behavior. Analyses the use of new media in brand building, business-to-business communication, direct response, database marketing, and sales promotions. Includes examination of strategic, planning, and communication aspects of Web sites, online advertising, e-mail marketing, CD-ROMs, interactive presentations, interactive kiosks, and more. Provides principles such as user experience, content organization, navigation development, and interface design necessary to develop persuasive interactive marketing materials. Course fee: \$42. Prerequisite: 301.
- 310-3 Writing for the Mass Media.** Emphasis on mass media writing styles; basic principles of editing; the techniques of information gathering and reporting; story organization; the use of library and on-line sources; and other basic newsgathering skills. Lab fee: \$42. Prerequisite: typing speed of at least 30 words per minute; a minimum 22 English ACT score or Linguistics 290 or English 290 with a grade of C or better.
- 311-3 Reporting and News Writing.** Continues development of news reporting skills for all media. Emphasizes personal interviews, development and use of news sources, analysis of public records, news beats and specialized reporting structures, and the professional working relationship between the writer and other news personnel. Lab fee: \$42. Prerequisite: 310.
- 312-3 Editing.** Introduces principles and techniques of editing and information management. Course emphasizes the editing of body copy and display type for maximum clarity and impact in a wide variety of news media including print, broadcast, and new electronic publications. Lab fee: \$42. Prerequisite: 310.
- 313-3 Basic Photojournalism.** Includes basic camera technique, film and print processing methods, digital photo imaging methods and evaluation of pictorial communication effects. Discusses the history and ethics of the profession. Student supplies own materials. Lab fee: \$52. Prerequisite: consent of department. Open only to journalism majors.
- 314I-3 American Politics and the Mass Media.** (University Core Curriculum)(Same as Political Science 314I) Analysis of the role of the mass media in American politics. Emphasis will be on the way in which the media covers political actors and institutions, the effects of media on political attitudes and behavior, and the expanding role of new media, such as the Internet, in politics.
- 332-3 Journalism Law.** Examination of the constitutional law of press censorship, of libel and privacy, of commercial speech and its regulation, of copyright and trademark, of access to government proceedings, and of confidentiality in newsgathering.
- 335-3 Graphic Communication.** Explores the history of visual communication with an emphasis on the integration of text and graphic images through design. Introduces fundamental design principles and the basics of typography, color usage, picture editing, and project management, all within the context of changing communication technology and production methods. Lab fee: \$42.
- 360-3 Magazine Management and Production.** The day-to-day operations of a magazine and the techniques involved in producing a magazine. A combination of lectures and workshops in which the professor will deal individually with student projects. Each student will produce an original magazine idea and bring it to, at least, the semi-comprehensive stage of development. Lab fee: \$42.
- 400-3 History of Journalism.** Development of American newspapers, magazines, and radio-television with emphasis on cultural, technological, and economic backgrounds of press development. Current press structures and policies will be placed in historical perspective.
- 401-3 International Communication.** An analysis of the development, structure, functions, and current status of media systems in other countries. Emphasis given to studying factors that facilitate or restrict the flow of intranational and international communication. Not open to students with credit in 306I.
- 405-3 Introduction to Mass Communication Research.** Overview of communication research methods including practical training in interpretation and presentation of social science data. Introduction to survey research methods, experimental design, and use of computers for analysis of data. Presentation of data in journalistic forms and social science reports. Not for graduate credit. Prerequisite: 302 or 310 or consent of instructor.
- 406-3 Advertising/IMC Campaigns.** Conceptual synthesis and practical application of business, research, media and creative principles used in the formulation of persuasive messages. Includes the development of a complete integrated marketing communications (IMC) campaign for a specific advertiser. Includes all rele-

- vant target audience contact points (e.g., advertising, sales promotion, marketing public relations, event marketing, packaging) and both written and oral presentation of the campaign. Prerequisite: 303, 304, 405.
- 407-3 Social Issues and Advertising/IMC.** Analysis of social issues involving advertising and integrated marketing communications (IMC); economic relationships, government and self-regulation, cultural effects, influence on media content and structure, role in democratic processes, international comparisons and the stereotyping of women, minorities and other audience segments. Prerequisite: senior standing.
- 408-3 Broadcast Advertising Production.** (Same as Radio and Television 486) This course, offered jointly with radio-television, offers students the opportunity to combine their respective knowledge and skills in creating and producing broadcast commercials. Emphasis will be placed on working in teams to create commercial messages. All stages of the process from research and development of scripts to production, post production and editing of finished commercials and final presentation of the finished products will be included in the course. Prerequisite: 303 or Radio and Television 365 or 383.
- 409-3 Specialized Topics in Advertising/IMC.** New developments in advertising and integrated marketing communications. Topics change each term. Students should check specific topic and any special requirements and prerequisites before enrolling. Prerequisite: permission of instructor.
- 411-3 Public Policy Reporting.** Continued development of reporting skills with emphasis on the reporting of public policy issues and on use of statistics, the analysis of computerized data bases, and advanced techniques for the investigation of complex stories. Prerequisite: 311 or consent of instructor.
- 413-3 Advanced Photojournalism.** Emphasis in-depth photojournalistic reporting. Students research, write and photograph picture stories. Examines ethics, history and social role of photojournalism domestically and internationally. Digital imaging and an introduced to full-motion video. Students must have fully adjustable camera. Lab fee: \$64. Prerequisite: 313 or Cinema and Photography 320. Student supplies own materials.
- 414-3 Picture Story and Photographic Essay.** Production of photographic stories and essays for newspapers, magazines and news media presentations. Students discuss, research, photograph, design and write several stories and essays, while studying the work of influential photojournalists. Student must supply own camera equipment. Lab fee: \$42. Prerequisite: 313 or consent of instructor.
- 416-3 Critical and Persuasive Writing.** The roles and responsibilities of the editor, editorial writer, and opinion columnist with emphasis upon editorial writing and critical thinking. Editorial problems, methods, policies, style and the fundamentals of persuasion and attitude change form the basis for study. Prerequisite: 311.
- 417-3 Freelance Feature Writing.** Identification, research and application of creative writing techniques in producing feature articles for various media. Students analyze reader appeal as well as feature story structure and methods of marketing features to various audiences and publications. Lab fee: \$42. Prerequisite: 310.
- 419-3 Specialized Topics in News Reporting.** Develops detailed reporting expertise in such topics as business, environment, education, arts and entertainment, health and medicine, sports, public journalism, etc. Lab fee: \$42. Prerequisite 311 or consent of instructor.
- 434-3 Media Ethics.** Explores the moral environment of the mass media and the ethical problems that confront media practitioners. Models of ethical decision-making and moral philosophy are introduced to encourage students to think critically about the mass media and their roles in modern society.
- 435-3 Advanced Graphic Communication.** Continues development of message design skills. Emphasizes creative solutions to the display of complex content in a wide variety of media. Lab fee: \$46. Prerequisite: 335 or consent of instructor.
- 436-3 Multimedia Publication Design.** Building upon the basic skills learned in publishing on the WWW, the course continues the exploration of using computer-based technologies for presentation of information to wide audience using the interactive capabilities of the internet and other new media. Focus is on organization of information, design of presentation, use of transaction generated information, and the production of multimedia files in a networked environment. Includes discussion of topics including privacy intellectual property, libel, and other matters of concerns to an interactive publisher. Course fee: \$42. Prerequisite: Mass Communication and Media Arts 396.
- 490-1 to 6 (1 to 3, 1 to 3, 1 to 3) Readings.** Supervised readings on subject matter not covered in regularly scheduled courses. Limited to maximum of 3 credits per semester. Not for graduate credit. Prerequisite: written consent of instructor and director.
- 494-1 to 6 Practicum.** Study, observation, and participation in publication or broadcast activities. A maximum of three credit hours may count toward the major for undergraduates. Prerequisite: consent of instructor and area head. Mandatory Pass/Fail for undergraduates.
- 495-1 to 12 (1 to 6, 1 to 6) Proseminar.** Selected seminars investigating media problems or other subjects of topical importance to advanced journalism majors. Seminars will be offered as the need and the interest of students demand. Prerequisite: senior standing.

Journalism Faculty

Atwood, L. Erwin, Professor, *Emeritus*, Ph.D., University of Iowa, 1965.

Brown, George C., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1963.

Fahmy, Shahira S., Assistant Professor, Ph.D., University of Missouri Columbia, 2003

Gruny, C. Richard, Assistant Professor, *Emeritus*, J.D., University of Illinois, 1959.

Hallock, Steven, Assistant Professor, Ph.D., Ohio University, 2005.

Hlavach, Laura, Assistant Professor, J.D., University of Texas, Austin, 1985.

Iyer, Narayanan, Lecturer, A.B.D., Indiana University Bloomington, 2006.

Jaehnig, Walter, Associate Professor and Director, Ph.D., University of Essex, 1974.

Kelly, James D., Associate Professor, Ph.D., Indiana University, 1989.

Lawrence, Michael J., University Professor and Associate Director, Public Policy Institute, B.A., Knox College, 1964.

Li, Xigen, Assistant Professor, Ph.D., Michigan State University, 1999.

Lowry, Dennis, Professor, Ph.D., University of Iowa, 1972.

McCoy, Ralph E., Professor, *Emeritus*, Ph.D., University of Illinois, 1956.

Padovani, Cinzia, Assistant Professor, Ph.D., University of Colorado at Boulder, 1999.

Ramaprasad, Jyotika, Associate Professor, Ph.D., Southern Illinois University, 1985.

Rice, W. Manion, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1967.

Shidler, Jon A., Associate Professor, *Emeritus*, M.S., Roosevelt University, 1980.

Spellman, Robert L., Jr., Associate Professor, *Emeritus*, J.D., Cleveland State University, 1977.

Stone, Gerald C., Professor, *Emeritus*, Ph.D., Syracuse University, 1975.

Kinesiology (Department, Major, Courses, Faculty)(Formerly Physical Education)

The Department of Kinesiology offers programs, which qualify graduates for positions as teachers in elementary and secondary schools or for alternative careers in private, industrial, and public settings. Whatever the student's career aims may be, the programs provide a full range of intriguing and challenging professional opportunities in diversified curricula. The student can choose a discipline best suited to individual interests, talents, temperament, and future plans. While studying new concepts, the student will observe the work of outstanding teachers, athletic coaches, and clinicians. Whichever direction is selected, the student will study and practice in modern facilities, with the latest equipment and will learn the most recent techniques.

Teacher Education Specialization. The teacher education specialization consists of courses, which are designed to meet the requirements of the Illinois State Department of Education and are, in most cases, transferable to meet requirements of other states. The laboratory and classroom experiences consist of basic and applied sciences, methods of teaching, and acquisition of physical skills, which include a variety of team and individual sports, exercise, and dance.

Students selecting the Teacher Education Specialization are encouraged to complete a minor in coaching. This addition to the preparation for teaching will enhance a graduate's employment opportunities.

A departmental prerequisite for admission to Teacher Education in the college is Kinesiology 313. Additionally, students must also have completed Kinesiology 314 or be currently enrolled.

Athletic Training Specialization. The athletic training specialization is designed to train students to provide exemplary first-aid care for student-athletes, and administer rehabilitation, therapeutic treatment, and preventive conditioning programs under the supervision of a physician. This program prepares graduates for careers as athletic trainers in public schools, colleges, and private and industrial settings.

Exercise Science and Physical Fitness. This program is designed for students who wish to direct physical fitness programs in private, industrial and public settings. Preparation in this program enables the graduate to assess components of adult fitness, design individual exercise programs for the development and maintenance of physical fitness, and manage a physical fitness program. Graduates will have the foundation for continued study at the graduate level.

Bachelor of Science Degree in Kinesiology, College of Education and Human Services

KINESIOLOGY MAJOR — TEACHER EDUCATION SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Kinesiology</i>	47
Kinesiology 113, 116, 118, 120, 201, 300, 301, 305, 313, 314, 320, 321, 323, 324, 345, 370, Physiology 201.	
<i>Professional Education Requirements</i>	28
See Teacher Education Program.	
<i>Additional courses required for Teacher Certification</i>	3
Psychology 102	
<i>Electives</i>	1
<i>Total</i>	120

KINESIOLOGY MAJOR-ATHLETIC TRAINING SPECIALIZATION

The Athletic Training Education Program is accredited by the Commission on the Accreditation of Athletic Training Education (CAATE). The Commission on the Accreditation of Athletic Training Education accredits programs for the Athletic Trainer upon recommendation of the Joint Review Committee on Education Programs in Athletic Training (JRC-AT).

Admission to the Athletic Training Education Program is selective and competitive. A limited number of students are admitted each year based on the number of clinical instructors. Prospective students must complete a Pre-Athletic Training experience that includes both formal classroom instruction and supervised clinical observation before making application to the Athletic Training Education Program. Students should expect to spend approximately \$800 for uniforms and NATA membership fees over the duration of the program.

Pre-Athletic Training Experience

Typically, the Pre-Athletic Training experience is completed during the student's freshman year and includes the following requirements:

- KIN 225 (grade of *B* or better), KIN 226 (grade of *B* or better), KIN 300 (grade of *B* or better), PHSL 201/208 (grade of *C* or better), CHEM 140a or 200/101 (grade of *C* or better), Documentation of 75 hours of clinical observation.

Transfer students are required to complete an equivalent experience prior to admission to the Athletic Training Education Program.

Athletic Training Education Program Admission Criteria

Admission to the Athletic Training Education Program is based on the following criteria:

1. Cumulative GPA of 2.50 or better in all college course work.
2. Successful completion of the Pre-Athletic Training experience;
3. Completion of recommendation forms by one faculty member, one certified athletic trainer, and one personal reference that can speak on behalf of your character;
4. Interview;
5. Signed Technical Standards form;
6. Completed physical exam form that indicates compliance with the Technical Standards;

Students who are formally accepted into the Athletic Training Education Program are required to submit the following information prior to beginning their first clinical rotation.

7. Proof of current First Aid/CPR certification;
8. Proof of Hepatitis B vaccination or waiver;

9. Proof of current Tuberculosis (PPD) vaccination.

Retention Criteria

Students admitted to the Athletic Training Education Program must meet the following standards to remain in the program:

- 1. A minimum overall collegiate grade point average of at least 2.50;
- 2. A minimum grade point average of 2.75 in courses required for the athletic training education specialization (athletic training courses with an earned grade of C or lower must be repeated).

<i>University Core Curriculum Requirements</i>	41
To include Health Education 101, Psychology 102, Sociology 215, Kinesiology 210, Mathematics 113, Physics 101, Philosophy 104, Speech Communication 101	
<i>Requirements for Athletic Training Specialization</i>	81
Kinesiology 201, 225, 226, 227a, b, c, d, e, f, 300, 320, 321, 325, 327, 335, 341a, b, 342, 381, 400, 407, 426, 427; Health Education 334; and 434, Chemistry 140a or 200/201, Food and Nutrition 101	
<i>Total</i>	122

KINESIOLOGY MAJOR — EXERCISE SCIENCE AND PHYSICAL FITNESS SPECIALIZATION	
<i>University Core Curriculum Requirements</i>	41
To include Psychology 102 and Zoology 118 as a substitute.	
<i>Requirements for Major in Kinesiology</i>	71
Kinesiology 201, 300, 303, 304, 313, 320, 324, 342, 355f, 381, 382, 408, 420, 421, 428	
Additional Requirements	39
Accounting 210; Management 304, 350; Biology 200a; Chemistry 140a,b; Computer Science 200b; Food and Nutrition 101, Physiology 201, 208; Educational Psychology 402.	
<i>Electives</i>	8
<i>Total</i>	120

Students wishing to gain experience in kinesiology and areas related to Kinesiology may pursue work in aquatics, coaching and athletic training.

Physical Education Minor

A student with a minor in physical education in secondary education must complete the following courses:

<i>Required Activity Courses</i>	7
Kinesiology 113, 116 or 120, 118	
<i>Required Methods Courses</i>	5
Kinesiology 305, 323	
<i>Required Theory Courses</i>	21
Kinesiology 201, 300, 301, 319, 320 or 321, 324, 370	
Physiology 201	3
<i>Total</i>	34

Minor in Aquatics

A student must have advanced swimming skill, a current American Red Cross Lifeguarding certificate and a current adult CPR certification to enter the program. If not, the student must obtain them by coursework or workshops.

Required Courses:	10
Kinesiology 307 or 311, 310, 312, 355a, 418	
Electives:	6
Three courses from Kinesiology 307 or 311; 308a, b, c, d, or e; 330c; 494a, b (First Aid Instructor and CPR Instructor certification ¹ .)	

Total

16

Minor in Coaching

Requirements for the minor are listed below:

Required courses

16

Kinesiology 201, 319, 324, 329, 345, 355C.
The Department of Kinesiology recommends the additional courses: Kine-
siology 320, 303 and 304 or 321, 330 (appropriate sport).

Courses (KIN)

101-2 Current Concepts of Physical Fitness. (University Core Curriculum) To foster a thorough understanding of scientific principles of physical fitness and to enhance the ability to utilize physical exercise toward achievement of healthful living.

102-2 to 10 (2 per section) Aquatics. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Swimming suits and towels are provided; however, students may provide their own one piece swimming suit (no pockets), towel and cap (optional). Long hair must be tied back. Goggles are recommended for some classes. A \$2 fee is required for all classes listed. (a) Swimming I: Orientation to Swimming. Prerequisite: course is open only to non-swimmers. Mandatory Pass/Fail grading. (b) Swimming II: 102a or equivalent skills and safe in deep water. (c) Skin Diving. Prerequisite: consent of instructor and pass swimming test prior to enrollment. (d) Scuba Diving. Fee and successful completion of National Test required for certification, special sections have extra charge for field trips. Prerequisite: consent of instructor and pass swimming test prior to enrollment. (f) Lifeguarding. Fee and successful completion of National Test required for certification. Prerequisite: 102b or equivalent skill and pass swimming test first day of class (500 yard continuous swim using front crawl, sidestroke and breaststroke, treadwater two minutes-legs only, retrieve a ten pound brick from seven foot depth).

103-2 to 12 (2 per section) Dance. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$2 is required for all classes listed. (a) Ballet, (b) Ballroom, (c) Jazz, (d) Modern, (e) Square, (f) Tap.

104-2 to 12 (2 per section) Fitness. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$2 is required for all classes listed. (a) Aerobic dance, (b) Cycling, bicycle required and helmet, (d) Strength training, (e) Walking and jogging, (f) Weight control.

105-2 to 14 (2 per section) Individual and Dual Activities. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$2 is required for all classes listed. (a) Badminton, three shuttlecocks required, (b) Bowling, additional lane fee of \$18 per credit hour and bowling shoes required, (c) Golf, six plastic golf balls required, (d) Racquetball, three racquetballs required, (e) Tennis, three tennis balls and racquet.

106-2 to 10 (2 per section) Team Activities. These courses are designed to provide an introduction to the fundamental skills and knowledge in the selected activities. Students must wear clothing appropriate for the activity. A fee of \$2 is required for all classes listed. (a) Basketball, (b) Flag football, (c) Soccer, (d) Softball, (e) Volleyball.

107-1 to 4 Restricted Physical Education. For physically challenged students as recommended by Health Service and consent of instructor. Course not designed for students who can take other physical activity courses. Mandatory Pass/Fail.

113-2 Aquatics. This course provides the opportunity for the student to improve one's ability in swimming skills and strokes. It is designed to prepare the student to be safe in, on and around the water. It prepares the student to react in emergency situations by knowing and having the ability to perform the proper rescue techniques to use while maintaining one's own safety. Prerequisite: 102a or equivalent skill.

116-3 Team Sports. This course is designed to introduce students to skills, lead up and modified games, strategies and basic rules of team sports. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level.

118-2 Rhythms and Dance. This course is designed to introduce the fundamentals of rhythm, basic dance steps and the elements of dance. Basic skills in square, folk, and social dance as well as basic rhythms and movement analysis will be covered.

120-3 Individual Sports. This course is designed to introduce students to skills, lead up games, strategies and basic rules of individual sports and activities. Emphasis will be on developing the basic skills through observation and analysis of movement patterns appropriate for various skill level.

160-2 to 8 (2,2,2,2) Dance Concert Production Ensemble. A select group which performs, choreographs, and produces one dance concert per semester and tours as feasible. Prerequisite: audition prior to first registration and consent of instructor each succeeding semester. Participation as an apprentice of Southern Illinois Repertory Dance Theatre for one semester.

170-2 Varsity Sports. The course is designed to teach skills and strategies as well as the rules and practices involved in a selected varsity sport. Prerequisite: Names must appear on an official NCAA squad list and consent of instructor. Mandatory Pass/Fail grade.

201-3 Concepts of Physical Fitness. (Advanced University Core Curriculum course) A course designed to provide kinesiology majors with the most recent scientific evidence to promote health related fitness by introducing students to different training programs, their benefits and means of evaluation. Satisfies University Core Curriculum Human Health requirement in lieu of 101 for kinesiology majors.

202-3 Physical Activities for Children and Youth. Developing activities for motor perceptual development and skill acquisition appropriate for different age levels of children and youth. Tennis shoes required. Dress must permit ease of movement. Prerequisite: at least sophomore standing.

210-3 Diversity in American Sport. Explores how historical and contemporary forces have shaped opportunities and experiences of various cultural groupings in American sport. The course focuses on diversity issues related to race, ethnicity, gender, social class, sexuality and physical ability/disability. Class utilizes a variety of interactive classroom activities to explore multicultural dynamics in sport and society.

225-3 Introduction to Athletic Training. This course is designed for students pursuing a career in athletic training. The course provides knowledge about the NATA, job opportunities, incidence of injury, basic injury prevention, recognition and treatment. It also provides the student with information concerning the recognition and treatment of illnesses and conditions common to athletes.

226-2 Clinical Applications in Athletic Training. This course is designed to familiarize the beginning athletic training student with all aspects of prophylactic taping, wrapping and use of braces for athletic training injuries. In addition, within the course students will be presented with basic skills, such as: splinting, taping, record keeping, wound care, measurement of vital signs, and illness assessment. Fee \$50. Prerequisite: 225 or concurrent enrollment in 225.

227-12 (2,2,2,2,2,2) Clinical Experience. Clinical experience designed to provide students with formal instruction and evaluation of the athletic training clinical proficiencies. This course requires the completion of a minimum of 250 clinical hours under the direct supervision of an Approved Clinical Instructor. (a) Upper Extremity, (b) Lower Extremity, (c) Equipment Intensive, (d) General Medical, (e) Practicum, (f) Culminating Experience/Exam Prep. Prerequisite: Admission to the Athletic Training Education Program and permission of the Director or Clinical Education Coordinator of the Athletic Training Education Program.

245-3 Sport and Modern Society. (Same as Sociology 233.) An examination of the social, cultural, political and economic aspects of contemporary sport. Special attention given to gender, race, and social class issues related to sport.

257-1 to 5 Current Work Experience. The student receives credit for current work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and in process. Prerequisite: at least C average in physical education after 12 hours. Mandatory Pass/Fail.

258-1 to 5 Work Experience. The student receives credit for past work experiences. Credit is awarded for many practical experiences and must be related to kinesiology and already completed. Mandatory Pass/Fail. Prerequisite: at least C average in physical education courses after 12 hours.

300-3 Musculoskeletal Anatomy. A fundamental study of the human body and its parts with special emphasis on bone, muscle and tissues.

301-3 Foundation, Organization and Administration of Physical Education. This course is designed to examine the historical and philosophical development of physical education. Students will gain a historical perspective of the physical education profession ranging from its earliest origins to its future development. The course will also examine the administrative and legal concerns relevant to the profession of physical education. Students will develop an understanding of the theories and principles involved in the administration and management of a physical education program. Specific concerns to be addressed are: (1) organizational and administrative processes, (2) program facilities and equipment, (3) personnel, (4) budget, (5) legal liabilities, and (6) public relations. The emphasis throughout the course will be a practical application of administrative concepts for the physical education teacher.

302-2 Physical Education of Normal and Pathological Conditions. Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical activities. Prerequisite: Physiology 300.

303-2 Physical Education. Force system, its relation to the mechanics of muscle action. Analysis of muscular-skeletal forces involved in physical education activities. Prerequisite: Physiology 300.

304-2 Mechanical Basis of Human Movement. Applies body mechanics with application of mechanical laws and principles to performance in physical activities. Prerequisite: 303 or consent of instructor.

305-2 Methods of Teaching Physical Education for Special Populations. An introductory course designed to provide the physical education generalist with the minimal competencies needed to teach the mildly physically challenged students in the mainstreamed or special education setting. The course will also aid the special education classroom teacher in providing appropriate physical education. Prerequisite: 317, junior standing.

306-1 Advanced Swimming, Skill and Analysis. Prerequisite: Physical Education 102b or equivalent.

307-2 Water Safety Instructor. Methods of teaching swimming and basic emergency water safety. American Red Cross Water Safety Instructor certificate may be earned. Fee and National Test are required for certification. Prerequisite: Kinesiology 102e or equivalent certification and concurrent enrollment in 306.

308-2 to 10 (2 per section) Instructor of Aquatics. (a) Handicapped. (b) Skin diving. (c) Scuba diving. (d) Canoeing. (e) Swimming. Prerequisite: consent of instructor.

310-2 Aquatics Facilities Management. Learning experiences designed to aid in the development of aquatic specialists who can efficiently work toward satisfactory solutions to the problems inherent in functional design, operation, and maintenance of aquatic facilities that are associated with schools, municipalities, and other organizations.

311-2 Lifeguarding Instructor. The skills, techniques and methods of preparing qualified individuals to prepare persons to become lifeguards at pools and open-water, non-surf beaches, American Red Cross Life-

guard Instructor Certification may be earned. Fee and National Test required for certification. Prerequisite: physical education 102f or equivalent certification. Lifeguarding experience.

312-2 Science and Pedagogy of Swimming. Designed to provide students: (1) a scientific basis for teaching swimming and (2) a necessary background as a future professional in the aquatic field. Prerequisite: 307 or equivalent. Previous teaching or coaching swimming required.

313-3 Motor Behavior. This course will introduce the student who will teach motor skills to people of any age to basic principles and concepts involved in the performance, control, and learning of motor skills. Emphasis will be on acquainting the student with age-related characteristics affecting motor performance, processes involved in the control of movement, and structuring the learning environment to maximize long-term retention of skills.

314-3 Methods of Teaching Elementary Physical Education. The purpose of this course is for physical education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education progressions. The course will consist of lectures, class participation in demonstrations of teaching movement, and peer teaching. Prerequisite: 317 and 318.

316-3 Advanced Level Sports Skills: Scuba. Prerequisite: consent of instructor.

317-2 Motor Development. The purpose of this course is to provide an introduction to the normal development of motor behavior in children and adolescents, biological and environmental variables which affect motor skill acquisition; and the assessment of motor development in children and youth, with particular emphasis on the application of the knowledge to teaching and learning situations.

318-2 Motor Learning. Study of theory and research emphasizing the psychological and neural basis of underlying the learning of motor skills; application to physical education teaching and athletic coaching environments. Prerequisite: Psychology 102.

320-3 Exercise Physiology. Immediate and long range effects of muscular activity on the systems. Integrative nature of body functions and environmental influence on human performance efficiency. Lab to be arranged. Prerequisite: 201 or consent of instructor, Physiology 201 or equivalent.

321-3 Biomechanics of Human Movement. The science of human motion is the basis of this course. The anatomical and mechanical principles of human motion will be studied as well as how these principles relate to skillful and efficient movement in humans. Prerequisite: Physiology 220.

322-1 Teaching Practicum. Laboratory experience assisting with a physical education courses or in a school setting. Mandatory Pass/Fail.

323-3 Methods of Teaching Secondary Physical Education. The purpose of this course is for physical education students to develop knowledge and skills for planning, implementing, and evaluating appropriate and effective physical education programs at the secondary school level. The course will focus on knowledge and skills related to effective instructional strategies, efficient management and organizational principles, and effective class control and motivational techniques specific to teaching physical education for secondary school students. Prerequisite: 314, 317, 318.

324-2 Essentials of Athletic Training. This course provides basic information regarding prevention, recognition, first aid, taping and wrapping of athletic injuries. The student will be required to successfully demonstrate basic strapping techniques, bandaging, splinting and CPR. The course leads to certification in first aid and CPR. Certification fees payable to the local organization will be collected in class.

325-3 Therapeutic Modalities. This course provides the athletic training student with the theoretical background of the physiological effects, indications, contraindications, and clinical applications of therapeutic modalities. This course also includes laboratory experiences in the clinical application of therapeutic modalities. Course fee: \$50. Prerequisite: Admission into Athletic Training Education Program or permission of instructor.

326-3 Emergency Care and Prevention of Athletic Injuries. The theoretical and practical methods of preventing and treating athletic injuries; techniques of taping and bandaging; emergency first aid; massage; use of physical therapy modalities. Lecture and laboratory sessions. Prerequisite: Physiology 220 or 301.

327-3 Medical Aspects of Athletic Injury. The student will acquire an advanced understanding of the proper prevention and rehabilitation of athletic injuries. The student will also understand medical and surgical procedures and their consequent factors to be considered in treatment programs. Prerequisite: 326.

328-6 (3,3) Field Experience. Designed on an individual basis for athletic training students as a field experience in a sports medicine setting under the direct supervision of a NATABOC-certified athletic trainer. Prerequisite: Admission into Athletic Training Education Training Program or permission of instructor.

329-3 Principles and Procedures for the Conduct of Interscholastic Athletics. An examination of the history, values, and trends in extracurricular sports programs. A review of regulations and standards as determined by the governing bodies for men's and women's sports and an in-depth study of coaching and administrative procedures. Prerequisite: competitive experience recommended and consent of instructor.

330-2-26 (2 per section) Techniques and Theory of Coaching. (a) Basketball. (b) Football. (c) Swimming. (d) Baseball. (e) Track and field. (f) Wrestling. (g) Tennis. (h) Gymnastics. (i) Golf. (j) Badminton. (k) Field hockey. (l) Softball. (m) Volleyball. Prerequisite: consent of instructor.

335-3 General Medical Conditions for the Athletic and Physically Active Populations. This course will provide the athletic training student with the knowledge and skill necessary to recognize, manage, and refer general medical conditions and disabilities that occur to athletes and the physically active. Prerequisite: Admission into the Athletic Training Education Program and Physiology 301 or consent of instructor.

341-6 (3,3) Assessment of Musculoskeletal Injuries. Assessment of upper/lower body injuries and related illness. (a) Upper Body (b) Lower Body. This course also includes laboratory experiences in clinical assessment of athletic related injuries and illness. Lab fee: \$50. Prerequisite: Admission into Athletic Training Education Program or permission of instructor and Physiology 301.

342-3 Pharmacology for Sport and Allied Health Professionals. This course is designed to make the allied health and exercise professional aware of the effects of prescription, non-prescription, performance enhancing and street drugs on the performance of physically active persons. Prerequisite: Physiology 201 or equivalent, Chemistry 140a or 200/201.

345-3 Psychological and Social Aspects of Sport and Physical Activity. This course exposes students to psychological and sociological concepts related to sport and physical education contexts. Primarily designed for future physical education teachers and coaches, the class examines how psychological and sociological principles relate to teaching and coaching contexts.

355-2 to 14 (2 per section) Practicum. (a) Aquatics. (b) Special populations. (c) Coaching. Mandatory Pass/Fail. (d) Athletic training. (e) Dance. (f) Practicum/Exercise Science. Fee: \$20. (g) Teaching of sport. Prerequisite: restricted to written consent of instructor.

370-2 Measurement and Evaluation in Physical Education. The theory of measurement in physical education, the selection and administration of appropriate tests of motor skills and the interpretation of results. Prerequisite: Education 317 or concurrent enrollment.

380-2 Aerobics. A study of theoretical and practical framework within which the concepts of aerobic fitness exist. Both an evaluation and a hands-on experience with the direct and indirect procedures commonly used to determine oxygen uptake capacity and aerobic power. A thorough discussion of the meaning of aerobic fitness as it applies to general fitness of the adult and aging person. Prerequisite: 320, junior standing, and approval of the instructor in the semester prior to enrollment.

381-2 Exercise and Nutrition. This course develops the interrelationship of exercise and nutrition. The course begins with an overview of food nutrients and bioenergetics. It then examines optimal nutrition for physical activity, nutritional ergogenic aids, and weight control and disordered eating. Prerequisite: 320, junior standing, and approval of instructor in the semester prior to enrollment.

382-3 Graded Cardiovascular Testing and Exercise Prescription. A study of the controlled use of exercise to evaluate the cardiovascular function of an adult population and in specific persons of middle and older aged groups. The scientific basis of recommending exercise programs as a preventive rather than a treatment of heart disease will be stressed. Prerequisite: 320, junior standing, and approval of the instructor in the semester prior to enrollment.

400-3 Psychology of Injury. This course will explore the theory and research related to the psychological aspects of injury and injury rehabilitation. The focus is on theory and application. Case studies will be used to explore assessment and intervention approaches relevant for different levels of athletic training, sports medicine and sport psychology professionals.

407-3 Rehabilitation of Athletic Injuries. This course provides the athletic training student with the theoretical background and practical application of principles and techniques of rehabilitation of athletic related injuries. This course also includes laboratory experiences in rehabilitation of athletic injuries. Laboratory fee: \$50. Not for graduate credit. Prerequisite: admission into Athletic Training Education Program or permission of instructor.

408-3 Advanced Exercise Prescription. Advanced exercise prescription provides an analysis of physical fitness as it relates to the total well-being of the individual. The course contains specific units on fitness parameters, hypokinetic disease, stress, current levels of physical fitness, but emphasizes the creation of training programs. The course contains exercise prescription for healthy, at risk, overweight and chronically ill populations. Prerequisite: 382 or consent of instructor.

409-3 Social Aspects of Sport and Physical Activity. This course presents the theoretical and empirical foundations of sport sociology. A research-based approach is used to explore the relationship of sport to various social institutions, as well as the role of social processes (e.g., socialization, discrimination, stratification, conflict) in sport and physical activity contexts.

410-3 Psychological Aspects of Sport and Physical Activity. This course presents the theoretical and empirical foundations of sport psychology. Operating from a conceptual rather than an applied framework, this class develops an understanding of social psychological phenomenon and processes related to participation in sport and physical activity (e.g., personality, anxiety, arousal, achievement motivation, social facilitation, aggression, pro-social behavior, group dynamics).

412-3 Research and Practice in Applied Sport Psychology. This course examines current research and practice in applied sport psychology. Emphasis will be placed on moving from theory into practice on sport-specific individual differences, motivational approaches, and interventions.

415-3 Foundations of Sport and Fitness Management. An introduction to broad concepts and issues regarding the management of health clubs, corporate fitness programs; and various components of amateur and professional sport organizations. Students investigate foundational aspects of sport and fitness management, examine requirements for operating successful programs and gain insight into various career opportunities.

416-2 Introduction to Team Building. The purpose of this course is to acquaint students, teachers, coaches and administrators with the "team building model". The course will focus on icebreakers, trust and communication initiatives, problem solving skills and processing. The goal of this introductory course is for the participants to become familiar and acquire team building skills, to develop a workable team building model and initiate the plan in the classroom or workplace.

418-2 Administration of Aquatics. The study of comprehensive aquatic programs, their implementation and coordination.

420-3 Physiological Effects of Motor Activity. The general physiological effects of motor activity upon the structure and function of body organs; specific effect of exercise on the muscular system. Prerequisite: Physiology 201 or equivalent.

421-3 Principles of Skeletal Muscle Action. The neural, physiological and mechanical basis of skeletal muscle action and plasticity in relation to the expression of strength and power. Prerequisite: Physiology 209 or equivalent.

426-3 Research in Athletic Training. Specifically designed for the student who wishes to become an athletic trainer and gain knowledge in the application and current research in therapeutic modalities.

427-3 Organization and Administration in Athletic Training. This course is designed to study and discuss the concepts of organization and administration in the health care of athletes and physically active individuals. Not for graduate credit. Prerequisite: Admission into the Athletic Training Education Program or consent of instructor.

428-3 Physical Activity and Exercise for Older Adults. This course is designed to introduce the student to physical changes of the older person with reference to activity, exercise and teach the student about rational activity and exercise programs for the older person with consideration of the care and prevention of typical injuries that may occur with such programs.

493-2 to 4 Individual Research. The selection, investigation, and writing of a research topic under supervision of an instructor. (a) Dance. (b) Physical Education. (c) Measurement. (d) Motor development. (e) Physiology of exercise. (f) History and philosophy. (g) Motor learning. (h) Psycho-social aspects. (i) Sport management. Written report required. Prerequisite: consent of adviser and department chair.

494-2 (1,1) Practicum in Kinesiology. Supervised practical experience at the appropriate level in selected kinesiology activities in conjunction with class work. Work may be in the complete administration of a tournament, field testing, individual or group work with special populations, administration of athletics or planning physical education facilities. Prerequisite: consent of adviser.

Kinesiology Faculty

Ackerman, Kenneth, Assistant Professor, *Emeritus*, M.A., Michigan State University, 1959.

Becque, M. Daniel, Associate Professor, Ph.D., University of Michigan, 1988.

Bian, Wei, Assistant Professor, Ph.D., University of Georgia, 2003.

Blackman, Claudia J., Assistant Professor, *Emerita*, M.S.Ed., Southern Illinois University, 1968.

Blinde, Elaine M., Professor and *Interim Chair*, Ph.D., University of Illinois, 1987.

Brechtelsbauer, Kay M., Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1980.

Carroll, Peter, Assistant Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1970.

Dirks, W. Edward, Instructor, *Emeritus*, M.S., Southern Illinois University, 1964; Certificate, Physical Therapy, Ohio State University, 1965.

Good, Larry, Associate Professor, *Emeritus*, Ph.D., Temple University, 1968.

Hartzog, Lewis, Instructor, *Emeritus*, M.E., Colorado State University, 1954.

Hernandez, Julianne, Assistant Professor, Ph.D., Iowa State University, 2004.

Illner, Julee Ann, Assistant Professor, *Emerita*, M.S.Ed., Southern Illinois University, 1968.

Knowlton, Ronald, Professor, *Emeritus*, Ph.D., University of Illinois, 1961.

Long, Linn, Assistant Professor, M.S., *Emeritus*, University of Colorado, 1967.

Okita, Ted, Professor, *Emeritus*, M.A., Northwestern University, 1964.

Olson, Michael, Assistant Professor, Ph.D., Louisiana State University, 2006.

Park, Meungguk, Assistant Professor, Ph.D., The Ohio State University, 2005.

Partridge, Julie, Assistant Professor, Ph.D., Olson Park University of Northern Colorado-Greeley, 2003.

Thorpe, Jo Anne Lee, Professor, *Emerita*, Ph.D., Texas Woman's University, 1964.

West, Charlotte, Professor, *Emerita*, Ph.D., University of Wisconsin, 1969.

Wilson, Donna, Associate Professor, M.F.A., University of Oklahoma, 1975.

Yoh, Taeho, Assistant Professor, Ph.D., Florida State University, 2001.

Zimmerman, Helen, Professor, *Emerita*, Ph.D., University of Wisconsin, 1951.

Landscape Horticulture

(SEE PLANT AND SOIL SCIENCE)

Liberal Arts (College, Courses)

Courses (LAC)

100-1 Strategies for Academic Success. Intended for liberal arts students on academic probation, this course is designed to assist students in their re-entry to college. Topics will cover academic, personal and career issues as well as various resources available for students on campus. Course is limited to College of Liberal Arts students and consent of instructor.

250-3 Fine and Performing Arts in University Life. This course links participation in university and community fine and performing arts activities to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

260-3 Humanities in University Life. This course links participation in university and community humanities lectures and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

270-3 Diversity in University Life. This course links participation in university and community multicultural events, lectures, and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

280-3 Social Sciences in University Life. This course links participation in university and community social science lectures and presentations to learning in the liberal arts. Students are required to attend six events and write six papers. Mandatory Pass/Fail.

288-1 Study Abroad Orientation. A pre-departure orientation course designed to prepare study abroad/exchange students for maximum learning during their overseas experience. Topics will include logistics, intercultural communication skills, health and safety issues, educational systems abroad and re-entry. Enrollment is restricted to consent of Study Abroad Programs.

3001-3 Social Perspectives on Environmental Issues. (University Core Curriculum) Case studies (e.g., rural village in developing nation; small town in the United States; city in developing nation) are used to learn how different societies and groups deal with their specific environmental issues, and how culture and economic factors affect their perspectives and actions.

301-2 Professional Development. This course is designed to prepare liberal arts students for the transition from the academic community into the workforce. Students will develop a personal career development strategy, learn how to conduct a job search in their chosen career field, and acquire professional development skills needed to succeed in various work environments.

303-1 to 9 (1 to 3 per semester) Interdisciplinary Studies. Offered in a variety of forms, including lectures, readings, research, or field study. Initiated by at least two faculty members from different departments. Approval by the dean is required during the semester prior to its offering. May be repeated to equal a total of nine credits.

388-1 to 36 Study Abroad. Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made on the student's completion of the work. One to eighteen hours may be earned per semester, one to nine hours may be earned for summer session. Prerequisite: one year of residence at Southern Illinois University Carbondale, good academic standing, and prior approval of the major department and the College of Liberal Arts.

Linguistics (Department, Major, Courses, Faculty)

Language is both a means of social communication and a unique property of the human mind. As such, linguistics - the scientific study of language - has a broad appeal to students who are interested in the social sciences, the humanities, computer science, or the life sciences. The undergraduate program in linguistics helps students understand the diversity of human modes of communication, the social and psychological origins of language, and the processes by which languages are learned and lost. A major in linguistics thus provides students with a focused but broad-based education in the liberal arts. In addition, the way linguists think about their subject has greatly influenced the development of other disciplines such as anthropology, computer science, language teaching, philosophy, psychology, and sociology. A degree in linguistics will thus be of great value to students intending to pursue careers in those fields.

Graduates of the linguistics program who enter the work force immediately after graduating find employment in a wide variety of settings: as teachers, writers, translators, editors, civil servants, community developers, etc. Graduates who go on to advanced study find themselves well prepared for professional careers in fields such as linguistics, language teaching, educational administration, language planning, language research, speech pathology, lexicography, publishing, and foreign service.

The major in linguistics consists of a minimum of 32 semester hours comprising a core of basic courses in general linguistics plus a variety of electives. The core of the linguistics major consists of 20 semester hours in Linguistics 104, 200, 300, 402, 405, 406, and 408. Majors are required to obtain a grade of C or better in each of these core courses. In addition, 9 semester hours of electives must be selected from other linguistics courses offered at the 300- or 400-level.

Since the study of linguistics involves familiarity with languages other than one's native language, knowledge of a foreign language is a requirement for a degree in linguistics. This requirement, which also satisfies the foreign language requirement of the College of Liberal Arts, involves either one-year of an un-

common or non-Western language or two years of any foreign language. International students whose native language is not English and who have successfully satisfied the requirement of the Office of Admissions and Records for English language proficiency will also have satisfied the Linguistics Department foreign language requirement by offering English as their foreign language.

Bachelor of Arts Degree in Linguistics, College of Liberal Arts

University Core Curriculum Requirements	41
College of Liberal Arts Academic Requirements (See Chapter 4)	14
Requirements for Major in Linguistics	32
Core courses: Linguistics 104, 200, 300, 402, 405, 406, and 408 each with a grade of C or better	20
Electives: 12 credits hours, 9 of which must be at the 400 level. 3 of the 12 hours may be taken outside the linguistics department with the permission of the department's undergraduate advisor	12
Foreign Language Requirements (satisfies the College foreign language re- quirement)	10-16
Electives	10-29
Total	120

Linguistics Suggested Curricular Guide

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
ENGL 101 or LING 101	3	-		Multicultural ¹ , Human Health	3	2	
ENGL 102 or LING 102	-	3		Interdisciplinary	3	3	
Core Science.....	3	3		Foreign Language ²	4	4	
Core Humanities	3	3		Composition Course ²	-	3	
Core Social Science.....	3	3		LING 104, 200, Ling 300.....	5	3	
Core Math, Core Fine Arts	3	3					
Total	15	15		Total	15	15	
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
LING 402, Ling 405, 408	3	6		LING 406 ³	3	-	
Linguistic Elective.....	3	3		Linguistic Elective	12	3	
SPCM 101	3	-		Free Elective	-	11	
CS 102	3	-					
Foreign Language	4	4					
Total	16	13		Total	15	15	

¹ Linguistics 201, Language Diversity in the USA recommended
² Meets CoLA Academic requirements
³ Meets CoLA Writing-Across-the-Curriculum Requirement

Minor

The minor in linguistics (a minimum of 17 hours) draws upon the core courses of the Department of Linguistics. Students are introduced to the structure of language, the historical development of languages, and the relation of language to the rest of culture. A minor in linguistics is of special interest to students in anthropology, computer science, English, foreign languages and literatures, mathematics, philosophy, psychology, sociology, speech communication, and communication disorders and sciences.

Course requirements for the minor in linguistics are 104, 200, and 300, plus at least three courses (9 semester hours) from among the following: 402, 404, 405, 406, 408, 415, 440, 450, 453, and 497.

Courses (LING)

- 100-3 Speaking and Listening in English as a Second Language. Oral conversational and academic English. An elective for students who do not speak English as their first language. Classes are offered at beginning, intermediate and advanced levels. May be repeated at three different levels for a maximum of 9 credit hours. Mandatory Pass/Fail.
- 101-3 English Composition I for ESL Students. (University Core Curriculum) [IAI Course: C1 900] The first course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in academic writing in English. To this end, Linguistics 101 teaches students processes and strategies for planning, drafting, revising and edit-

ing their English writing for academic audiences. Course assignments focus on writing from primary and secondary sources. ESL equivalent to University Core Curriculum English 101.

102-3 English Composition II for ESL Students. (University Core Curriculum) [IAI Course: C1 901] The second course in the university's two-course required composition sequence designed for ESL students. This course helps ESL writers become more comfortable with and proficient in research writing for academic audiences. Linguistics 102 focuses on writing from secondary sources, teaching students processes and strategies for planning, drafting, revising and editing papers that incorporate published material. All aspects of the research process are addressed, from locating and evaluating relevant sources to incorporating and documenting these sources in papers written for various purposes. For credit in the University Core Curriculum, students must earn a "C" or better in 102. Prerequisite: 101 or English 101 with a grade of C or better, or equivalent. Equivalent to University Core Curriculum English 102.

104-2 Grammar in Language. Description and explanation of the major grammatical categories and structures found in a wide variety of languages, including English. Consideration of the role of language structures in such topics as the nature, origin, acquisition, and variation of language. Course is designed to give students insight into the basic concepts of grammar and show their interrelationship, importance, and functioning in human language.

200-3 Language, Society and the Mind. (University Core Curriculum) What distinguishes humans from other animals? This course addresses how language is a uniquely human phenomenon by exploring issues in language and society and psychological aspects of language use. Topics include language in conversation, differences between speakers of different ages/genders/regions/social groups, first and second language acquisition, bilingualism, language meaning and change, and the relationship between language and culture.

201-3 Language Diversity in the USA. (University Core Curriculum) An examination of different varieties of English and the growing presence of other languages in the United States. Local, regional and national perspectives are used to review current patterns of language diversity and to explore the impact of language issues on policies and practices in education, the legal system and the work place.

290-3 Advanced English Composition for ESL Students. This course helps ESL writers refine their writing in English, with a focus on broadening their understanding of the rhetorical expectations of the types of writing done in their professional disciplines, both in academia and in industry. Assignments focus on the exploration of research methods and writing tasks involved in various fields and in the job application process. Prerequisite: 101 and 102 or English 101 and 102 with a grade of C or better, or equivalent.

298-1 Multicultural Applied Experience. (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail.

300-3 Introduction to Descriptive Linguistics. An introductory survey of descriptive linguistics: assumptions, methods, goals, terminology, and data manipulation. Prerequisite: 200 or consent of instructor.

320I-3 Language, Gender and Power. (University Core Curriculum)(Same as Women's Studies 320i) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the field of linguistics, anthropology, psychology, sociology and speech communication will be used.

330-3 Language and Behavior. A wide-ranging examination of the implications of language study for people's view of themselves and their place in the world. Topics deal with the pervasiveness of verbal and non-verbal language in various aspects of modern society.

331-3 Pedagogical Grammar. Explores relationship among language structure, learning and teaching in order to understand the role of grammar in TESOL. Makes students more aware of how the English language works, the kinds of language that ESL learners (K-adult) produce and why they proceed through certain stages, and understand the role and effects of grammatical consciousness-raising on the development of English as a second language. Prerequisite: 300 or equivalent and 353.

340-3 Second Language Acquisition. Introduction to key concepts and major theoretical and methodological issues in SLA research. Examines major developments in SAL in phonology, morphology, lexis, syntax, semantics and discourse and provides students with hands-on experience in describing and accounting for L2 data. An opportunity to design and implement a data-based study in an area of interest to students. Prerequisite: 300 or equivalent or consent of instructor.

341-3 Introduction to Intercultural Communication. (See Speech Communication 341.)

353-3 Methods and Materials in TESOL. Req. for IL ESL/Bilingual Approval. Methods/materials to teach ESL/EFL in the United States (K-adult) and abroad. Promotes eclecticism through reflective practice; overview of methods from early grammar translation to cognitive and communicative, integrated skills, technology and content-based approaches. Lecture, readings, discussion, demonstration, material review, lesson planning, micro-teaching. Prerequisite: 200 or consent of instructor.

382-3 Course Design for TESOL. Overview of issues and procedures in the design and implementation of courses for TESOL. Particular attention is given to recent developments such as content-based instruction. All major course components such as setting of objectives, syllabus design, content specification and evaluation are considered. In addition, resources available for addressing these issues will be discussed. Prerequisite: 300 or equivalent and 353, or consent of instructor.

402-3 Phonetics. Theory and practice of articulatory phonetics.

403-3 English Phonology. Study of English phonology, including phonetics, phonemics and prosodics. Prerequisite: 300 or equivalent, consent of department.

- 404-3 American Dialects.** Regional variation and social stratification of American English. Phonological and syntactic differences among the major dialects of American English. Prerequisite: one previous course in linguistics.
- 405-3 Phonological Theories.** A survey of various phonological theories from the 19th century up to the present, including theoretical issues arising there from and relationships among the theories. Limited data analysis within the perspectives of the different theories. Prerequisite: 300 or equivalent; 402 recommended.
- 406-3 Introduction to Historical Linguistics.** (Same as Anthropology 406) An introductory survey of historical and comparative linguistics, including terminology, assumptions and methods of investigation. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Not open to graduate students in Linguistics. Prerequisite: 300 or equivalent, 405, 408 recommended.
- 408-3 Syntactic Theory.** This course is an introduction to the major concepts and issues in generative grammar. Data from English and other languages will be examined and students will be provided with numerous opportunities to solve problems in syntax. Students will also be given an opportunity to carry out an individual project in syntax. Prerequisite: 300 or equivalent.
- 409-3 Linguistic Structure of Modern German.** (Same as German 411.) The descriptive study of phonology, grammatical structure, and vocabulary of modern German with consideration of its structural differences from English and application to teaching. Appropriate for students with at least two years of German. Conducted in English.
- 411-3 The Linguistic Structure of Chinese.** (Same as Chinese 410.) Phonology and syntax of Mandarin Chinese. Principal phonological features of major Chinese dialects. Special emphasis on the contrastive analysis between Mandarin Chinese and English. Theoretical implications of Chinese syntax for current linguistic theories. Prerequisite: one year of Chinese.
- 412-3 The Linguistic Structure of Japanese.** (Same as Japanese 410) Inductive approach to the analysis of various aspects (such as phonology, morphology, syntax) of Japanese grammar with emphasis on syntactic structures within any of the current theoretical frameworks such as pragmatics, functionalism and formal linguistics. May include contrastive analysis between Japanese and English, and close examination of theories of comparative-historical linguistics of Japanese and Korean. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: one year of Japanese or one previous course in linguistics or consent of instructor.
- 413-3 Linguistic Structure of French.** (Same as French 411.) Study of the phonology, morphology, and syntax of modern spoken and written French, stressing interference areas for English speakers in learning French. Prerequisite: French 320b and permission of instructor.
- 414-3 Linguistic Structure of Spanish.** (Same as Spanish 411.) Theory and practice in Spanish pronunciation and study of Spanish grammatical structure, in contrast to English, with application to teaching.
- 415-3 Sociolinguistics.** (Same as Anthropology 415) History, methodology, and future prospects in the study of social dialectology, linguistic geography, multilingualism, languages in contact, pidgin and creole languages, and language planning. Prerequisite: one previous course in linguistics or consent of instructor.
- 430-3 to 6 (3,3) Grammatical Structures.** Detailed analysis of the structure of particular languages. May be repeated to a total of six hours credit with consent of department. Prerequisite: one previous course in linguistics or consent of instructor.
- 440-1 to 6 (1 to 3 per topic) Topics in Linguistics.** Selected topics in theoretical and applied linguistics. May be repeated to a total of six hours credit with consent of department. Prerequisite: one previous course in linguistics or consent of instructor.
- 442-3 Language Planning.** Survey of the field of language planning: definitions and typologies, language problems, language treatment, attitudes and beliefs about language, relations between language planning processes and other kinds of social and economic planning, linguistic innovations and other processes of language change, implementation of language policies. Prerequisite: 300 or equivalent.
- 443-3 Bilingualism.** Examines the linguistic, psycholinguistic, sociolinguistic and educational aspects of bilingualism, particularly as pertaining to the care and education of bilingual children. Useful for teachers, speech therapists, doctors, psychologists, counselors, and other working with bilinguals. Practical applications and data-based research. Not for graduate credit. Prerequisite: 300 or consent of instructor.
- 445-3 Psycholinguistics.** (Same as Psychology 445.) A broad spectrum introduction to psycholinguistics. Topics to be covered include general methodology for the study of psycholinguistics, the nature of language, theories of human communication, language comprehension and production, first and second language acquisition, meaning and thought, natural animal communication systems and language and the brain. Prerequisite: 300, 402, 408.
- 450-3 to 6 (3,3) Language Families.** A synchronic survey of particular language families or sub-families. May be repeated to a total of six hours credit with consent of department. Prerequisite: one previous course in linguistics or consent of instructor.
- 454-3 Observation and Practice in Teaching English to Speakers of Other Languages.** Focused observations of a wide variety of classes in English as a second language and in foreign languages. Some supervised teaching or tutoring. Analysis of textbooks for TESOL. Not for graduate credit. Prerequisite: 453 or consent of instructor, and undergraduate status.
- 456-3 Contrastive and Error Analysis.** Examination of the interference of other languages into the English of ESL learners on the levels of phonetics, phonology, morphology, syntax, lexicon, semantics, and orthography. Study of written and spoken errors, diagnosis of errors, and development of techniques for correction. Not for graduate credit. Prerequisite: 340 or consent of instructor.
- 470-3 Foundations of Bilingual Education.** Required for State of Illinois Bilingual Education Approval. Provides a broad overview of the field of bilingual education, including related terminology; historical, politi-

cal, social, theoretical, international, economic, cultural, and legal aspects of bilingual education; and educational program models for serving LEP students.

471-3 Bilingual Education Methods and Materials. Required for Illinois Bilingual Approval. Emphasis on US/K-12 schools; methods and materials for: bilingual content, biliteracy, sheltered and multicultural instruction and for ELLS with disabilities; techniques for advocacy for ELLs, writing funding proposals, and conducting program reviews and workshops. Include materials reviews, lesson planning and micro-teaching. Prerequisite: 470 and student must be bilingual.

472-3 Assessment of Language Minority Students. Required for IL ESL/Bilingual Approval. Assessment concepts and terminology; how to select, administer, and interpret standardized tests for English learners in the U.S. (K-adult) and abroad; develop traditional and alternative classroom tests of language and content instruction. Course includes lectures, readings, class discussions, and individual and group projects.

480-3 to 12 Less Commonly Taught Languages. Elementary course in less commonly taught language. Languages vary. Section (a) corresponds to first semester, section (b) of the same language is a continuation of section (a). Must be taken in (a), (b) sequence when available. Sequence may be repeated with a different language. Prerequisite: 480b, 480a must be completed with a grade of C or better.

497-1 to 8 Readings in Linguistics. Directed readings in selected topics. Prerequisite: consent of instructor and undergraduate status.

Linguistics Faculty

Angelis, Paul J., Associate Professor, *Emeritus*, Ph.D., Georgetown University, 1968.

Baertsch, Karen S., Lecturer, Ph.D., Indiana University, 2002.

Brutten, Sheila R., Associate Professor, *Emerita*, M.A., Southern Illinois University Carbondale, 1965.

Charkova, Krassimiri, Lecturer, Ph.D., Southern Illinois University Carbondale, 2001.

Dotson, John E., Professor and Chair, Ph.D., Johns Hopkins University, 1969.

Friedenberg, Joan, Professor, Ph.D., University of Illinois, 1979.

Fuller, Janet M. Associate Professor, Ph.D., University of South Carolina, 1997.

Gilbert, Glenn G., Professor, *Emeritus*, Ph.D., Harvard University, 1963.

Halliday, Laura J., Lecturer, Ph.D., Southern Illinois University Carbondale, 2005.

Hofling, C. Andrew, Professor, Ph.D., Washington University, 1982.

Kim, Alan Hyun-Oak, Associate Professor, Ph.D., University of Southern California, 1985.

Lakshmanan, Usha, Professor, Ph.D., University of Michigan, 1989.

Montavon, Mary V., Lecturer, Ph.D., University of Illinois, 2003.

Parish, Charles, Professor, *Emeritus*, Ph.D., University of New Mexico, 1959.

Perkins, Allen Kyle, Professor, *Emeritus*, Ph.D., University of Michigan at Ann Arbor, 1976.

Redden, James E., Professor, *Emeritus*, Ph.D., Indiana University, 1965.

Management (Department, Major, Minor, Courses, Faculty)

Management is the art of decision-making, supervision and strategic planning for effective use of physical and human resources to achieve high performance. The curriculum provides a broad exposure to the key functions of management. It helps develop technical, technological and human resource management skills needed in modern enterprises. The management curriculum develops valuable methods, tools, techniques and skills while emphasizing creative thinking and problem solving. Students can satisfy the general requirements of a management major and direct their programs of study toward several career tracks. These specializations include general management.

General Management. Managers make and implement decisions through and with people working together toward common goals. The Curriculum focuses on the organizational and environmental factors that influence individuals and groups, particularly in work settings. This includes developing leadership, organizational and behavioral skills that support high performance organizations.

Entrepreneurship. Entrepreneurship is the initiation and management of a new venture or revitalizing an existing firm. This specialization explores the special problems associated with starting a new venture and operating an independent, and often small, business venture.

Management Information Systems. The MIS specialization trains students to analyze, design and implement information systems. This specialization prepares students to solve business problems through designing and managing information

systems by capitalizing on advances in information technology In the new era of electronic commerce, there is a growing demand for professionals who understand both information technologies and business processes.

Operations Management. In today’s global competitive environment, organizations must efficiently manage the operations aspect of business. Customers require high quality products and services at competitive prices. Operations management facilitates efficient transformation of various inputs into goods and services while maintaining high quality. This specialization also prepares students for the CPIM certification examination of APICS, the educational society for resource management.

Students in the four specializations in management prepare for career opportunities in both profit and non-profit, service and manufacturing organizations. The flexibility provided by our four specializations creates a wide variety of employment opportunities. Additionally, students may seek careers as consultants with any of the various consulting firms.

A specialization in General Management provides students with an excellent background for entry-level positions as management trainees, supervisors, personnel specialists, or human resource coordinators.

A specialization in Entrepreneurship provides training in the basics of small business management, marketing and financial planning and budgeting. These skills are necessary for starting and running small businesses, franchise operations and family concerns.

A Management Information Systems specialization prepares students for positions such as business analysts, database administrators, business application developers, information technology managers and knowledge engineers.

A specialization in Operations Management prepares students for entry-level positions as operations supervisors, operations schedulers, or assistant plant managers.

Students majoring in other areas such as accounting, finance, or marketing can obtain a double major in management that will facilitate upward mobility in their careers.

Technology Fee

The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.

Bachelor of Science Degree in Management, College of Business and Administration

<i>University Core Curriculum Requirements</i>	41
<i>Professional Business Core</i> (See Chapter 4)	45
<i>Requirements for Major in Management</i>	21

Specializations (Choose one)

Management.

Required: Management 341, 352, 385, 431.

Electives: Select three from Management 350, 474, 483, 485.

Entrepreneurship.

Required: Management 350, 471, Finance 350, Marketing 350.

Electives: Select three from Management 341, 385, 474, 485 or 495.

Management Information Systems.

Required: Management 341, 352 or 362, 360, 421, 456.

Computer Science 201 or 202 in place of Computer Science 200b/Information Management Systems and Applied Technologies 229 in Professional Business Core.

Electives: Select two from Management 362, 411, 422.

Operations Management.

Required: Management 341, 352, 483, Industrial Technology 475

Electives: Select three from Management 360, 385, 456, 495, Industrial Technology 445

<i>Approved Electives</i> (at least three credits non-business)	13
<i>Total</i>	120

Management Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BUS 123, UCC Fine Arts	1	3	ACCT 220, 230	3	3
ENGL 101, 102	3	3	ECON 241, 240	3	3
UCC Science	3	3	ACCT/MGMT 208	3	-
UCC Humanities, PSYC 102			CS 200b or ISAT 229 ⁴	-	3
or SOC 108	3	3	UCC Humanities	3	-
UCC Human Health	2	-	SPCM 101, ENGL 291	3	3
MATH 140, 139	4	3	UCC Integrative Studies	-	3
<i>Total</i>	16	15	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MGMT 304, 318, 345	6	3	FIN 270 ²	3	-
FIN 330, BUS 302	3	1	MGMT 481	-	3
MKTG 304, Specialization ³	3	9	Specialization ³	6	6
UCC Integrative Studies	3	-	Approved Elective ¹	6	5
Approved Elective ¹	-	2	<i>Total</i>	15	14
<i>Total</i>	15	15			

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

³Major option, Major specialization or Secondary concentration.

⁴Management Information Systems Specialization: Substitute Computer Science 201 or 202.

Minor

A minor in Management consists of a minimum of 15 semester hours, including Management 304, 318, 345 and six credit hours in Management at the 300 level or above. All prerequisites for these classes must also be satisfied. An advisor within the College of Business and Administration must be consulted before selecting this field as a minor.

Courses (MGMT)

170-3 Introduction to Business. Survey of business. General knowledge of the modern business world, the composition and functions of the business organization, as well as business as a social institution. Open only to freshmen and sophomores. Does not satisfy a College of Business and Administration requirement.

202-3 Business Communications. Creating and managing written and oral administrative communications including the analysis, planning and practice of composing different types of internal and external communications in various administrative and business contexts. To successfully complete this course, a communication competency examination (additional fee required) must be passed with at least 70% accuracy prior to University course drop date. Prerequisite: English 101 and 102 or equivalent.

208-3 Business Data Analysis. Uses of business data in policy formulation are discussed. Emphasis is placed on the conversion of raw information into statistics which are useful to the decision maker. Problems stress solution to questions typically raised in businesses. Prerequisite: Mathematics 139 or equivalent.

304-3 Introduction to Management. Basic concepts of the administrative process are considered with emphasis on executive action to develop policy, direction, and control based on traditional and behavioral science approaches to decision making. Prerequisite: junior standing; Business 302 for College of Business and Administration students; may be taken concurrently.

318-3 Production-Operations Management. An introduction to the design, planning, and control of manufacturing and service operations. Typical coverage includes Material Requirements Planning, Total Quality Management, Just-in-Time, and operations strategy, as well as traditional techniques for facility layout, scheduling and inventory control. Prerequisite: Accounting/Management 208 and junior standing.

341-3 Organizational Behavior. The study of human problems in administration including the analyses of individual, group, and inter-group relations under a broad range of organizational settings. Theory and case analyses. Prerequisite: 208, 304, and junior standing or consent of department.

345-3 Computer Information Systems. Integrates topics of management and organization, information, computers, and the systems approach. Emphasizes planning, design, and implementation of information systems to aid management decision making. Application of computer techniques to develop, manipulate, and analyze system models. Prerequisite: Computer Science 200b or Information Systems and Applied

Technologies 229 (Computer Science 201 or 202 for MIS specialization), junior standing, and must be a College of Business major or Management minor.

345B-3 Introduction to Information Systems. Principles and concepts of computers and information systems. Topics include: hardware, software, telecommunications, database, Internet and e-commerce, spreadsheets, database management systems, website design, systems solutions and development. Prerequisite: Computer Science 200a or 200b.

350-3 Small Business Management. Identification of small business, its importance and relationship to the United States economy, and the opportunities and requirements unique to operation and management. Personal characteristics, interpersonal relationships, organizational systems, and decision-making processes are examined for their contribution to the success or failure of the firm. Prerequisite: junior standing or consent.

352-3 Management Science. An introduction to mathematical model building in organizations and the solution techniques commonly used to solve such models. Topical coverage includes decision theory, mathematical programming, project management, queuing models, and simulation. Prerequisite: 208, 318, Mathematics 140 or equivalent, Computer Science 200b or Information Systems and Applied Technologies 229 or equivalent, junior standing or consent of department.

360-3 Database Management. This course provides an introduction to database design and management in business. It covers database management, data modeling techniques, Relational Database Theory, Structured Query Language (SQL), database applications development and a DBMS tool such as MS Access, Oracle, MS SQL Server, IBM DB/2, or INFORMIX. Prerequisite: 345 with a grade of C or better.

360B-3 Introduction to Database Management. An introduction to database design and database management. The course will cover the issues of relational database theory, database modeling, database design, forms design, reports design and database management. Lab assignments will be required. Prerequisite: 345b.

362-3 to 9 Business Applications Programming. An introduction to the principles of computer programming and business applications prototyping using a rapid application development tool such as (a) Visual Basic, (b) Delphi (c) Java, (d) Visual C++, or (e) other. It includes basic programming constructs, language elements, graphical, user interface design and database transaction programming. Prerequisite: 345 with a grade of C or better.

380B-3 Web-based Business Technologies. The course provides a general introduction to the concept of Internet and web. Details include network protocols, network security issues, HTML, JavaScript, Dynamic HTML, and XML. Prerequisite: Management 345b and Computer Science 200b.

385-3 Personnel and Human Resources Management. (Same as Psychology 322) An introduction to the development, application, and evaluation of policies, procedures, and programs for the recruitment, selection, development and utilization of human resources in an organization. Prerequisite: 208, 304 and junior standing or consent of department.

411-3 Enterprise Networks and Communications. (Same as Accounting 411). This course focuses on the application of data communications and network technologies for improving business. Coverage includes, but is not restricted to, an introduction to the principles of data transmission technology, various communication architectures and protocols, basic network design principles, Internet and Intranet technologies, data security issues and elements of network management. Not for graduate credit. Prerequisite: 345 with a grade of C or better.

411B-3 Introduction to Data Communications and Networking. This course focuses on the application of data communications and network technologies for improving organizational functioning. Coverage includes an introduction to the principles of data transmission technology, various communication architectures and protocols, basic network design principles, internet and intranet technologies, data security issues and elements of network management. Prerequisite: 345b.

421-3 Information System Analysis and Design. This course provides an introduction to the techniques of business modeling such as Entity-Relationship diagrams and data flow diagrams. It emphasizes the application of software engineering tools such as Oracle Designer 2000 to support modeling, code generation and reverse engineering. Not for graduate credit. Prerequisite: 360 with a grade of C or better.

421B-3 Introduction to Systems Analysis and Design. Principles of systems analysis and design. Topics include information systems (IS) development methodologies. IS project planning, process, data and user interface design, use of CASE tools, systems implementation and maintenance issues. Prerequisite: Management 345b and 360b.

422-3 Business Systems Development. An introduction to the concepts of inter-networking, electronic business transactions, HTML or XML for web interfaces design, client-side scripting, server-side scripting, distributed components for programming business logics and web data base transaction using Structured Query Language. Not for graduate credit. Prerequisite: 360 with a grade of C or better.

422B-3 Web-based Systems Development. This course covers web-based database systems design and development. The details include distributed computing models, a survey of web technologies, VBScript and JavaScript for dynamic web contents and client-side validation, ActiveX Components, Java Applets, Structured Query Language (SQL), and Active Server Pages programming. Prerequisite: 345b and 380b.

431-3 Organizational Design and Structures. The study of modern theories of complex organizations. Particular emphasis is placed on open-systems perspectives of administrative theory and the adaptation of the organization to a changing environment. Prerequisite: 341, junior standing or consent of department.

456-3 Enterprise Resource Planning and Decision Support. Investigation of selected systems and computer based methods for aiding decision-making. Topics include systems analysis applications, simulation, and decision models. Not for graduate credit. Prerequisite: 360 with a grade of C or better.

471-3 Seminar in Entrepreneurship. Investigation of selected special or advanced topics in seminar format. Topics may include but are not limited to entrepreneurship, small business analysis, or topics related to the ownership and management of a business. Activities will include library and field research, data analysis, report writing, and active participation in seminar presentations and discussions. Designed particularly for the student who has completed the three small business courses numbered 350 and has discussed personal small business or entrepreneurial objectives with the instructor prior to registration. Prerequisite: consent of department.

474-3 Management's Responsibility in Society. Analysis of the cultural, social, political, economic, and immediate environment of the organization. Particular emphasis is given to the manner in which the manager adapts to and is influenced by the environment and its conflicting demands. Prerequisite: senior standing or consent of department.

481-3 Administrative Policy. Development of organizational strategies and policies within environmental and resource limitations. Emphasis upon the application and integration of basic principles from all areas of business by case problem analysis, simulation exercises, and group participation. Not for graduate credit. Prerequisite: 304 and 318, Finance 330, Marketing 304 or equivalent, senior standing, and must be a College of Business major.

483-3 Advanced Production-Operations Management. An in-depth study of production and inventory management with a focus on preparation for the American Production and Inventory Control Society (APICS) certification examinations. Topics covered include planning for material and capacity requirements, scheduling, Theory of Constraints, Just-in-Time and Total Quality Management. Not for graduate credit. Prerequisite: 318 and junior standing or consent of department.

485-3 Organizational Change and Development. Analysis of problems in personnel management with emphasis on current trends and techniques. Case problems, special reports and experiential approaches are used as a basis for examining ways of using an organizations' human resources to best advantage. Not for graduate credit. Prerequisite: 341, junior standing.

491-1 to 6 Independent Study. Utilizes special faculty resources to enable individually, the exploration of an advanced area of study through research by means of data analysis and/or literature search. Not for graduate credit. Prerequisite: consent of department and must be a College of Business major.

495-3 Internship in Management. Supervised work experience that relates to the student's academic program and career objectives. Not repeatable for credit. Not for graduate credit. Prerequisite: junior standing, consent of department and must be a Management major. Mandatory Pass/Fail.

Management Faculty

Bateman, David N., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.

Bedwell, R. Ralph, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1969.

Karau, Steven J., Associate Professor, Ph.D., Purdue University, 1993.

Larson, Lars L., Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1971.

Litecky, Charles R., Professor, Ph.D., University of Minnesota, 1974.

McKinley, William, Professor, Ph.D., Columbia University, 1983.

Melcher, Arlyn J., Professor, Ph.D., University of Chicago, 1964.

Michalisin, Michael, Associate Professor, Ph.D., Kent State University, 1996.

Mykytyn, Jr., Peter P., Professor, Ph.D., Arizona State University, 1985.

Nelson, H. James, Assistant Professor, Ph.D., The University of Colorado, 1999.

Nelson, Kay M., Professor, Ph.D., The University of Texas at Austin, 1995.

Nelson, Reed E., Professor, Ph.D., Cornell University, 1983.

Pearson, John M., Associate Professor, D.B.A., Mississippi State University, 1991.

Sekaran, Uma, Professor, *Emerita*, Ph.D., University of California at Los Angeles, 1977.

Stubbart, Charles I., Associate Professor, Ph.D., University of Pittsburgh, 1983.

Tadisina, Suresh, Associate Professor, Ph.D., University of Cincinnati, 1987.

Vicars, William M., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1969.

Westberg, William C., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1948.

White, Gregory P., Professor and *Chair*, Ph.D., University of Cincinnati, 1976.

Wilson, Harold K., Associate Professor, *Emeritus*, D.B.A., University of Colorado, 1972.

Marketing (Department, Major, Courses, Faculty)

Marketing involves a system of interrelated activities used to develop, price, promote and distribute goods and services to customers, creating exchanges that satisfy individual and organizational goals. It is the marketing function that links the production of goods and services with their use. Effective marketing is essential to organizations in their efforts to achieve a competitive advantage that can be sustained. Without this, growth and survival of the organization are threatened.

The bachelor's degree program in marketing encompasses the entire key marketing functions, including those in e-commerce. Graduates may take advantage of challenging and dynamic career opportunities in large and small businesses, in government, and in non-profit organizations. Careers in the field of marketing cut across many industries and involve a variety of organizations. Some of the career options open to the marketing major include industrial selling and sales management, retailing, advertising, marketing research, distribution, international marketing and marketing management.

A C or better grade is required for all marketing majors in all-marketing courses taken to satisfy major requirements.

Technology Fee

The College of Business and Administration assesses College of Business and Administration majors a technology fee of \$6.00 per credit hour for Fall and Spring semesters up to twelve semester hours and Summer up to six semester hours.

Bachelor of Science Degree in Marketing, College of Business and Administration

University Core Curriculum Requirements	41
Professional Business Core (See Chapter 4)	45
Requirements for Major in Marketing	24
Marketing 305, 329, 363, 390, 493	15
Marketing Electives	9
Approved Electives	10
Total	120

Marketing Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BUS 123, UCC Fine Arts	1	3	ACCT 220, 230.....	3	3
ENGL 101, 102.....	3	3	ECON 241, 240.....	3	3
UCC Science	3	3	ACCT/MGMT 208.....	3	-
UCC Humanities, PSYC 102, SOC 108	3	3	CS 200b or ISAT 229.....	-	3
UCC Human Health	2	-	UCC Humanities	3	-
MATH 140, 139	4	-	SPCM 101, ENGL 291	3	3
Total	16	15	UCC Integrative Studies.....	-	3
			Total	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MGMT 304, 318, 345	6	3	FIN 270 ²	3	-
MKTG 304, 305	3	3	MKTG ³	3	3
FIN 330, MKTG 390	3	3	MGMT 481	-	3
MKTG Elective	-	3	MKTG 329.....	3	-
UCC Integrative Studies	3	-	MKTG 493.....	-	3
Approved Elective	-	2	MKTG 363.....	3	-
BUS 302	-	1	Approved Elective ¹	3	5
Total	15	15	Total	15	14

¹120 semester hours are required for graduation. Approved electives should be selected in consultation with academic advisor to meet this requirement.

²The combination of Finance 280 (Business Law I) and Finance 380 (Business Law II) may be substituted for Finance 270 and is highly recommended for Accounting majors.

³Major option, Major specialization or Secondary concentration.

Minor

A minor in Marketing consists of a minimum of 15 semester hours, including marketing 304, 305 and nine credit hours in Marketing at the 300 level or above. All prerequisites for these classes must also be satisfied. Marketing 493, 495 and 499 may not be taken as part of the minor in Marketing. An advisor within the College of Business and Administration must be consulted before selecting this field as a minor. A 2.0 gpa or better is required for all marketing minors in all-marketing courses taken to satisfy minor requirements.

Courses (MKTG)

304-3 Marketing Management. An introduction to various issues involved in managing the firm's marketing function in a dynamic business environment. Studies management of issues like branding, pricing, promotion, and distribution to enhance customer value and customer satisfaction. Examines how firms can leverage technology to improve the efficacy of their traditional and e-commerce marketing activities. Prerequisite: junior standing or higher; Business 302 for College of Business and Administration students; may be taken concurrently.

305-3 Consumer Behavior. Examines the psychological and sociological factors that influence consumption and decision-making. Studies the practical implications of consumer attitudes and behavior for such marketing activities as merchandising, market research, distribution, product development, pricing, branding and e-commerce. Prerequisite: junior standing or higher.

329-3 Marketing Channels. The methods and processes used in the distribution of consumer and industrial products and services. Emphasis is upon the ways in which certain basic distribution functions are carried out in the traditional channel system as well as e-commerce. The roles of a variety of sellers and buyers in for-profit and not-for-profit manufacturers, wholesalers, retailers and e-business as parts of this system are analyzed. Prerequisite: 304 with a grade of C or better and junior standing or higher.

336-3 International Business. Business activities of firms and social organizations are examined in an international/global environment. The course examines the fundamental concepts and principles of international/global business. It analyzes the marketing, finance, accounting, managerial, logistics, and production functions of international/global operations. It examines the changing technological environment as it impacts international/global business, including the realm of e-commerce. Prerequisite: 304 with a grade of C or better junior standing or higher.

350-3 Small Business Marketing. Deals with principles involved in locating market opportunities and developing growth plans for traditional and electronic commerce businesses. Taught from the point of view of the owner manager. Not approved as an elective for marketing majors. Prerequisite: junior standing or higher.

363-3 Strategic Promotion and Brand Management. The planning and management of marketing communication activities including advertising, personal selling, sales promotion, public relations, packaging and branding. The emphasis in the course is on strategic issues rather than tactical details. A consulting project involving a real client is usually required. Prerequisite: 304 with a grade of C or better and junior standing or higher.

380-3 Professional Sales. Analysis of professional selling activities and how they fit into the firm's promotional efforts. The course examines the dynamics of selling in traditional and e-commerce settings. The course emphasizes preparing the student via video taping to make sales presentations in business settings. Prerequisite: 304 with a grade of C or better and junior standing or higher.

390-3 Marketing Research and Analysis. The application of traditional and electronic media procedures and theories appropriate to solving marketing problems related to customer and competitive intelligence and marketing information systems. Prerequisite: 304 with a grade of C or higher and Management or Accounting 208 with a grade of C or better and junior standing or higher. Must be a business major or obtain consent

401-3 Retail Management. Designed to present and integrate basic principles in decision areas such as location, layout, organization, personnel, merchandise control, pricing, sales promotion, traditional and e-commerce marketing strategies and channel development considerations. A strategic managerial perspective of retail merchandising. Prerequisite: 304 with a grade of C or better and junior standing or higher.

435-3 International Marketing. Analysis of international operations. Emphasis on the factors influencing marketing to and within foreign countries and the alternative methods of operations open to international firms including e-commerce. Prerequisite: 304 with a grade of C or better and junior standing or higher.

438-3 Sales Management. Analysis of the sales effort within the marketing system. Philosophies, concepts and judgment criteria of the sales function in relation to the total marketing program. Emphasis on the integration of computer- and Internet-based technologies in the strategic development and operations of the sales force. Prerequisite: 304 and Management 304 with grades of C or better, and junior standing or higher.

439-3 Business to Business Marketing. Analysis of emerging structures in resource acquisitions, product and service processing and fabrications, channel flow and customer profiling and servicing. Emphasis is on the determination of what constitutes the basis for strategic alliances, partnerships, downsizing and other structural changes designed to make business to business firms more competitive in the present age of instant communication and e-commerce options. Prerequisite: 304 and 329 with grades of C or better and junior standing.

452-3 Physical Distribution Management. Integration of physical distribution activities of the firm into a system. Transportation and location as elements of the system. Inventories and service as constraints upon the system. Planning, operation, organization, and management of the system. Prerequisite: 304 with a grade of C or better and junior standing or higher.

463-3 Advertising Management. Deals with advertising from the viewpoint of business management. Discussion of integrated marketing communication and problems of integrating advertising strategy into the firm's total marketing program. Course discusses the role of advertising in different business environments such as technology driven markets and electronic commerce. Prerequisite: 304 and 363 with grades of C or better and junior standing or higher.

493-3 Marketing Policies. Integrates all marketing concepts discussed in core required marketing courses. The course is aimed at developing the student's ability to think comprehensively, and to apply marketing concepts in traditional and e-commerce business environments through analysis of strategic marketing

problems. Prerequisite: 305, 329, 363 and 390. Must be marketing major or obtain consent of the department.

495-3 Internship in Marketing. Provides the student an opportunity to participate in an internship program coinciding with areas of interest. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: 304, 305 and one additional marketing course pertinent to internship excluding 350, a 3.0 gpa or better in marketing courses and a 3.0 gpa or better in SIUC upper division business courses; consent of supervising faculty and of department.

496-3 Field Seminar in International Business. Coursework and field study related to international business issues. Students will complete coursework on campus and then travel to international locations (e.g., Europe, Asia, or South America) for scheduled business visits with companies operating in those locations (both international and domestic businesses). Students will also complete additional report writing upon return from their international trip. Fees: package cost for air transportation, land travel in and between countries, lodging, and some meals, in addition to tuition and on-campus costs.

499-1 to 12 (1 to 3 per section) Marketing Insights. Provides the student an opportunity to participate in an independent study, or seminar coinciding with areas of interest. May be repeated for credit only when topics vary. Not for graduate credit. Prerequisite: junior standing or higher, and approval of the instructor and the department chair in the semester prior to enrollment; must be a marketing major or consent of department. Prerequisite: 304, 305, 363, plus two marketing electives excluding 350, a 3.4 SIUC gpa or better in marketing and a 3.0 SIUC gpa or better in upper division business courses.

Marketing Faculty

Adams, Kendall A., Professor, *Emeritus*, Ph.D., Michigan State University, 1962.

Adjei, Mavis, Assistant Professor, Ph.D., University of Mississippi, 2006.

Balasubramanian, Siva, Professor, Ph.D., State University of New York at Buffalo, 1986.

Bruner, Gordon C., II, Professor, Ph.D., University of North Texas, 1983.

Campbell, David, Assistant Professor, Ph.D., University of Mississippi, 2006.

Clark, Terry, Professor and *Chair*, Ph.D., Texas A&M University, 1987.

Fraedrich, John P., Professor, Ph.D., Texas A & M University, 1988.

Hindersman, Charles H., Professor, *Emeritus*, D.B.A., Indiana University, 1959.

King, Maryon F., Associate Professor, Ph.D., Indiana University, 1989.

Lambert, Zarrel V., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1966.

Knowles, Lynette L., Associate Professor, Ph.D., Ohio State University, 1990.

Moore, James Ray, Assistant Professor, *Emeritus*, Ph.D., University of Illinois, 1972.

Nasco, Suzanne, Assistant Professor, Ph.D., University of Notre Dame, 1999.

Summey, John H., Associate Professor, Ph.D., Arizona State University, 1974.

Mass Communication and Media Arts (College,

Courses)

Courses (MCMA)

201-3 Media in Society. Provides a critical basis for understanding the interrelationships between societal needs, communication institutions, and economic, political and cultural processes. Beginning with early communication systems, the course examines developments leading to our multimedia environment and how these developments impact our lives.

202-3 Visual Literacy. Students will learn to interpret visual images, compose visual messages and evaluate the cultural impact of visual communication on contemporary society. Lab fee: \$42.

203-3 Critical Thinking Through Media Writing. Students will be asked to apply reasoning skills as they analyze examples of media writing. Students will also be asked to apply these reasoning skills to their own writing as they develop their ability to compose effective sentences, to construct sound arguments and to adapt their writing for different purposes and audiences. Prerequisite: successfully completing English 101 and 102, restricted to Mass Communication and Media Arts majors.

204-3 Alternative Media in a Diverse Society. (University Core Curriculum) The freedoms guaranteed in the First Amendment have resulted in a multitude of alternatives to the establishment media. These alternative media give voice to a range of communities ignored or suppressed by the dominant culture. Publications, alternative art spaces, film, radio and television messages and the groups and individuals who create them are examined. Not for graduate credit.

300-3 Introduction to Digital Communication. This course provides a descriptive, introductory survey providing an overview of the development and current status of digital communication, focusing on the economic, legal, social, political and ethical considerations in digital communication media.

301-3 Production of Digital Communication. A course that complements 300 by focusing on hands-on production skills using production standard computer software and hardware to complete several communication projects for variety of purposes. The laboratory approach will allow for collaborative learning and team production of finished message products. Course fee: \$40.

320-3 Introduction to Audio Arts. This course is designed to introduce students to the world of computer-assisted sound design and musical composition for multimedia. The techniques covered in this class will be directly applicable to a wide variety of non-interactive settings as well as film/video sound design and post-

- production, Foley and sound effects, film scoring, radio production, etc. Students will have the opportunity to explore the creative possibilities of computer control of digital synthesizers using Opcode Studio Vision Pro software and Emu Ultra Proteus MIDI modules. Prerequisite: knowledge of Macintosh operating system.
- 360-3 Digital Communications Media and the Information Society.** This course introduces students to digital communication media and information technology in modern society. Topics include media history and regulation, information theory, and business applications. Students will gain exposure to production techniques in digital audio, digital video, desktop publishing, and multimedia applications.
- 361-3 Digital Sound and Convergence.** This course introduces students to digital sound theory and design and provides a foundation for understanding multimedia convergence in a desktop environment as well as practical creative application in a non-linear audio lab. Special consideration is given to web audio and related music and gaming applications. Lab fee: \$50. Prerequisite: 360 or consent of instructor.
- 362-3 Digital Moving Image Production.** This course introduces students to digital video and film techniques using narrative and documentary forms. Students develop skills in the pre-production, production, and post-production phases of moving image creations. Acquired production skills and practices will be supplemented by an integration of international film/video history and theory with an emphasis on aesthetic, cultural and ideological diversity. Lab fee: \$50. Prerequisite: 360 or consent of instructor.
- 363-3 Digital Communication in Print.** This course introduces students to current uses and practices of desktop publishing. Topics include an overview of the history of printed communications, principles of visual perception, copyright and legal uses of images, and basic principles of design and typography as they are applied in the production of printed media. Emphasis will be on developing digital production skills using industry standard page layout and photo imaging software and will include technical considerations for production of electronic files including file formats, image resolution, color management and file transfer. Lab fee: \$40. Prerequisite: 360 or consent of instructor.
- 364-3 Introduction to Multimedia Design.** This course introduces students to digital multimedia applications and the processes used to produce games, courseware, web sites and other communication content. It provides an overview of consumer and business uses of multimedia and addresses specific issues in planning and project management. Students acquire hands-on experience in multimedia development from the initial articulation of a concept to the execution and evaluation of the final product. Students learn specific skill tools in multimedia production within a context emphasizing good design principles and practices. Lab fee: \$40. Prerequisite: 360 or consent of instructor.
- 396-3 Publishing on the WWW.** The class provides instruction in designing for the WWW. Students learn the basics of HTML, and are provided an opportunity to develop literacy in networked, interactive communication. Students learn the basics of good interface design and apply these skills in interactive multimedia such as interactive news and information display, training development, business marketing applications, asynchronous learning materials, and entertainment products. Lab fee: \$50. Prerequisite: consent of instructor.
- 410-3 Computer Background for Multimedia Production.** This course provides an introduction to the basics of operating systems, word processing, Internet applications and digital media. Not for graduate credit. Offered summer semester only for students lacking basic computer backgrounds. Prerequisite: majors only or consent of the instructor.
- 420-3 Advanced Audio Arts.** This course is designed to enhance and expand students' creative skills in the area of computer-assisted sound design and musical composition for interactive sound installations, experimental media arts, CD-ROM based multimedia, and web-based projects. Through a series of lectures, demonstrations, and hands-on creative projects, students will learn about the creative possibilities of such Macintosh-based digital sound editing/processing applications as MAX, Pro-Tools, Meta-Synth, Super Collider, David Rokeby's Very Nervous System (for gesture and motion tracking), and the Kurzweil K2500 MIDI production workstation. The course will cover such advanced topics as algorithmic sound/musical composition, alternative gestural control, and sonification of data and other approaches to sound/music mapping. The focus of the class is to explore the potential of the computer to function not only as a tool which models pre-digital approaches to sound design and manipulation, but serves as a virtual collaborator in which the student devises computer-based systems which unlock combinations of sound, text, video, and other media in ways not otherwise possible. Nor for graduate credit. Prerequisite: 320.
- 449-3 Race and Media in United States History.** (Same as Black American Studies 449 and History 449) This course explores the history of race in the modern United States by focusing on moments of racial crisis that garnered media attention. The course asks what these moments reveal about the shifting status of "race," as well as how spectacles have changed with the transformation of modern media.
- 495-3 Final Project.** Students will create a final project in their area of interest. The course will be a hands-on, individual work, production course that will enable students to synthesize their content expertise with their particular production skills. Lab fee: \$50. Prerequisite: 300, 301 and consent of department.
- 497-1 to 6 Special Interdisciplinary Study.** Designed to offer and test new and experimental courses and series of courses within the College of Mass Communication and Media Arts. Incorporation course fee: \$25.
- 499-1 to 3 Independent Study.** Supervised research, project, or creative work. The area of study is proposed by the student with the approval of a Mass Communication and Media Arts faculty member. Not for graduate credit. Prerequisite: consent of instructor.

Mathematics (Department, Major, Courses, Faculty)

Opportunities for mathematics majors have expanded greatly in recent years. Mathematics majors become actuaries, statisticians, mathematical computer sci-

entists, applied mathematicians, operations research analysts and mathematical researchers. Mathematics is growing and changing and holds fascinating challenges for inquiring minds.

As an undergraduate mathematics major at Southern Illinois University Carbondale, you may work toward a Bachelor of Science degree in the College of Science or the College of Education and Human Services, or a Bachelor of Arts degree in the College of Liberal Arts. The classes in the mathematics major curriculum are small and are taught by senior faculty members. A strong support system of college and departmental advisement is available to you at SIUC throughout the year.

A student planning for employment with a bachelor's degree should consider a minor or a second major in some field in which mathematics is applied. Many students earn a double major in mathematics and computer science. All of the bachelor's degree programs in mathematics, including the Bachelor of Science degree in the College of Education and Human Services, have sufficient flexibility to allow you to prepare for alternate career possibilities.

To prepare to major in mathematics at SIUC, you should have a solid high school preparation in algebra, geometry in two and three dimensions, and trigonometry, including a substantial study of functions and graphing. Students transferring to SIUC after two years at a community college should have completed the calculus sequence and, if possible, linear algebra and a course in a high-level computer programming language.

As a mathematics major at SIUC, you will meet with a Department of Mathematics adviser at least once each semester for planning and departmental approval of courses appropriate to your goals and interests.

A grade of *C* or better is required in every mathematics course used to satisfy departmental requirements. A student cannot repeat a course or its equivalent in which a grade of *B* or better was earned without the consent of the department.

Double majors in mathematics and related fields

Special provisions are made for students to earn a double major in mathematics and a field in which mathematics is extensively applied. The courses Math 361, 447, 449, 471, 472, and 475 carry credit in both mathematics and computer science. See Bachelor of Science Degree, College of Science for specific requirements in mathematics for students who also earn a major or minor in computer science.

For students who also have a major in engineering, physics, or chemistry, the requirements for a major in mathematics are Math 150, 221, 250, 251, 305 and five additional mathematics courses numbered above 300, including at least three courses above 400, and including two of the three areas of algebra, analysis, probability and statistics. A mathematics department adviser must approve the courses.

Students majoring in business and administration with a secondary concentration in mathematics may obtain a second major in mathematics. The requirements are Mathematics 150, 250, 251, 221, and five approved mathematics courses at the 300-400 level, of which at least four are at the 400-level. Recommended courses for this program are Mathematics 361, 471, 472, 483, 484, Management 352, 453, 456; Economics 315, 465; Finance 310, 331, and 341.

Option in Statistics

A student majoring in mathematics in the College of Science or the College of Liberal Arts may choose to concentrate in statistics. For this option, the 300- and 400-level course requirements are: 417; 305 or 472; one of 352, 450, 452, or 455; 380 or 480; 483; and at least two of 473, 481, 484, 485.

Bachelor of Science Degree in Mathematics, College of Science

<i>College of Science Academic Requirements</i>	(6) + 14 ¹
Supportive Skills: a two-semester sequence in a foreign language, or three years of one foreign language in high school with no grade lower than C.	8
Biological Sciences (not University Core)	(3) + 3
Physical Sciences (not University Core)	(3) + 3
<i>Requirements for Major in Mathematics</i>	(3) + 42 ¹
Mathematics 150, 221, 250, 251	(3) + 11
Computer Science 202 or approved substitute	4
At least one course from each of the following groups:	12
(One group may be waived for students who have a minor in CS)	
Group A: Algebra/Discrete Mathematics/Linear Algebra: 319, 349, 419, 421, 447, 449	
Group B: Analysis: 352, 450, 452, 455	
Group C: Applied Mathematics/Numerical Analysis: 305, 361, 471, 472, 475a	
Group D: Probability/Statistics: 380, 480, 483	
Five additional courses in mathematics numbered above 299 (exclud- ing 300i, 311, 314, 319e, 352e, 411, 412, 458)	15
Each student's program must include at least one of 302, 319, 352, and at least 5 mathematics courses at the 400 level and must be approved by a mathematics department adviser.	
Courses taken Pass/Fail will not count toward the major.	
<i>Electives</i>	23
<i>Total</i>	120

¹ Numbers in parentheses are hours, which may be substituted into the University Core Curriculum.

Mathematics Suggested Curricular Guide, College of Science

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MATH 111 ¹	4	-	MATH 221, Humanities	3	3
MATH 150	-	4	MATH 250, 251	4	3
CS 202	-	4	MATH 302 or 305	-	3
ENGL 101, 102	3	3	Human Health, Social Science ...	2	3
Fine Arts	3	-	SPCM 101, Biology	3	2-3
Foreign Language	4	4	PLB 200 or ZOOL 118 ²	4	-
<i>Total</i>	14	15	<i>Total</i>	16	14-15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Two 300-400-Level Math ³	6	6	Two 300-400-Level Math ³	6	6
Humanities, Social Science	3	3	Multicultural	3	-
PHYS 205a, 255a	4	-	Interdisciplinary	-	3
PHYS 203b, 205b	-	3	Elective	7	6-7
Elective	2	3			
<i>Total</i>	15	15	<i>Total</i>	16	15-16

¹ Fulfills University Core Curriculum foundation skills.

² Fulfills University Core Curriculum science requirement.

³ Must be approved by a mathematics advisor.

Bachelor of Arts Degree in Mathematics, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i>	11
English Composition	3
Foreign Language	8
<i>Requirements for Major in Mathematics</i>	(3) + 41 ¹
Mathematics 150, 221, 250, 251,	(3) + 11
Computer Science 202 or approved substitute	4
At least one course from each of the following groups:	12
(One group may be waived for students who have a minor in Computer Science)	

Group A: Algebra/Discrete Mathematics/Linear Algebra: 319, 349, 419, 421, 447, 449	
Group B: Analysis: 352, 450, 452, 455	
Group C: Applied Mathematics/Numerical Analysis: 305, 361, 471, 472, 475a	
Group D: Probability/Statistics: 380, 480, 483	
Five additional courses in mathematics numbered above 299 (excluding 300i, 311, 314, 319e, 352e, 411, 412, 458)	15
Each student's program must include at least one of 302, 319, 352 and at least 5 mathematics courses at the 400 level and must be approved by a mathematics department adviser.	
Courses taken Pass/Fail will not count toward the major.	
Secondary Concentration Requirements	6-9
Six to nine hours approved by the Department of Mathematics in one of the following areas: engineering, computer science, physics, economics, business and administration. A minor in any department of the College of Liberal Arts or the College of Science may be substituted for this requirement.	
Electives	15-17
Total	120

¹Numbers in parenthesis are hours, which may be substituted into the University Core Curriculum.

Mathematics Suggested Curricular Guide, College of Liberal Arts

FIRST YEAR		FALL	SPRING	SECOND YEAR		FALL	SPRING
MATH 111 ¹ , 150	4	4		MATH 221, English Comp	3	3	
CS 202	-	4		MATH 250, 251	4	3	
ENGL 101, 102	3	3		Human Health, Humanities ...	2	3	
Fine Arts, Humanities	3	3		SPCM 101, MATH 302 or 305 .	3	3	
Social Science	3	3		Science	3	3	
Total	13	17		Total	15	15	
THIRD YEAR		FALL	SPRING	FOURTH YEAR		FALL	SPRING
Two 300-400 Level Math ²	6	6		Two 300-400 Level Math ²	6	6	
Secondary Concentration	3	3		Secondary Concentration	3	-	
Multicultural, Interdisciplinary..	3	3		300-400 Level Elective	3	9	
Foreign Language	4	4		Additional Science w/lab	3	-	
Total	16	15		Total	15	15	

¹ Fulfills University Core Curriculum Foundation Skills.
² Must be approved by a mathematics advisor.

Bachelor of Science Degree in Mathematics, College of Education and Human Services

University Core Curriculum Requirements to include Mathematics 300i	41
Requirements for Major in Mathematics	(12) + 71
Content Courses	(3) ¹ + 39
Mathematics 150, 221, 250, and 251 or 305	(3) ¹ + 11
Computer Science 202 or approved substitute	4
Mathematics 302, 319, 335, 349 and 352 or 452	15
At least three additional 400-level mathematics courses excluding 458 ²	9
Methods Courses	4
Mathematics 311	
Professional Education and Certification Requirements	(9) ¹ + 28
Professional Education Requirements	28
Education 308, 310, 311, 314, 315, 316, 317, 401	
Courses required for the TEP	(9) ¹
English 101, 102 (with C or better) and Psychology 102	
Electives	8
Total	120

¹Numbers in parenthesis are hours which may be substituted into the University Core Curriculum.

²At least one course in probability and statistics must be included.

Unconditional admission into the Teacher Education Program in mathematics requires a 2.5 average in Mathematics 150, 221, 250, and 251 or 305. Retention in the Teacher Education Program and approval for student teaching requires a 2.75 average in the major and departmental approval.

Mathematics majors are required to meet with a departmental advisor for approval of their courses prior to registering each semester.

Concentration in Mathematics for Elementary Education

Consult with College of Education and Human Services and with Mathematics advisors about the latest requirements. Currently the recommended courses are:

Mathematics 114	Algebraic and Arithmetic Systems
Mathematics 150	Calculus I
Mathematics 221	Linear Algebra
Mathematics 302	Mathematical Communication and the Transition to Higher Mathematics
Mathematics 314	Geometry for Elementary Teachers
Mathematics 349	Discrete Mathematics

Mathematics Suggested Curricular Guide, College of Education and Human Services

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MATH 150, 250	4	4	MATH 305 or 251, CS 202	3	4
ENGL 101, 102	3	3	MATH 302, 483	3	4
Science Core ¹ , PSYC 102	3	3	Humanities Core ¹	3	3
Science Core ¹ , MATH 221	3	3	Elective, Science Core ¹	3	3
Fine Arts ¹	3	-	EDUC 314, EDUC 311	2	2
Human Health Core ¹	-	2			
<i>Total</i>	16	15	<i>Total</i>	14	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MATH 319, 352	3	3	MATH 311	4	-
MATH 349, 335	3	3	MATH 400-Level ²	3	-
EDUC 310, 308	2	3	MATH 400-level ²	3	-
EDUC 315, 316	3	2	EDUC 317, 401	2	12
SPCM 101, Multicultural	3	3	Interdisciplinary ¹	3	-
Elective	2	2			
<i>Total</i>	16	16	<i>Total</i>	15	12

¹ Consult with College of Education and Human Services academic advisor for appropriate course.

² Must be approved by mathematics department advisor.

Minor

A non-teaching minor consists of Mathematics 150 and 12 hours of mathematics credit at the 200 level or above, including at least three hours at the 400 level (excluding 220, 257, 282, 283, 300i, 311, 314, 321, 322, 411, 412, and 458). All courses used for the minor must be completed with a grade of C or better. The 400-level mathematics must be taken at SIUC. The departmental advisor must approve the student's minor program. Elementary and secondary education students interested in a mathematics minor should see a mathematics department education adviser to obtain a list of specific requirements.

Honors

Mathematics 395 and 495 are used for individual honors work for upper level undergraduates in mathematics.

Placement

In addition to having taken the prerequisite mathematics, new students are required to present a satisfactory placement score as a condition for registration in mathematics courses. Contact the Department of Mathematics for current information regarding placement.

Courses (MATH)

A hand-held calculator with function keys appropriate to the course is required of each student in 108, 109, 111, 114, 139, 140, 141, 150, 250, 251, 282, and 283. The student should consult the instructor of the course about appropriate calculators.

107-3 Intermediate Algebra. Properties and operations of the number system. Elementary operations with polynomials and factoring. Elementary operations with algebraic fractions. Exponents, roots, and radicals. First and second-degree equations and inequalities. Functions and graphing. Systems of equations and inequalities. Exponential and logarithmic functions. This course does not satisfy the University Core Curriculum mathematics requirement and it does not count toward the 120 hours needed for graduation. Prerequisite: one year of high school algebra.

108-3 College Algebra. (Advanced University Core Curriculum course) The algebra of functions (polynomials, rational, exponential, logarithmic), graphing, conic sections, solving equations including systems. Credit is not given for both 108 and 111. Prerequisite: 107 or three years of college preparatory mathematics including Algebra I, Geometry and Algebra II with a C or better. New students must present satisfactory placement scores or obtain the permission of the department of mathematics.

108A,B,C-1,1,1 College Algebra. The algebra of functions (polynomials, rational, exponential, logarithmic), graphing, conic sections, solving equations including systems. Credit is not given for both 108 and 111. Prerequisite: Mathematics 107 or three years of college preparatory mathematics including Algebra I, Geometry and Algebra II. New students must present satisfactory placement scores or obtain the permission of the department of mathematics.

109-3 Trigonometry and Analytic Geometry. (Advanced University Core Curriculum course) Trigonometric and inverse trigonometric functions, complex numbers, conic sections, polar coordinates. Credit is not given for both 109 and 111. Prerequisite: 108 or equivalent with a grade of C or better. New students must present satisfactory placement score or obtain the permission of the Department of Mathematics. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 113.

110-3 Non-Technical Calculus. (University Core Curriculum) The elements of differentiation and integration. The emphasis is on the concepts and the power of the calculus rather than on technique. It is intended to provide an introduction to calculus for non-technical students. Does not count towards the major in mathematics. No credit hours may be applied to fulfillment of any degree requirements if there is prior credit in Mathematics 140, 141 or 150. Prerequisite: 3 years of college preparatory mathematics including algebra I, algebra II and geometry with C or better. Students must present satisfactory placement scores or obtain the permission of the Department of Mathematics.

111-4 Precalculus. (Advanced University Core Curriculum course) An intensive review course in college algebra and trigonometry for students who plan to take Calculus I. The algebra of functions (polynomial, rational, exponential, logarithmic, trigonometric, inverse trigonometric), graphing (polynomial, rational, exponential, logarithmic, and trigonometric function), analytic trigonometry and trigonometric identities, including the law of sines and the law of cosines, conic sections, complex numbers, polar coordinates, parametric equations. Not open to students with credit in 108 or 109. Prerequisite: Advanced Algebra and Trigonometry with C or better in high school and ACT math subscore of at least 24. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 113.

113-3 Introduction to Contemporary Mathematics. (University Core Curriculum) [IAI Course: M1 904] Elementary mathematical principles as they relate to a variety of applications in contemporary society. Exponential growth, probability, geometrical ideas and other topics. This course does not count towards the major in mathematics. Prerequisite: Mathematics 107 or 3 years of college preparatory high school mathematics including geometry and Algebra II. Students must present satisfactory placement scores or obtain the permission of the Department of Mathematics.

114-4 Algebraic and Arithmetic Systems. Whole numbers, integers, rational numbers, real numbers, numeration systems, algorithms, number theory, metric system, elementary algebra, probability. Successful completion of this course requires a passing grade on a basic skills test of minimal mathematical proficiency. Does not count towards the major in mathematics. Can not be used to satisfy the University Core Curriculum mathematics requirement. Prerequisite: Intermediate algebra or a second year of high school algebra or equivalent.

120-3 Mathematics Content and Methods for the Elementary School I. (Same as Curriculum and Instruction 120.) Modern approaches to mathematics instruction for the elementary grades. Mathematics content includes problem solving, intuitive set theory, development of whole numbers, integers and rational numbers and the fundamental arithmetic operations. Place value. Prime numbers and divisibility properties. Computation includes students' informal mathematics, mental computation and estimation, algorithms and the appropriate use of calculators. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and two hours laboratory per week. Prerequisite: Three years of college preparatory mathematics including Algebra I, Algebra II and Geometry.

125-4 Technical Mathematics with Applications. (Advanced University Core Curriculum course) Emphasizes the applications of algebra and trigonometry in technical fields. Topics in algebra include functions and graphs, systems of linear equations, quadratic equations, higher degree equations and variation. Topics in trigonometry include the trigonometric functions, laws of sines and cosines, complex numbers, exponential and logarithmic functions. Meets University Core Curriculum requirement in mathematics for Applied Sciences and Arts students. Enrollment restricted to students in the College of Applied Sciences and Arts or

permission of department. Prerequisite: Mathematics 107 or two years of high school algebra or equivalent, with a grade of C or better.

139-3 Finite Mathematics. (Advanced University Core Curriculum course) Set concepts and operations, combinations, permutations, elementary probability theory including Bayes formula, linear systems of equations, matrix algebra, Gauss-Jordan row reduction, introduction to linear programming. This course does not count towards the major in mathematics. Prerequisite: Mathematics 107 (or three years of college preparatory mathematics including Algebra I, Geometry and Algebra II) with a grade of C or better. New students must also present satisfactory placement scores or obtain the permission of the department. Satisfies University Core Curriculum Mathematics in lieu of 110 or 113.

140-4 Short Course in Calculus. (Advanced University Core Curriculum course) Techniques of differentiation, increasing and decreasing functions, curve sketching, max-min problems in business and social science; partial derivatives, LaGrange multipliers, elementary techniques of integration. Credit hours for both 140 and 141 may not be applied to fulfillment of degree requirements. No credit hours for 140 may be applied to fulfillment of degree requirements if there is prior credit in 150. Does not count towards the major in mathematics. Prerequisite: Mathematics 107 (or three years of high school college preparatory mathematics including Algebra I, Geometry and Algebra II) with a grade of C or better. New students must present satisfactory placement scores or obtain the permission of the department of mathematics. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 113.

141-4 Short Course in Calculus for Biological Sciences. (Advanced University Core Curriculum course) [IAI Course: M1 900] Basic techniques of differentiation and integration. Population and organism growth problems solved by using calculus. Translation of problems in the biological sciences into mathematical problems. Does not count towards the major in mathematics. Credit hours for both 140 and 141 may not be applied to fulfillment of degree requirements. No credit hours for 141 may be applied to fulfillment of degree requirements if there is prior credit in 150. Prerequisite: 111 or equivalent with grade of C or better. New students must present satisfactory placement scores or obtain the permission of the department of Mathematics. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 113.

150-4 Calculus I. (Advanced University Core Curriculum course) [IAI Course: M1 900] Treatment of the major concepts and techniques of single-variable calculus, with careful statements but few proofs. Differential and integral calculus of the elementary functions with associated analytic geometry. If there is prior credit in 140 or 141 only 2 hours credit for 150 may be applied to graduation requirements. Prerequisite: 111 or equivalent with a grade of C or better. Students must present satisfactory placement scores or obtain the permission of the department of Mathematics. Satisfies University Core Curriculum Mathematics requirements in lieu of 110 or 113.

220-3 Mathematics Content and Methods for the Elementary School II. (Same as Curriculum and Instruction 220.) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on rational and irrational numbers. Ordering of numbers. Decimal representations. Percents. Ratio and Proportion. Perimeter and area concepts. Pythagorean Theorem. Concept of square root and n^{th} root. Exponent notation. Elementary geometry. Triangles, quadrilaterals, polygons, angles associated with a polygon. Reflectional and rotational symmetry. Congruence and Similarity. Tessellations. Transformations: translations, rotations, reflections. Measurement of perimeter, area, surface area, volume, mass, temperature. Conversion of measurements. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and two hours lab per week. Prerequisite: 120 or Curriculum and Instruction 120 or equivalent with a grade of C or better.

221-3 Introduction to Linear Algebra. Vector spaces, linear functions, systems of equations, dimensions, determinants, eigenvalues, quadratic forms. Prerequisite: 150 with a grade of C or better.

250-4 Calculus II. (Advanced University Core Curriculum course) [IAI Course: M1 900] Develops the techniques of single-variable calculus begun in Calculus I and extends the concepts of function, limit, derivative and integral to functions of more than one variable. The treatment is intuitive, as in Calculus I. Techniques of integration, introduction to multivariate calculus, elements of finite series. Prerequisite: 150 with a grade of C or better. Students must present satisfactory placement score or obtain the permission of the department. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 113.

251-3 Calculus III. (Advanced University Core Curriculum course) [IAI Course: M1 900] Further topics in calculus. Definite integrals over solid regions, applications of partial derivatives, vectors and vector operations, derivatives of vector functions, line integrals. Green's theorem. Prerequisite: 250 with a grade of C or better. Satisfies University Core Curriculum Mathematics requirements in lieu of 110 or 113.

257-1 to 12 Concurrent Work Experience. As an instructional aide, the student will do tutoring under the direction of an established teacher and under the supervision of a representative of the Department of Mathematics. Prerequisite: consent of department. Mandatory Pass/Fail.

282-3 Introduction to Statistics. (Advanced University Core Curriculum course) [IAI Course: M1 902] Designed to introduce beginning students to basic concepts, techniques, and applications of statistics. Topics include the following: organization and display of data, measures of location and dispersion, elementary probability, statistical estimation, and parametric and nonparametric tests of hypotheses. Prerequisite: 108 or equivalent with a C or better. Satisfies University Core Curriculum Mathematics requirement in lieu of 110 or 113.

283-3 Introduction to Applied Statistics. [IAI Course: M1 902] This course is experiment motivated, uses real-work data, and computer analysis of data. Statistical concepts discussed are descriptive statistics, elementary probability, expectation, sampling distributions, statistical estimation and testing, confidence intervals, correlation and regression, and contingency tables. The student is given experience in writing reports of experiments. Prerequisite: 140 or equivalent with C or better.

300I-3 History of Mathematics. (University Core Curriculum) This course examines how diverse cultures and history from the ancient past to the present have shaped the development of mathematical thought and how developing mathematical ideas have influenced history and society. Particular attention will be given to the evolution of the concepts of number and space; the emergence and applications of calculus, probability theory, non-Euclidean geometries and technology; and to the changes in the concept of mathematical rigor. Does not count towards the mathematics requirements of the mathematics major. Open to all students. Prerequisite: 150.

302-3 Mathematical Communication and the Transition to Higher Mathematics. A course in communicating mathematical ideas with a special emphasis on reading, writing, and critiquing mathematical proofs. Topics covered include logic, proofs, set theory, relations, functions. Additional illustrative topics will be drawn from linear algebra, number theory, complex variables, and geometry. Prerequisite: Mathematics 221 and 250 with a grade of C or better.

305-3 Introduction to Ordinary Differential Equations I. Solution techniques for differential equations with emphasis on second order equations, applications to physical sciences, series solutions. Prerequisite: 250 with a grade of C or better.

311-4 Teaching of Secondary Mathematics. The nature and objectives of the secondary mathematics curriculum. Particular attention is given to the means of introducing new ideas into the high school program. For students preparing to be certified teachers of secondary mathematics. Three lectures and two laboratory hours per week. Does not count toward a mathematics major in the College of Liberal Arts or in the College of the Science. Prerequisite: 319, 319e, and 335.

314-3 Geometry for Elementary Teachers. [IAI Course: M1 903] Congruence, similarity; parallelism, perpendicularity; measurement; area, volume; ratio and proportion; constructions; proof. May not be used to satisfy requirements for a mathematics major. Prerequisite: 114 and one year of high school geometry and a passing grade on a basic skills test of minimal mathematical proficiency.

318-2 An Introduction to Mathematics Software. This course is an introduction to the use of Maple, a modern computer algebra system, as a computational and experimental tool in mathematics. The preparation of reports using text, graphics and mathematics is emphasized. Topics will include: solving equations, plotting techniques, special packages, programming with Maple V. Prerequisite: 150 with B or better or 250 with C or better.

319-3 Introduction to Abstract Algebra. Basic properties of groups and rings: Binary operations, groups, subgroups, permutations, cyclic groups, isomorphisms, Cayley's theorem, direct products, cosets, normal subgroups, factor groups, homomorphisms, rings, integral domains. Prerequisite: 221; plus for secondary education majors, 302 or concurrent enrollment in 319e.

319E-1 Modern Algebra as Applied to the Secondary Schools. Two hours per week. The applicability of the concepts of modern algebra, particularly the field axioms and the function concept, to the secondary curriculum. Prerequisite: concurrent enrollment in 319. Mandatory Pass/Fail.

321-3 Mathematics Content and Methods for the Elementary School III. (Same as Curriculum and Instruction 321.) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: straight-edge and compass constructions. Justification and proof of geometric properties. Three dimensional geometry. Coordinate geometry. Transformations expressed in coordinate notation. Analysis of linear relationships geometrically and algebraically. Modeling various "real-world" situations by linear equations and inequalities. Setting up and solving equations and inequalities. Exploration of statistical data. Representation of data, interpretation of data, misrepresentation of data. Introduction to the fundamental ideas of statistics; measures of spread and central tendency. Introduction to the fundamental concepts of probability. Counting techniques needed for calculating probabilities. Dependent and independent events. Conditional probability. Odds, expected value. Simulation. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and two hours lab per week. Prerequisite: 220, Curriculum and Instruction 220 or equivalent with a grade of C or better.

322-3 Mathematics Content and Methods for the Elementary School IV. (Same as Curriculum and Instruction 322.) Modern approaches to mathematics instruction for the elementary grades. Mathematics content focuses on: algebra and algebraic thinking, geometry, relations and functions and their applications to real-life problems. Emphasis is placed throughout on reasoning, multiple representations of mathematical concepts, making connections and communication. Two hours lecture and two hours laboratory per week. Prerequisite: 321, Curriculum and Instruction 321 with a grade of C or better.

335-3 Concepts of Geometry. Introduction to the foundations of Euclidean and non-Euclidean geometry with an emphasis on axiom systems, models, and counterexamples. Topics include metric geometry, betweenness, plane separation, congruence, absolute plane geometry, the critical function, and parallelism. Prerequisite: 221 or 250; for secondary education majors concurrent enrollment in Mathematics 302 is highly recommended.

349-3 Introduction to Discrete Mathematics. Numbers, sets, relations and functions; elementary enumeration; introduction to graph theory; logic, partially ordered sets and Boolean algebra; mathematical induction; recurrence relations. Prerequisite: 221.

352-3 Theory of Calculus. An introduction to understanding and writing proofs in mathematical analysis, through a careful study of limits, continuity, the derivative, and the integral. Prerequisite: 221, 250; plus for secondary education majors, 302 or concurrent enrollment in 352e.

352E-1 Analysis as Applied to the Secondary Schools. Two hours per week. Sequences, series, infinite decimals, continuity. Applications to the secondary curriculum. Prerequisite: concurrent enrollment in 352. Mandatory Pass/Fail.

361-3 Numerical Calculus. (Same as Computer Science 361.) Algorithms for the solution of numerical problems encountered in scientific research work with special emphasis on the use of digital computers. Includes an elementary discussion of error, polynomial interpolation, quadrature, solution of nonlinear equations and linear systems, solution of differential equations. Prerequisite: 221 and 250 and Computer Science 202 or equivalent programming proficiency.

380-3 Elements of Probability. Probability as a mathematical system. Axioms, permutations and combinations, random variables, generating functions, limit theorems, and Monte Carlo procedure. Prerequisite: 250 and Computer Science 202.

390-3 to 6 Topics in Contemporary Mathematics. Content will vary according to the instructor. The seminar will introduce students to new and developing areas of mathematics, such as Chaos, Fractals, Algorithms, Fourier Analysis, Difference Equations, etc. Prerequisite: intended for students who have completed Mathematics 150, 221, 250 and either 251 or 305. Other prerequisites may apply. May be repeated as topics vary.

395-1 to 6 Readings in Mathematics. Supervised reading in selected subjects. Prerequisite: 3.00 grade point average in mathematics and consent of chair.

405-3 Intermediate Differential Equations. This course features the study of several sets of differential equations with the aid of computers. The equations are actual applications taken from the areas of biology, chemistry, economics, engineering, finance, medicine and physics. Where possible, problems will be chosen to match student's interests. Students from these areas are particularly welcome. Basic theory of differential equations is cited, particularly as it is needed or encountered in the problems. Prerequisite: 305, but highly motivated students with a good calculus background and an interest in learning to use mathematical software may enroll with permission of the instructor.

406-3 Linear Analysis. An elementary introduction to function spaces and operators as used in quantum mechanics, partial differential equations, etc. Topics include: discrete and continuous models for the vibrating string; separation of variables and eigenfunction analysis; inner product spaces; operators on inner product spaces; the spectral theorem for Hermitian operators on finite dimensional spaces with selected applications; the Courant-Fisher max-min characterization of eigenvalues; the spectral theorem for compact Hermitian operators with selected applications to Sturm-Liouville boundary value problems and Fredholm integral equations. Prerequisite: 221 and 305.

407-3 Introduction to Partial Differential Equations. The purpose of this course is to teach the student how to solve linear partial differential equations that arise in engineering and the sciences. Topics studied will include: the heat equation, the wave equation, Laplace's equation, separation of variables, boundary and initial value problems, uniqueness via the energy methods, the maximum principle and characteristics. Solutions to the vibrating string and dissipation of heat in a bar will be discussed. Prerequisite: 251 and 305.

409-3 Fourier Analysis. A practical modern introduction to the theory, techniques and applications of elementary Fourier analysis. Topics include: the Fourier synthesis and analysis equations for periodic and aperiodic functions on the reals and the integers; convolution; the calculus for finding Fourier transforms, Fourier series and DFT's; operators and their Fourier transforms; the FFT and related algorithms; generalized functions, such as Dirac's delta, the comb, and " $1/x$ ", and selected applications of Fourier analysis to sampling theory, partial differential equations, probability, the synthesis of musical tones, diffraction and wavelets. Prerequisite: 221 and 305.

411-1 to 6 (1 to 3, 1 to 3) Mathematical Topics for Teachers. Variety of short courses in mathematical ideas useful in curriculum enrichment in elementary and secondary mathematics. May be repeated as topics vary. Does not count toward a mathematics major.

412-3 Problem Solving Approaches to Basic Mathematical Skills. Content of basic skills at all levels of education and the development of these skills from elementary school through college; emphasis on problem solving and problem solving techniques; determination of student skills and proficiency level. Credit may not be applied toward degree requirements in mathematics. Prerequisite: 314 or equivalent.

417-3 Applied Matrix Theory. Selected applications of matrices to physics, chemistry and economics. This material is also useful for engineering and computer science. Topics will include matrix representation of symmetry groups, non-negative matrices and the subsidy problem, location of eigenvalues. Prerequisite: 221.

418-3 Computer Algebra Systems. This course presents modern computer algebra systems (CAS) as a research tool in mathematics. The use of a CAS in the preparation of reports, theses and dissertations will also be covered. Topics will include: solving differential equations with a CAS; plotting techniques with a CAS; symbolic packages for such areas as abstract algebra, number theory; and combinatorics; programming with a CAS; exporting results to TeX or word processing software; The AMS-LaTeX package. Prerequisite: graduate standing and consent of instructor.

419-3 Introduction to Abstract Algebra II. A detailed study of polynomial equations in one variable. Solvable groups and the Galois theory of field extensions are developed and applied to extensions of the quadratic formula, proving the impossibility of trisecting an angle with only a straight-edge and a compass, and to the basic facts about finite fields as needed in coding theory and computer science. Prerequisite: 319 or consent.

421-3 Linear Algebra. The extension of basic linear algebra to arbitrary scalars. The theory and computation of Jordan forms of matrices (as needed e.g., for certain diffusion equations). Inner products, quadratic forms and Sylvester's Law of Inertia. Prerequisite: 221.

425-3 Introduction to Number Theory. Properties of integers, primes, divisibility, congruences, quadratic forms, diophantine equations, and other topics in number theory. Prerequisite: 319 or consent of department.

430-3 Introduction to Topology. Study of the real line and the plane, metric spaces, topological spaces, compactness, connectedness, continuity, products, quotients and fixed point theorems. This course will be

particularly useful to students who intend to study analysis or applied mathematics. Prerequisite: 302 or 352 or consent of instructor.

435-3 Elementary Differential Geometry. An introduction to modern differential geometry through the study of curves and surfaces in \mathbb{R}^3 . Local curve theory with emphasis on the Serret-Frenet formulas; global curve theory including Fenchel's theorem; local surface theory motivated by curve theory; global surface theory including the Gauss-Bonnet theorem. Prerequisite: 221 and 251.

447-3 Introduction to Graph Theory. (Same as Computer Science 447.) Graph theory is an area of mathematics which is fundamental to future problems such as computer security, parallel processing, the structure of the World Wide Web, traffic flow and scheduling problems. It is also playing an increasingly important role within computer science. Topics covered include: trees, coverings, planarity, colorability, digraphs, depth-first and breadth-first searches. Prerequisite: 349 or consent of instructor.

449-3 Introduction to Combinatorics. (Same as Computer Science 449.) This course will introduce the student to various basic topics in combinatorics that are widely used throughout applicable mathematics. Possible topics include: elementary counting techniques, pigeonhole principle, multinomial principle, inclusion and exclusion, recurrence relations, generating functions, partitions, designs, graphs, finite geometry, codes and cryptography. Prerequisite: 349 or consent of instructor.

450-3 Methods of Advanced Calculus. This course presents multivariable calculus, an area that is fundamental to fields such as continuum mechanics, differential geometry, electromagnetism, relativity, and thermodynamics. Topics will include: parametric curves and surfaces, the inverse and implicit function theorems, contraction mapping and fixed point theorems, differentials, convergence of multivariate integrals, coordinate systems in space, Jacobians, surfaces, volumes and Green's, Gauss', and Stokes' theorems. The emphasis in this course will be on explicit computations. Prerequisite: 251

452-3 Introduction to Analysis. This course develops the basic mathematical tools that are necessary for the understanding of all other advanced courses in analysis. Its principal content is a rigorous development of one-variable calculus. Topics will include: sets, axioms for the real numbers, continuity and limits, differentiation, the Riemann integral, and infinite sequences and series of functions. If time allows, additional topics may be chosen from areas such as Riemann-Stieltjes integration or the analysis of functions of several variables. Prerequisite: 250.

455-3 Complex Analysis with Applications. This course introduces the mathematical techniques that are commonly used to analyze those problems in the sciences and engineering that are inherently two dimensional in nature. Its content is the analysis of differentiable functions of a single complex variable. Topics will include: the complex plane, analytic functions, the Cauchy-Riemann equations, line integrals, the Cauchy integral formula, Taylor and Laurent series, the residue theorem, and conformal mappings. Applications will be made to topics selected from fluids, electrostatics and control theory. Prerequisite: 251 or consent of instructor.

458-3 Statistical Methods in Business and Industry. The course gives an introduction to statistical techniques using a limited calculus background. Topics covered include probability; random variables; standard distributions such as the binomial, Poisson, normal and exponential; estimation including the method of moments and of maximum likelihood; tests of hypotheses; simple linear regression. Applications to business and engineering problems will be emphasized. The course does not count toward a mathematics major or a mathematics minor. Prerequisite: 140 or equivalent.

460-3 Transformation Geometry. Geometry viewed as the study of properties invariant under the action of a group. Topics include collineations, isometries, Frieze groups, Leonardo's Theorem, the classification of isometries of Euclidean and hyperbolic geometries. Recommended elective for secondary education majors in mathematics. Prerequisite: 221 and 319.

471-3 Optimization Techniques. (Same as Computer Science 471.) An elementary introduction to algorithms for finding extreme values of nonlinear functions of several variables with and without constraints. Topics include: convex sets and functions; the arithmetic-geometric mean inequality; Taylor's theorem for functions of several variables; positive definite, negative definite, and indefinite matrices; iterative methods for unconstrained optimization such as the method of steepest descent; the Kuhn-Tucker algorithm; unconstrained and constrained geometric programming; Lagrange multipliers, and penalty function methods. Students will use a computer to study the numerical properties of these algorithms. Prerequisite: 250 and 221.

472-3 Linear Programming. (Same as Computer Science 472.) An introduction to the theory for finding extreme values of linear functionals subject to linear constraints. Topics include: recognition, formulation, and solution of real problems via the simplex algorithm; development of the simplex algorithm; artificial variables; the dual problem and the duality theorem; complementary slackness; sensitivity analysis; and selected applications of linear programming to integer programming, cutting plane algorithm, the distribution problem, the transportation problem, and the assignment problem. Students will use a computer to study the numerical performance of these algorithms. Prerequisite: 221.

473-3 Reliability and Survival Models. The course provides an introduction to the statistical analysis of data on lifetimes. Topics covered include hazard functions and failure distributions; multicomponent systems; estimation and hypothesis testing in life testing experiments with complete as well as censored data. Engineering applications include standby redundancy; repairable systems preventive maintenance. Bio-medical and actuarial applications will also be discussed. Prerequisite: 458 or 483 or 480 or consent of instructor.

475-6 (3,3) Numerical Analysis. (Same as Computer Science 475.) A practical introduction to the theory and techniques for computation with digital computers. Topics include: the solution of nonlinear equations; interpolation and approximation; solution of systems of linear equations; numerical integration, solution of ordinary differential equations; computation of eigenvalues and eigenvectors; and solution of partial differ-

ential equations. Students will use MATLAB to study the numerical performance of the algorithms introduced in the course. Prerequisite: (a) 221 and 250 (b) 305 and 475a.

480-3 Probability, Stochastic Processes and Applications I. An introduction to the central topics of modern probability including some elementary stochastic processes. A student taking this course will learn about random variables and their properties, including sum of independent random variables and the Central Limit Theorem. In addition, random walks and discrete-time finite state Markov chains will be introduced. Applications to random number generators and image and signal processing will be discussed. Principal topics studied, in addition to those already listed, include generating functions, conditional probability and independence, expectation and moments, covariance and correlation, and characteristic functions. Prerequisite: 251.

481-3 Probability, Stochastic Processes and Applications II. A continuation of Part I with additional emphasis on stochastic processes and applications. Students will see a thorough introduction to Markov processes and Martingales. Principal topics include the laws of large numbers, classification of states, recurrence, and convergence to the stationary distribution in Markov chains, birth processes and Poisson processes, stopping times, and the Martingale convergence theorem. Additional topics may include the renewal equation, stationary processes and the ergodic theorem and their applications, diffusion, and Kalman filtering with applications to signal processing and estimation. Prerequisite: 480.

483-4 Mathematical Statistics in Engineering and the Sciences. The course develops the basic statistical techniques used in applied fields like engineering, and the physical and natural sciences. Principal topics include probability; random variables; expectations; moment generating functions; transformations of random variables; point and interval estimation; tests of hypotheses. Applications include one-way classification data and chi-square tests for cross classified data. Prerequisite: 250.

484-3 Applied Regression Analysis and Experimental Design. The course provides an introduction to linear models and design of experiments used extensively in applied statistical work. Principal topics include linear models; analysis of variance; analysis of residuals; regression diagnostics; randomized blocks; Latin squares; factorial designs. Applications include response surface methodology and model building. Computations are an integral part of the course and will require the use of a statistical package such as SAS. Prerequisite: 483 and 221 or consent of instructor.

485-3 Applied Statistical Methods. The course gives an introduction to sampling methods and categorical data analysis which are widely used in applied areas such as a social and biomedical sciences and business. In sampling methods, topics covered include: simple random and stratified sampling; ratio and regression estimators. In categorical data analysis, topics covered include: contingency tables; loglinear models; logistic regression; model selection; use of a computer package. Prerequisite: 483 or consent of instructor.

495-1 to 6 Special Topics in Mathematics. Individual study or small group discussions in special areas of interest under the direction of a member of the faculty. Prerequisite: consent of chair and instructor.

Mathematics Faculty

Ban, Dubravka, Associate Professor, Dr. Sci., University of Zagreb, 1998.

Beckemeyer, Imogene C., Assistant Professor, *Emerita*, M.A., Southern Illinois University, 1952.

Bhattacharya, Bhaskar, Professor, Ph.D., University of Iowa, 1993.

Budzbah, Gregory, Professor, Ph.D., University of South Florida, 1991.

Burton, T. A., Professor, *Emeritus*, Ph.D., Washington State University, 1964.

Clark, Lane, Professor, Ph.D., University of New Mexico, 1980.

Crenshaw, James, Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1967.

Danhof, Kenneth, Professor, *Emeritus*, Ph.D., Purdue University, 1969.

Dharmadhikari, Sudhakar, Professor, *Emeritus*, Ph.D., University of California at Berkeley, 1962.

Earnest, Andrew, Professor and *Chair*, Ph.D., Ohio State University, 1975.

Elston, George, Assistant Professor, *Emeritus*, M.S., University of Wisconsin, 1949.

Feinsilver, Philip, Professor, Ph.D., New York University (Courant), 1975.

Fitzgerald, Robert W., Professor, Ph.D., University of California at Los Angeles, 1980.

Foland, Neal E., Professor, *Emeritus*, Ph.D., University of Missouri, 1961.

Gates, Leslie D., Associate Professor, *Emeritus*, Ph.D., Iowa State University, 1952.

Gregory, John, Professor, Ph.D., University of California at Los Angeles, 1969.

Grimmer, Ronald C., Professor, Ph.D., University of Iowa, 1967.

Hall, Dilla, Associate Professor, *Emeritus*, Ph.D., St. Louis University, 1955.

Hooker, John W., Professor, *Emeritus*, Ph.D., University of Oklahoma, 1967.

Hughes, Harry R., Associate Professor, Ph.D., Northwestern University, 1988.

Hunsaker, Worthen N., Professor, *Emeritus*, Ph.D., Washington State University, 1966.

Jeyaratnam, Sakthivel, Professor, Ph.D., Colorado State University, 1978.

Kammler, David, Professor, Ph.D., University of Michigan, 1971.

Kirk, Ronald B., Professor, *Emeritus*, Ph.D., California Institute of Technology, 1968.

Koch, Charles, Assistant Professor, *Emeritus*, Ph.D., University of Illinois, 1961.

Kocik, Jerzy, Assistant Professor, Ph.D., Southern Illinois University Carbondale, 1989.

Langenhop, Carl E., Professor, *Emeritus*, Ph.D., Iowa State University, 1948.

Mark, Abraham M., Professor, *Emeritus*, Ph.D., Cornell University, 1947.

Maxwell, Charles, Professor, *Emeritus*, Ph.D., University of Illinois, 1955.

McSorley, John, Assistant Professor, Ph.D., Oxford University, 1988.

Mohammed, Salah-Eldin A., Professor, Ph.D., University of Warwick (England), 1976.

- Moore, Robert A.**, Associate Professor, *Emeritus*, Ph.D., Indiana University, 1961.
- Mugdadi, Abdel-Razzaq**, Associate Professor, Ph.D., Northern Illinois University, 1999.
- Neuman, Edward G.**, Professor, Ph.D., University of Wrocław (Poland), 1972.
- Olive, David**, Associate Professor, Ph.D., University of Minnesota, 1998.
- Paine, Thomas B.**, Assistant Professor, *Emeritus*, Ph.D., University of Oregon at Eugene, 1966.
- Panchapakesan, S.**, Professor, *Emeritus*, Ph.D., Purdue University, 1969.
- Parker, George D.**, Associate Professor, Ph.D., University of California at San Diego, 1971.
- Patula, William T.**, Professor, *Emeritus*, Ph.D., Carnegie-Mellon University, 1971.
- Pedersen, Franklin D.**, Associate Professor, *Emeritus*, Ph.D., Tulane University, 1967.
- Pericak-Spector, Kathleen**, Professor, Ph.D., Carnegie-Mellon University, 1980.
- Porter, Thomas D.**, Professor, Ph.D., University of New Mexico, 1990.
- Redmond, Donald**, Associate Professor, Ph.D., University of Illinois, 1976.
- Schurz, Henri**, Associate Professor, Ph.D., Humboldt University, Berlin, 1997.
- Spector, Scott J.**, Professor, Ph.D., Carnegie-Mellon University, 1978.
- Sullivan, Michael**, Professor, Ph.D., University of Texas at Austin, 1992.
- Tall, Issa**, Assistant Professor, Ph.D., Institut National des Sciences Appliquées, 2004.
- Wallis, Walter**, Professor, Ph.D., University of Sydney, 1968.
- Wilson, Joseph C.**, Professor, *Emeritus*, Ph.D., Louisiana State University, 1954.
- Wright, Mary H.**, Professor, Ph.D., McGill University (Montreal), 1977.
- Xiao, Ming Quing**, Associate Professor, Ph.D., University of Illinois, 1997.
- Xu, Dashun**, Assistant Professor, Ph.D., Memorial University of Newfoundland, 2004.
- Xu, Jianhong**, Assistant Professor, Ph.D., University of Connecticut, 2003.
- Yucas, Joseph**, Professor, Ph.D., Pennsylvania State University, 1978.
- Zeman, Marvin**, Professor, Ph.D., New York University (Courant Institute), 1974.

Mechanical Engineering and Energy Processes

(Department, Major [Mechanical Engineering], Courses, Faculty)

The mission of the Department of Mechanical Engineering and Energy Processes is to provide high quality engineering education to students and equip them with lifelong learning skills, which allow them to adapt to a changing work environment throughout their careers. Also, the Department of Mechanical Engineering and Energy Processes supports faculty growth and development through research and creative activities because quality teaching and service to humanity and society cannot be achieved without such activities. Finally, the Department of Mechanical Engineering and Energy Processes supports the ideal of service to department, college, university, professional societies and community as part of the mission. The Mechanical Engineering program leading to the Bachelor of Science degree at SIUC is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (111 Market Pl., Suite 1050, Baltimore, MD. 21202-4012: Telephone (410) 347-7700), the recognized agency for accrediting engineering curricula in the United States. The department also offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees.

Bachelor of Science Degree in Mechanical Engineering

The fundamental goal of the undergraduate program in Mechanical Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives for our students.

1. To provide students with the education, the skills and the attributes necessary in such areas as mathematics and basic sciences to allow them to successfully compete for quality jobs in all major areas of mechanical engineering and in all functions of mechanical engineering employment.
2. To provide students with communication skills, extensive design experience, familiarity with modern computer and software tools and the ability to work effectively in a team environment. These will ensure successful integration in the team-oriented industrial workplace, and the timely advancement of their careers.

3. To provide quality laboratory training and experiences in all major areas of mechanical engineering.

4. To provide students the broad education necessary to understand the impact of engineering solutions in a global and societal context. To accomplish this objective, the general education component of the curriculum places increased emphasis in the areas of humanities and engineering economics.

5. To equip students with lifelong learning skills, which will allow them to successfully adapt to the evolving technologies throughout their professional careers.

6. To provide students a solid foundation in basic sciences and engineering which will allow them to successfully pursue graduate studies.

7. To provide students the opportunity to experience the unique interdisciplinary feature of the department which includes the faculty backgrounds and research in the four thrust areas of mechanical systems, thermal sciences, chemical processes and materials engineering. This is a feature characteristic of the program, designed to provide our graduates with a unique advantage.

8. To provide students with an opportunity to support the ideal of service by encouraging them to actively participate in the student chapters of relevant professional societies and extra-curricular activities.

Mechanical engineering is one of the broadest fields of engineering. Mechanical engineers learn measurement and instrumentation, computer-aided design, computer simulation, computer control, combustion and engine analysis. They learn to design thermal systems for mechanical and electrical equipment including heating, ventilating, air conditioning and refrigeration. Students learn how to design and produce new materials for advanced engineering applications. Courses are also offered in subjects related to the chemical processes and environmental control industries. Graduates are highly sought after in a variety of industries such as automotive, aerospace and manufacturing.

Bachelor of Science Degree in Mechanical Engineering, College of Engineering

<i>University Core Curriculum Requirements</i>	41 ¹
Foundations	12
English 101, 102, Speech Communication 101 and substitute	
Mathematics	
Disciplinary Studies	23
Fine Arts	3
Human Health (Biology 202 or Physiology 201 or an approved substitute)	2
Humanities	6 ^{2,3}
Social Science	6 ^{2,3}
Science (substitute Physics and Chemistry)	6 ¹
Integrative Studies	6
Multicultural	3
Interdisciplinary	3 ²
<i>Requirements for Major in Mechanical Engineering</i>	(9) + 86
Basic Sciences	(6) + 9
Chemistry 200, 201, 210	(3) + 4
Physics 205a,b, 255a,b	(3) + 5
Mathematics Analysis	(3) + 14
Mathematics 150, 250, 251, 305	(3) + 11
Engineering 351	3
Mechanical Engineering	63
General:	
Engineering 102, 222b, 400, and Mechanical Engineering	
101 and 361	8
Engineering Sciences	29

Engineering 300, 312 and 335; Mechanical Engineering 261, 302, 309 and either 301 or 400; Civil Engineering 250, 350a and 370a	
Mechanical Engineering 411, 436, 475, 495a,b	12
Engineering Laboratory	3
Mechanical Engineering 401 and 407	
Elective Engineering Design Courses	11 ⁴
Total	127

¹Courses required for the major will apply toward nine hours of University Core Curriculum, a total of 41 in that area.
²Engineering requirements for University Core Curriculum are more restrictive than those of the University as a whole.
³Transfer students holding an Associate of Arts or Associate of Science degree in a baccalaureate oriented program must have 15 hours of advisor-approved social science and humanities classes. See departmental advisor for approved courses. Students transferring from other programs or institutions will be required to meet the University Core Curriculum requirements for engineering students.
⁴See department guidelines for appropriate electives.

Mechanical Engineering Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BIOL 202 ¹	-	2	Core Humanities ¹	-	3
CHEM 200, 201	4	-	Core Social Science ¹	3	-
CHEM 210	-	3	ENGR 222b, ME 261	2	3
ENGL 101, 102	3	3	CE 250, 350a	3	3
ENGR 102	2	-	MATH 251, 305	3	3
MATH 150, 250	4	4	PHYS 205b, 255b	4	-
ME 101	2	-	SPCM 101, ME 361	3	1
PHYS 205a, 255a	-	4	ENGR 300	-	3
Total	15	16	Total	18	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Fine Arts ¹	-	3	Core Humanities ¹	3	-
Core Social Science ¹	3	-	Core Integrative Studies ¹	3	3
ENGR 312, ME 302	3	3	ME 401, 411	1	2
CE 370a	3	-	ME 436	3	-
ENGR 335	3	-	ME 407	-	2
ENGR 351, 400	3	1	ME 475	3	-
ME 309, ME 301 or 400	2	3	ME 495a,b	1	3
ME Design Elective	-	6	ME Design Elective	3	2
Total	17	16	Total	17	12

¹ See University Core Curriculum.

Mechanical Engineering (ME)

Safety glasses, an electronic calculator, and textbooks are required of all mechanical engineering students.

- 101-2 Introduction to Mechanical Engineering.** Introduction to engineering fields and to mechanical engineering. Activities which provide the student with tools for greater academic success, professional awareness, teamwork and engineering success are explored. Introduction to design principles and creativity in class projects. Prerequisite: enrollment in mechanical engineering, Mathematics 111 or equivalent, working knowledge of word processing and spreadsheet is highly desirable .
- 261-3 Mechanical Engineering Dynamics.** Fundamentals of particle and rigid body dynamics. Kinematics and kinetics of a single particle and system of particles. Application of Newton's laws and energy and moment principles in solving problems involving particles or rigid bodies in planar motion. Introduction to kinetics of rigid bodies in three dimensions. Prerequisite: CE 250.
- 301-3 Engineering Thermodynamics II.** Combined first and second law analysis; availability and reversibility. Third Law. General thermodynamic relations. Reactive systems. Thermodynamic equilibrium. Phase Rule. Applications. Thermodynamics of one dimensional fluid flow. Prerequisite: Engineering 300.
- 302-3 Engineering Heat Transfer.** Fundamentals of heat transfer by conduction, convection and radiation. Applications of theory to engineering systems. Prerequisite: Engineering 300, Civil Engineering 370a and Mathematics 305.
- 309-2 Mechanical Analysis and Design.** Kinematics and kinetics of inter-connected bodies. Principles of kinematics and force analyses of planar machinery. Analytical and numerical techniques for finding displacement, velocity and acceleration. Design of linkage, cam-follower mechanisms and gear trains. Prerequisite: 261 and Engineering 222b.
- 361-1 Engineering Economics.** Present, future and annual worth, rate of return and incremental rate of return methods of comparing alternative engineering projects and designs; bonds, depreciation and tax considerations. Application of basic statistical concepts and spreadsheets for problem solutions. Professional engineering exams include these course materials. Prerequisite: 101, Mathematics 111 or equivalent.
- 392-1 to 6 Mechanical Engineering Cooperative Education.** Supervised work experience in industry, government or professional organization. Students work with on-site supervisor and faculty advisor. Reports

are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Prerequisite: sophomore standing.

393-1 to 12 Internship in Mechanical Engineering. Credit for documented work experience as an intern in an engineering occupation or an engineering-related occupation. Work assignments must have been professional service in the mechanical engineering field. Hours do not count toward degree requirements. Mandatory Pass/Fail. Prerequisite: satisfactory completion of twelve hours of Engineering and/or Mechanical Engineering courses.

400-3 Engineering Thermodynamics II. Combined first and second law analysis: Exergy analysis; Analysis of power and refrigeration cycles. Detailed treatment of gas and vapor cycles including gas and steam cycles; Thermodynamics of combustion and reaction of mixtures; Introduction to thermodynamic property relations, chemical and phase equilibrium. Prerequisite: Engineering 300.

401-1 Thermal Measurements Laboratory. Study of basic measurements used in the thermal sciences. Calibration techniques for temperature and pressure sensors. Thermal measurements under transient and steady-state conditions. Applications include conduction, convection and radiation experiments. Uncertainty analysis. The handling and reduction of data. Prerequisite: 302.

402-3 Heat Exchange Equipment Design. Engineering design of heat exchange equipment such as boilers, evaporators, cooling towers, furnaces and systems involving combinations of conduction, convection and radiation mechanisms. Emphasis is placed on application of basic principles of heat transfer and fluid mechanics to the design of heat exchange equipment. Students are encouraged to work open-ended problems with multiple possible solutions. Prerequisite: 302.

404-4 Optimization of Process Systems. Simulation and optimization of process systems based upon engineering science and economic fundamentals. Analysis and correlation of experimental engineering data and use of correlated data in simulation, design and decision making. Design of systems using economics and continuous and discrete optimization methods encountered in engineering practice. Use of the computer is required. Prerequisite: 361 or Engineering 361, Mathematics 305 and senior standing in engineering.

405-3 Internal Combustion Engines and Gas Turbines. Operation and performance characteristics of Otto, Diesel, Wankel engines and gas turbines. Methods of engine testing, types of fuels and their characteristics, fuel metering systems, engine combustion analysis as related to engine performance, fuel characteristics and air pollution, exhaust gas analysis, and air pollution control. Prerequisite: Engineering 300.

406-3 Thermal Systems Design. Applications of the principles of engineering analysis to the design of thermal systems. Consideration of such systems as refrigeration, air conditioning, spacecraft thermal control and cogeneration. Numerical analysis and solution of an open-minded design problem. Prerequisite: 302, Engineering 351.

407-2 Mechanical Engineering Measurements and Controls. Laboratory to familiarize students with the use of instruments to measure time, distance, velocity, acceleration, strain, fluid flow and turbulence. Instruments include micrometers, laser distance meters, stroboscopes, oscilloscopes, incremental rotary encoder, LVDT, load cells accelerometers, analog/digital converters, pressure transducers, and related equipment. Application of control principles to mechanical engineering systems. Speed and position control using computer-based instrumentation. Pneumatic control temperature and flow sensing and control. Automatic control of servo systems. Process control and Programmable Logic Controller (PLC) applications. Not for graduate credit. Prerequisite: 436.

408-3 Energy Conversion Systems. Principles of advanced energy conversion systems; nuclear power plants, combined cycles, magnetohydropromagnetics, cogeneration (electricity and process steam), and heat pumps. Constraints on design and use of energy conversion systems; energy resources, environmental effects, and economics. Prerequisite: 301 or 400.

410-3 Applied Chemical Thermodynamics and Kinetics. Designed for students interested in chemical and environmental processes and materials science. Topics covered include applications of the Second and Third Laws of Thermodynamics, solution theory, phase equilibria, sources and uses of thermodynamic data, classical reaction rate theory, kinetic mechanisms and the determination of rate-determining steps in chemical reactions. Prerequisite: Chemistry 200, 201, Engineering 300 or consent of instructor.

411-2 Manufacturing Methods for Engineering Materials. Overview of manufacturing processes with emphasis on the fabrication of materials from the processing and equipment viewpoint. This course presents a broad study of the many manufacturing processes utilized in the production of a wide variety of products and components. Insight into the multitude of processing factors which influence the practical design of manufactured parts to achieve the advantages of maximum economy, accuracy and automation in everyday production. Not for graduate credit. Prerequisite: Engineering 312 and Civil Engineering 350a.

416-3 Air Pollution Control. Engineering control theory, procedure, equipment, and economics related to control of particulate, gaseous, and toxic air emissions. The environmental impacts due both to controlling and not controlling emissions are considered. Understanding of the basics is evaluated as students design control equipment, specify and troubleshoot control systems and predict the impacts for each major type of control system. Prerequisite: Senior standing.

419-3 Hazardous Waste Incineration. Incineration techniques, procedures and systems are presented for solid waste disposal and for remedial site clean-up activities. This includes regulations, waste handling, emission controls and residue disposal. Thermodynamics, chemistry and equipment are discussed, including heat recovery. Prerequisite: 416 or consent of instructor.

422-3 Applied Fluid Mechanics for Mechanical Engineers. Applications of fluid mechanics in internal and external flows. The mathematical basis for inviscid and viscous flows calculations is developed with application to pipe and duct flows; external flow about bodies; drag determination; turbomachinery; and reaction propulsion systems. Semester design project of a fluid mechanical system. Prerequisite: Engineering 300, Civil Engineering 370a and Mathematics 305.

423-3 Compressible Flows. Foundation of high speed fluid mechanics and thermodynamics. One-dimensional flow, isentropic flow, shock waves and nozzle and diffuser flows. Flow in ducts with friction and heat transfer. Prandtl-Meyer flow. Compressibility effects in reaction propulsion systems. Semester design project. Prerequisite: Engineering 300, Civil Engineering 370a.

435-3 Design of Mass Transfer Processes. Design principles of mass transfer processes. The rate mechanism of molecular, convective and interphase mass diffusion. The design of selected industrial mass transport process operations such as absorption, humidification, water-cooling, drying and distillation. Prerequisite: 302.

436-3 Mechanical Engineering Control. Analysis and design of controls for mechanical engineering systems: mechanical, electrical thermal, fluid and combinations. Prerequisite: 261 Engineering 300, 335, 351.

440-3 Heating, Ventilating, and Air Conditioning Systems Design. Principles of human thermal comfort. Heating and cooling load analysis. HVAC system design. Air conditioning processes. Prerequisite: 302.

446-3 Energy Management. Fundamentals and various levels of analysis for energy management of commercial buildings and industrial processes and buildings. Use of energy management systems and economic evaluations are required in course projects. Prerequisite: 302.

463-3 Introduction to Ceramics. Structure and physical properties, mechanical properties, processing and design of ceramics. Prerequisite: Engineering 312 or equivalent.

465-3 Introduction to Nanotechnology. Survey of the rapidly developing fields of nanometer science and engineering. Impact on society; principles of self-assembly; production and properties of nano-materials; cell mechanism as a model for assemblers; nano-tools; and nano-systems are explored. Prerequisite: Chemistry 210.

468-3 Friction Science and Applications. Study of systems and materials used for friction applications with a focus on aerospace and ground transportation vehicles. Course covers theories and experimental methods regarding friction and wear, contact mechanics, friction materials, vibration and noise, thermal transport and thermo-elastic phenomena. The course approach uses a materials emphasis. Lectures are complemented by exposure to laboratory methods and equipment. Design of a friction component, system or testing device. Prerequisite: Engineering 312 and senior standing or consent of instructor.

470-3 Mechanical System Vibrations. Linear vibration analysis of mechanical systems. Design of mechanical systems to include effects of vibration. Prerequisite: 261, Engineering 351, Mathematics 305.

472-3 Materials Selection for Design. Interaction of material design process with material selection criteria. Comparison of materials properties, processes and fabrication. Project work includes design models, materials selection rationale, oral presentation of projects, construction of mock-up models, and theoretical design problems in the area of the student's specialization. Prerequisite: Engineering 222b, 312.

475-3 Machine Design I. Design of machines using bearings, belts, clutches, chains and brakes. Develops application of the theory of fatigue, power transmission and lubrication to the analysis and design of machine elements. Prerequisite: Engineering 351 and Civil Engineering 350a.

476-3 Machine Design II. Design of machines using gears, springs, screws and fasteners, and adhesives. Matching power sources to driven machines. Prerequisite: 475.

477-3 Fundamentals of Computer-Aided Design and Manufacturing. Introduction to the concepts of computer-aided design and manufacturing (CAD/CAM). Subjects include computer graphics, geometric modeling, engineering analysis with FEM, design optimization, computer numerical controls, project planning, and computer integrated manufacturing. (CIM). Students are required to use computer packages for projects. Prerequisite: 475 or consent of instructor.

478-3 Finite Element Analysis is CAD. Course to cover a multitude of topics in CAD/CAE with emphasis on finite element modeling and analysis. Overview of CAD/CAM/CAE; FEA software; FEA problems including trusses, beams, frames, thermal analysis and fluid mechanics; design optimization; rapid prototyping. Students are required to use FEA software for homework assignments and a design project. Prerequisite: 475 or consent instructor.

480-3 Computational Fluid Dynamics. Application of computational fluid dynamics techniques to the solution of problems in engineering heat transfer and fluid flow. Discretization techniques; stability analysis. Introduction to grid generation. Prerequisite: Engineering 351, Civil Engineering 370, Mechanical Engineering 302 or consent of instructor.

492-1 to 5 Special Problems in Engineering. Engineering topics and problems selected by either the instructor or the student with the approval of the instructor. Five hours maximum course credit. Not for graduate credit. Prerequisite: senior standing and consent of instructor.

495-4 (1,3) Mechanical Engineering Design. (a) Project development skills, feasibility and cost-benefit analysis, ethical issues, professionalism, preliminary design, identification of tasks, assignment of tasks to project team members, coordination of interdisciplinary team effort, development of final proposal, oral presentation of final proposal. Prerequisite: Senior standing in mechanical engineering (second to last semester) (b) Development of the final design, hardware implementation of the final design (if the project warrants), documentation of all stages of design, project coordination, documentation of the testing and evaluating of the design, cost estimating, scheduling, and written, oral, and poster presentation of the final design. Not for graduate credit. Prerequisite: Mechanical Engineering 495a, (last semester).

Mechanical Engineering and Energy Processes Faculty

Abrate, Serge, Professor, Ph.D., Purdue University, 1983.

Agrawal, Om, Professor, Ph.D., University of Illinois at Chicago, 1984.

Blackburn, James W., Professor, Ph.D., University of Tennessee, 1988.

Chen, Juh W., Professor, *Emeritus*, Ph.D., University of Illinois, 1959.

Chu, Tsuchin, Professor, Ph.D., University of South Carolina, 1982.

Don, Jarlen, Associate Professor, Ph.D., Ohio State University, 1982.

Esmaeeli, Asghar, Assistant Professor, Ph.D., University of Michigan, 1995.

Farhang, Kambiz, Professor, Ph.D., Purdue University, 1989.

Filip, Peter, Professor, Ph.D., Technical University Ostrava, Czech Republic, 1989.

Helmer, Wayne Allen, Professor, *Emeritus*, Ph.D., Purdue University, 1974.

Hippo, Edwin J., Professor, Ph.D., Pennsylvania State University, 1977.

Jefferson, Thomas B., Professor, *Emeritus*, Ph.D., Purdue University, 1955.

Kent, Albert C., Professor, *Emeritus*, Ph.D., Kansas State University, 1968.

Koc, Rasit, Professor, Ph.D., University of Missouri-Rolla, 1989.

Mahajan, Ajay, Professor, Ph.D., Tulane University, 1994.

Mathias, James A., Assistant Professor, Ph.D., Ohio State University, 2001.

Muchmore, Charles B., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.

Nsofor, Emmanuel C., Associate Professor, Ph.D., Mississippi State University, 1993.

O'Brien, William S., Associate Professor, *Emeritus*, Ph.D., West Virginia University, 1972.

Orthwein, William, Professor, *Emeritus*, Ph.D., University of Michigan, 1959.

Rajan, S., Professor, *Emeritus*, Ph.D., University of Illinois, 1970.

Swisher, George M., Professor, *Emeritus*, Ph.D., Ohio State University, 1969.

Swisher, James H., Professor, *Emeritus*, Ph.D., Carnegie-Mellon University, 1963.

Szary, Marek L., Associate Professor, Ph.D., Technical University of Wroclaw, Poland.

Tempelmeyer, Kenneth E., Professor, *Emeritus*, Ph.D., University of Tennessee, 1969.

Weston, Alan J., Associate Professor, Ph.D., Southern Illinois University, 1991.

Wiltowski, Tomasz, Associate Professor, Ph.D., Institute of Catalysis and Surface Chemistry, 1982.

Wittmer, Dale, Professor, Ph.D., University of Illinois, 1980.

Wright, Maurice, Professor, *Emeritus*, Ph.D., University of Wales, 1962.

MEDPREP (Medical/Dental Education Preparatory Program)

MEDPREP is a post baccalaureate program within the Southern Illinois University School of Medicine. MEDPREP is a certificate-granting program. Courses are restricted to MEDPREP students only. Admission to MEDPREP is by direct application to the program. Contact the MEDPREP admissions coordinator for information.

Courses (MEDP)

400-1 to 6 (1 per semester) MEDPREP Seminar. Seminar on social, professional, and scientific issues of interest to students planning a career in medicine or dentistry. Topics: (a) Orientation; (b) Medical/dental seminar. Required of MEDPREP participants. Prerequisite: restricted to MEDPREP students. Must be taken in a,b sequence. Mandatory Pass/Fail.

401-1 to 27 (1 to 3 per topic) MEDPREP Basic Skills. Focus on skills critical for academic success in preprofessional and professional training. Topics: (a) Learning skills; (b) Prematriculation (P/F only); (c) Quantitative skills (P/F only); (d) Problem Based Learning (P/F only); (e) Convocation (S/U only); (f) Reasoning in reading and writing I; (g) Reasoning in reading and writing II; (h) Reasoning in reading and writing III; (i) Other (P/F only). Topic (a) and (e) required of all students. Not for graduate credit. Prerequisite: restricted to MEDPREP students only.

402-1 to 13 (a,b,c,e,f 1 to 2 per topic, d: 3 hours) MEDPREP Special Problems. Seminars, workshops, lectures, and field experiences related to preparing the student for medical/dental school and careers in medicine or dentistry. Topics: (a) MCAT/DAT orientation; (b) Research seminar; (c) Clinical experience, mandatory pass/fail; (d) Independent research, mandatory pass/fail; (e) Independent readings; (f) Other. Not for graduate credit. Prerequisite: restricted to MEDPREP students.

403-1 to 33 (1 to 3 for sections a,b,c,d,e,f, i; 1 to 6 for sections g and h) MEDPREP Biology Problem-Solving. Depending on individual need content will be remedial, supplementary to concurrent Biological Science courses or additional permitting acceleration or preparational for the MCAT. Topics: (a) Medical genetics; (b) Anatomy; (c) Cardiovascular physiology; (d) Embryology; (e) Immunology; (f) Endocrinology; (g) Biology review; (h) Neural science; (i) Biology problem solving. Not for graduate credit. Prerequisite: restricted to MEDPREP students.

404-1 to 18 (1 to 3 per topic) MEDPREP Chemistry Review. Content may be remedial, supplemental to concurrent preprofessional chemistry courses; additional permitting acceleration, or preparational for the MCAT. Topics (a) Inorganic review; (b) Inorganic; (c) Organic review; (d) Organic; (e) Biochemistry; (f) Chemistry problem solving. Not for graduate credit. Prerequisite: restricted to MEDPREP students.

405-1 to 9 (1 to 6 per topic a, 1 to 3 for topic b) MEDPREP Physics Review. Content may be remedial, supplemental to concurrent preprofessional physics courses, additional permitting acceleration, or

preparational for the MCAT. Topics: (a) Physics review; (b) Physics problem solving. Not for graduate credit. Prerequisite: restricted to MEDPREP students.

MEDPREP Faculty

Bardo, Harold R., *Director, Associate Chair*, Department of Medical Education Carbondale, Assistant Dean for Minority Affairs and Counseling, Executive Assistant to the Dean for Diversity, Educational Psychology, Ph.D., Southern Illinois University, 1972.

Chaklos, Mary S., Visiting Instructor, Chemistry and Biochemistry, Ph.D., Southern Illinois University, 1979.

Henry, Paul, Associate Professor, Counselor Education/Educational Psychology, Ph.D., Southern Illinois University, 1982.

Herrold, Linda K., Visiting Instructor, Mathematics, M.S., Southern Illinois University, 1990.

Jackson, Evelyn W., Associate Professor, *Emerita*, Education/Reading, Ph.D., Southern Illinois University, 1975.

Jones, Kathleen A., Visiting Instructor, Biological Sciences, M.S., Southern Illinois University, 1990.

Kaplan, Harold M., Visiting Professor, Physiology, Ph.D., Harvard University, 1933.

McGlinn, Shirley, Instructor, Zoology, M.S., Southern Illinois University, 1975.

Paul, Gina, Assistant Professor, Education/Reading, Ph.D., Southern Illinois University, 2001.

Szary, Barbara, Instructor, Immunology, Ph.D., Institute of Immunology and Experimental Therapy, Poland, 1977.

Microbiology (Department, Major, Courses, Faculty)

Microbiology is the study of microorganisms, a large and diverse group of organisms that exist as single cells or cell clusters. The science of microbiology includes the study of microbial growth, biochemistry, genetics and ecology and the relationship of microorganisms to other organisms including humans. As a basic biological science, microbiology provides some of the most accessible research tools for probing the nature of life processes. Our sophisticated understanding of the chemical and physical principles governing life has developed from studies of microorganisms. As an applied biological science, microbiology deals with many important practical problems in medicine, agriculture, biodegradation and food industries, and is at the heart of biotechnology industries. Students pursuing a major in microbiology will have an opportunity to take coursework related to these important areas. Chemistry is also an integral part of modern microbiology. Therefore, general and organic chemistry are required for the microbiology major. The chemistry courses required for the microbiology degree satisfy the requirements for a chemistry minor. In addition, opportunities for undergraduate research in microbial biochemistry, genetics and diversity, as well as in immunology and molecular biology are available for outstanding undergraduate students. The microbiology major, chemistry minor and undergraduate research options are strong assets for students who seek careers in health care professions or industrial microbiology, or who seek graduate training in microbiology or related disciplines.

The following program of study prepares students for research or teaching positions after the bachelor's degree or for advanced study in graduate programs in microbiology, molecular biology or cell biology. A grade of *C* or better must be earned in Microbiology 301 and 302 to fulfill degree requirements. Transfer courses used for Microbiology 301 and 302 equivalencies must have a *C* grade or better. An overall grade point average of 2.00 or better for all microbiology courses is required to satisfy degree requirements. A student cannot repeat a course or its equivalent in which a grade of *B* or better was earned without the consent of the department.

Bachelor of Science Degree in Microbiology, College of Science

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	6

Supportive skills coursework consisting of a minimum of six semester hours selected from: Computer Science 200b or 201; Eng-

lish 291, 491; Mathematics 282 or 283 or Plant Biology 360; any two-semester sequence of one of the following foreign languages: 200-level French, German, Japanese, Russian or Spanish.

<i>Requirements for Major in Microbiology</i>	68
Biology 200a,b	6 ²
Microbiology 301, 302, 403, 460, 480, 481 and 495	22
Microbiology electives	12
Senior level work consisting of lecture courses selected from: 421, 423, 425, 453, 454, 470	
Chemistry 200, 201, 210, 211, 340, 341 and 342	16 ²
Mathematics 141 or 150	4 ²
Physics 203a,b and 253a,b	8 ²
<i>Electives</i>	5
<i>Total</i>	120

¹The 41 hour requirement may be reduced by taking College of Science or major requirements which are approved substitutes for University Core Curriculum requirements.

²These courses meet the College of Science requirements for biological sciences, physical sciences and mathematics.

Microbiology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
BIOL 200a,b	3	3	CHEM 340, 341, Humanities... ..	5	3
CHEM 200, 201, Fine Arts	4	3	MATH 141, CS 201	4	3
CHEM 210, 211	-	4	MICR 301, 302	4	3
ENGL 101, 102	3	3	SPCM 101, CHEM 342	3	3
MATH 108, 109	3	3	Social Science	-	3
<i>Total</i>	13	16	<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Human Hlth, Interdisciplnry .	2	3	MICR 421 or 425, MICR 453 ...	3	3
Humanities, MATH 282	3	3	MICR 423 or 454	3	-
MICR 460, 403	3	3	MICR 470, MICR 495	-	4
PHYS 203a, 253a	4	-	MICR 480, 481	4	4
PHYS 203b, 253b	-	4	Multicultural	3	-
Social Science, Elective	3	3	Elective	2	3
<i>Total</i>	15	16	<i>Total</i>	15	14

Minor

A minor in microbiology consists of 16 semester hours, to include 301, 302, and other courses determined by the student in consultation with the microbiology adviser.

Courses (MICR)

201-4 Elementary Microbiology. (Advanced University Core Curriculum course) [IAI Course: L1 903L] Basic concepts of microbiology, classification, metabolic activity and the effect of physical and chemical agents on microbial populations. Host-parasite interactions. Infectious agents, methods of transmission and control. Three hours lecture and three hours laboratory per week. Spring semester. Satisfies the University Core Curriculum Science Group II requirement in lieu of Plant Biology 115 or Zoology 115. Lab fee: \$10. Prerequisite: Recommended for students of Allied Health Careers, Dental Hygiene, Dental Technology, Respiratory Therapy, Health Care Management, Animal Science and others.

301-4 Principles of Microbiology. Morphology, structure, metabolism, population dynamics and heredity of the microorganisms with emphasis on pure culture methods of study of bacteria, viruses and related organisms. Three hours lecture, three hours laboratory. Fall semester. Lab fee: \$10. Prerequisite: one year of college chemistry and Biology 200a, or Plant Biology/Zoology 115 or Zoology 118.

302-3 Molecular Biology. Molecular structure, dynamics, and genetics of living cells and viruses with particular attention to the transfer of biological information. Spring semester. Prerequisite: one year of college chemistry and Biology 200a.

403-3 Medical Microbiology Lecture. (Same as Molecular Biology, Microbiology and Biochemistry 403.) A survey of the more common bacterial, mycotic and viral infections of humans with particular emphasis on the distinctive properties, pathogenic mechanisms, epidemiology, immunology, diagnosis and control of disease-causing microorganisms. Three hours lecture. Spring semester. Prerequisite: 301.

405-3 Clinical Microbiology. (Same as Molecular Biology, Microbiology and Biochemistry 405.) This course will be offered in Springfield only. A comprehensive course for health science professionals covering the biology, virulence mechanisms, and identification of infectious agents important in human disease and host-defense mechanisms. Clinical applications emphasized. Three hours lecture. Prerequisite: 301 or equivalent.

421-3 Biotechnology. (Same as Molecular Biology, Microbiology and Biochemistry 421.) Topics covered will include the genetic basis of the revolution in biotechnology, medical applications including genetic screening and therapeutic agents, industrial biotechnology and fermentation, and agricultural applications. Three hours lecture. Fall semester. Prerequisite: 302.

423-3 Geomicrobiology. (Same as Molecular Biology, Microbiology and Biochemistry 423 and Geology 423.) The course will focus on the role that microorganisms play in fundamental geological processes. Topics will include an outline of the present understanding of microbial involvement of weathering of rocks, formation and transformation of soils and sediments, and genesis and degradation of minerals. Elemental cycles will also be covered with emphasis on the interrelationships between the various geochemical cycles and the microbial trophic groups involved. Prerequisite: 301 and Chemistry 210 and 211. Recommended: Geology 220, 221 or 222.

425-3 Biochemistry and Physiology of Microorganisms Lecture. (Same as Molecular Biology, Microbiology and Biochemistry 425.) Chemical composition, cellular structure, and metabolism of microorganisms. Fall semester. Prerequisite: organic chemistry.

453-3 Immunology Lecture. (Same as Molecular Biology, Microbiology and Biochemistry 453.) Principles of molecular and cellular immunology. Particular emphasis is given to molecular mechanisms involved in activation and maintenance of the immune response at the basic science level. The role of the immune system in medical diagnostic procedures and in human health is also discussed. Spring semester. Prerequisite: 403 or permission of instructor.

454-4 Soil Microbiology. (Same as Plant and Soil Science 454.) A study of microbial numbers, characteristics, and biochemical activities of soil microorganisms with emphasis on transformation of organic matter, minerals, and nitrogen in soil. Lab fee \$15.00. Prerequisite: 301 or Plant and Soil Science 240.

455-2 Medical Immunology. (Same as Molecular Biology, Microbiology and Biochemistry 455.) This course will be offered in Springfield only. A survey of the components of the immune system and how they interact with each other to produce responses that are important in the control or mediation of human disease. Two hours lecture. Prerequisite: 301 or equivalent.

460-3 Genetics of Bacteria and Viruses. (Same as Molecular Biology, Microbiology and Biochemistry 460.) Genetic mechanisms, mutation, transformation, recombination, transduction, lysogeny, phenotypic mixing and reactivation phenomena. Three hours lecture. Fall semester. Prerequisite: 301 and 302.

470-3 Prokaryotic Diversity Lecture. (Same as Molecular Biology, Microbiology and Biochemistry 470.) A consideration of the major groups of prokaryotes with special emphasis on their comparative physiology and biochemistry. Three hours lecture. Spring semester. Prerequisite: 301 or equivalent.

480-4 Molecular Biology of Microorganisms Laboratory. (Same as Molecular Biology, Microbiology and Biochemistry 480.) Genetic and biochemical analyses of microorganisms using a variety of techniques in molecular biology, molecular genetics and biotechnology. Six hours laboratory per week plus two hours of supervised unstructured laboratory work in most weeks. Lab fee: \$20. Prerequisite: 301 and 302 with a C grade or better and two (or concurrent enrollment in two) of the following: 421, 423, 425 or 460.

481-4 Diagnostic and Applied Microbiology Laboratory. (Same as Molecular Biology, Microbiology and Biochemistry 481.) Enrichment and isolation of medically relevant prokaryotes from natural samples, diagnostic methods for the identification of pathogenic bacteria and infection and the nature of the immune response. Six hours laboratory per week plus two hours unstructured, supervised laboratory work in most weeks. Lab fee: \$20. Prerequisite: 301 and 302 with a C grade or better and two (or concurrent enrollment in two) of the following: 403, 453 or 470.

490-1 to 3 Undergraduate Research Participation. Investigation of a problem either individually or as part of a research group under the direction of a member of the faculty. Not for graduate credit. Prerequisite: 3.0 grade point average in microbiology and consent of instructor.

495-1 Senior Seminar. Readings, discussions, and presentations of current research topics on microbiology. Offered in spring semester. Prerequisite: senior standing in Microbiology. Graded P/F only.

Microbiology Faculty

Achenbach, Laurie A., Professor, Ph.D., University of Illinois, 1988.

Clark, David P., Professor, Ph.D., University of Bristol (England), 1976.

Fix, Douglas F., Associate Professor, Ph.D., Indiana University, 1983.

Haddock, John D., Associate Professor, Ph.D., Virginia Polytechnic Institute and State University, 1990.

Madigan, Michael T., Professor, Ph.D., University of Wisconsin, 1976.

Martinko, John M., Associate Professor and Chair, Ph.D., State University of New York at Buffalo, 1978.

Parker, Jack, Professor and Dean, Ph.D., Purdue University, 1973.

Rouhandeh, Hassan, Professor, *Emeritus*, Ph.D., Kansas State University, 1959.

Mining and Mineral Resources Engineering

(Department, Major [Mining Engineering], Courses, Faculty)

Mining engineers engage in planning, design, development and management of surface and underground mining operations for extraction of the earth's mineral deposits. The Mining Engineering Program prepares graduates to meet the challenges of the mining industry with emphasis on the coal and aggregate industries.

The Geological Engineering specialization permits students to gain a broader background in mine geology and exploration.

The missions of the Department are: to provide quality engineers to meet current trained manpower needs for exploration and extraction of regional minerals resources in an environmentally acceptable manner; advance the mining engineering discipline by engaging in basic and applied research, with emphasis on solving regional problems; and to transfer and apply new technical knowledge to enhance the competitive position of the state and national minerals industry.

The fundamental goal of the undergraduate program in Mining Engineering is to offer a high-quality education, designed to achieve the following specific educational objectives:

1. To provide students with the knowledge, skills and attributes necessary to allow them to successfully compete for quality jobs in mining engineering.
2. To provide students with communication skills, extensive design experience, familiarity with modern computer-aided design tools and classical techniques, and the ability to work effectively in a team environment.
3. To provide students with the broad education necessary to understand the impact of environmental and engineering solutions in a global and societal context.
4. To equip students with lifelong learning skills, which will allow them to successfully adapt to the evolving technologies throughout their professional career.
5. To provide students with a solid foundation in mathematics, basic science and engineering science, which will allow them to successfully pursue graduate studies in engineering or other professional degrees.
6. To provide students with high-quality laboratory training and experience in mining engineering.

Coursework in the program includes such areas as surface and underground mining systems, mine ventilation, ground control and rock mechanics, mineral and coal processing, material handling systems, engineering economics, mine environment, health and safety engineering, probability and statistics applications, and computer-aided mine design. Facilities include modern, well-equipped rock mechanics, mine ventilation, mineral processing, material handling, mine environment, and computer laboratories.

After completing the program, the graduate may work in an engineering or management position for mining industries, environmental companies, construction industries, oil companies, equipment manufacturers, research organizations, or government agencies. The coursework also provides strong preparation for further study at the graduate level. The Mining Engineering major is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (EAC/ABET), 111 Market Place, Suite 1050, Baltimore, MD., 21202-4012; Telephone (410) 347-7700.

Bachelor of Science Degree in Mining Engineering, College of Engineering

MINING ENGINEERING MAJOR

<i>University Core Curriculum Requirements</i>	41
Foundation Skills	12
English 101, 102	6
Mathematics (substitute Mathematics in major)	3
Speech Communication 101	3
Disciplinary Studies	23
Fine Arts	3
Human Health (Biology 202, Physiology 201 or approved substitute)	2
Humanities	6
Science (substitute Physics and Chemistry)	6 ¹

Social Science	6 ^{2,3}	
Integrative Studies		6
Multicultural	3	
Interdisciplinary	3 ^{2,3}	
Requirements for Major in Mining Engineering	(9) + 83 ¹	
Basic Sciences	(6) + 9	
Physics 205a; 255a	(3) + 1	
Chemistry 200, 201	(3) + 1	
Geology 220, 223, 419	7	
Mathematics 150, 250, 251, 305, Mining Engineering 417	(3) + 13	
Engineering		61
General: Engineering 102, 361	4	
Engineering Topics	57	
Engineering Science:		
Civil Engineering 250, 350, 370	9	
Engineering 335, 400	4	
Mechanical Engineering 261	3	
Mining Coursework:		
Mining Engineering 270, 310, 315, 320, 420, 425, 431, 440, 455, 475	32	
Approved Technical Electives ⁴	6	
Capstone Design:		
Mining Engineering 460	3	
Total		124

¹Courses required for the major will apply toward 9 hours of University Core Curriculum, making a total of 41 in that area.

²Engineering requirements for Core Curriculum Social Science and Core Curriculum Sciences are more restrictive than those of the University as a whole.

³Transfer students holding an associate degree in a baccalaureate-oriented program must have a sequence of courses in social science or humanities terminated by a junior level course. See departmental adviser for an approved course. Students transferring required to: (a) complete a course sequence in humanities or social sciences which includes a junior level course or (b) meet the Core Curriculum requirements for engineering students.

⁴One technical elective must be a mining and mineral resources engineering course.

Mining Engineering Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
CHEM 200, Core Fine Arts	3	3	Core Humanities	-	3
Core Social Science	-	3	Core Interdisciplinary	-	3
CHEM 201, ENGL 101	1	3	ENGL 102, CE 250	3	3
ENGR 102, SPCM 101	2	3	ENGR 361	2	-
GEOL 220	3	-	MATH 251, 305	3	3
GEOL 223	1	-	MNGE 315, 310	3	3
MATH 150, 250	4	4	PHYS 205a	3	-
MNGE 270, 320	3	1	PHYS 255a	1	-
Total	17	17	Total	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
Core Humanities	3	-	Core Human Health	2	-
Core Social Science	-	3	Core Multicultural	-	3
CE 350, 370	3	3	MNGE 425, ENGR 400	4	1
GEOL 419, ENGR 335	3	3	MNGE 431, 460	4	3
ME 261, MNGE 420	3	4	MNGE 440, 475	4	3
MNGE 417, 455	2	3	Technical Elective ¹	3	3
Total	14	16	Total	17	13

¹Technical Electives: Mining Engineering 421, 435, 450 and other approved courses.

Bachelor of Science Degree in Mining Engineering, College of Engineering

MINING ENGINEERING MAJOR – GEOLOGICAL ENGINEERING SPECIALIZATION

University Core Curriculum Requirements	41
Foundation Skills	12
English 101, 102	6
Mathematics (substitute Mathematics in major)	3

Speech Communication 101	3	
Disciplinary Studies	23	
Fine Arts	3	
Human Health (Biology 202 or Physiology 201 or an approved substitute)	2	
Humanities	6	
Science (substitute Physics and Chemistry)	6 ¹	
Social Science	6 ^{2,3}	
Integrative Studies	6	
Multicultural	3	
Interdisciplinary	3 ^{2,3}	
<i>Requirements for Major in Mining Engineering</i>	(9) + 88 ¹	
Basic Sciences	(6) + 17	
Physics 205a, 255a	(3) + 1	
Chemistry 200, 201	(3) + 1	
Geology 220, 223, 310, 315, 419	15	
Mathematics 150, 250, 251, 305, Mining Engineering 417	(3) + 13	
Engineering	58	
General:		
Engineering 102, 361	4	
Engineering Topics	54	
Engineering Science:		
Civil Engineering 250, 350, 370	9	
Engineering 335, 400	4	
Mechanical Engineering 261	3	
Mining Coursework:		
Mining Engineering 270, 310, 315, 320, 420, 425, 431, 440, 455	29	
Approved Technical Electives	6	
Capstone Design:		
Mining Engineering 460	3	
<i>Total</i>	129	

¹Courses required for the major will apply toward 9 hours of University Core Curriculum, making a total of 41 in that area.

²Engineering requirements for Core Curriculum Social Science and Core Curriculum Sciences are more restrictive than those of the University as a whole.

³Transfer students holding an associate degree in a baccalaureate-oriented program must have a sequence of courses in social science or humanities terminated by a junior level course. See departmental adviser for an approved course. Students transferring required to: (a) complete a course sequence in humanities or social sciences which includes a junior level course or (b) meet the Core Curriculum requirements for engineering students.

Mining Engineering – Geological Engineering Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
Core Social Science	-	3	ENGL 102, CE 250	3	3
CHEM 200, Core Fine Arts	3	3	GEOL 310, 315	4	4
CHEM 201	1	-	MATH 251, 305	3	3
GEOL 220, ENGL 101	3	3	MNGE 315, 310	3	3
GEOL 223, SPCM 101	1	3	PHYS 205a	3	-
ENGR 102	2	-	PHYS 255a	1	-
MNGE 270, 320	3	1	Core Interdisciplinary	-	3
MATH 150, 250	4	4			
<i>Total</i>	17	17	<i>Total</i>	17	16
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
Core Humanities	3	3	Core Human Health	-	2
CE 350, 370	3	3	Core Multicultural	-	3
ENGR 361, 335	2	3	Core Social Science	-	3
GEOL 419, MNGE 420	3	4	MNGE 425, ENGR 400	4	1
ME 261	3	-	MNGE 431, 460	4	3
MNGE 417, 455	2	3	MNGE 440	4	-
			Technical Elective ¹	3	3
<i>Total</i>	16	16	<i>Total</i>	15	15

¹Technical Electives: GEOG 418, 420, GEOL 434, 436, 470 and 471, 474, 484 and other approved courses.

Courses (MNGE)

Safety glasses, an electronic calculator, and textbooks are required of all mining engineering students.

270-3 Introduction to Mining Engineering. (Same as 400) Importance of mining to a country's economy; stages of mining: prospecting and exploration, development and extraction; unit operations of mining; surface mining systems; underground mining methods; novel mining methods; mineral processing; marketing of minerals.

310-3 Underground Mining. Underground mining access openings; underground mining equipment types and functions; advancing, sinking, and production blast rounds; underground mining methods, planning, and layout considerations. Prerequisite: 270 or consent of instructor.

315-3 Surface Mining. Surface mining methods, equipment, and sequences; surface mining tools; surface mine blast design basics; truck-shovel fleet design, sizing, and selection. Prerequisite: 270 or consent of instructor.

320-1 Mine Surveying Laboratory. Introduction to surveying; horizontal and vertical angles; using a level; land surveying; analysis of survey data for engineering design. Laboratory. Prerequisite: Mathematics 111 and Engineering 102, or consent of instructor.

392-1 to 6 Mining Engineering Cooperative Education. Supervised work experience in industry, government or professional organizations. Students work with on-site supervisor and faculty adviser. Reports are required from the student and the employer. Hours do not count toward degree requirements. Mandatory Pass/Fail. Prerequisite: sophomore standing.

401-1 Mining Environmental Impacts and Permits. Socio-economic impacts of mining industry. Analyzing the markets for coal and its products. Mining operations and related environmental impacts. Mining permits. Prerequisite: 400 or consent of instructor.

405-1 Field Trip. Visit several mining operations and prepare a report. Not for graduate credit. Prerequisite: 400 and Geology 390.

417-2 Applied Probability and Statistics for Engineers. Probability and statistics concepts, analysis of engineering experimental data. Fitting experimental data to distribution functions. Regression analysis. Quality control in production systems. Reliability in engineering processes. Stochastic simulation of engineering systems. Prerequisite: Mathematics 250 or consent of instructor.

420-4 Mineral and Coal Processing. Principles of processing minerals, aggregates and coal, including unit operations of comminution, classification, solid-solid separation, dewatering and tailings disposal. Laboratory investigations of the fundamental principles governing unit operations including size reduction, mineral liberation, classification, mineral recovery, and dewatering. Laboratory. Prerequisite: 270, Chemistry 200, Physics 205a, Mathematics 250, Civil Engineering 370 or concurrent enrollment, consent of instructor for non-majors and graduate students.

421-3 Mineral Processing Plant Design. Engineering design of unit operations used for minerals, aggregates and coal processing including crushing, grinding, industrial screening, classification, gravity separation, flotation and dewatering. Overall plant performance optimization and flow sheet design. Prerequisite: 417 or concurrent enrollment and 420, consent of instructor for graduate students and non-majors.

425-4 Mine Ventilation Systems Analysis and Design. Thermodynamic principles in mine ventilation. Study of the theories and practice of natural and forced mine ventilation. Fan and mine characteristics. Ventilation network analysis. Mine ventilation design and problem analysis. Laboratory. Prerequisite: 310, Civil Engineering 370, consent of instructor for graduate students and non-majors.

430-3 Economics of Mineral Resources. Economics of mineral resources. Investment decision making criteria; economic viability of mining projects, financing mining projects; sensitivity and risk analyses. Prerequisites: 400, Engineering 361, or consent of instructor.

431-4 Rock Mechanics: Principles and Design. Analysis of stress and strain, elementary elasticity, stress distribution around openings, engineering properties of rocks, artificial support and reinforcement, slope stability. Laboratory. Prerequisite: Civil Engineering 350, consent of instructor for graduate students and non-majors.

435-3 Application of Operations Research to Mining. Mine systems analysis, operations research and statistics in decision making, production engineering, optimization, linear programming, simulation. Prerequisite: 270, knowledge of linear algebra, or consent of instructor.

440-4 Material Handling Systems. Analysis and design of material handling systems such as belt conveying, hoisting and pumping. Mine power systems design. AC and DC motor applications. Material handling systems economics. Prerequisite: 310, 315, consent of instructor for graduate students and non-majors.

450-3 Industrial Minerals. Processing of key industrial minerals with special emphasis on the aggregates industry. Mining and utilization aspects. Prerequisite: 270 or consent of instructor.

455-3 Mine Environment, Health and Safety Engineering. Analysis of mine environmental impacts and their mitigation, safety problems and rules and regulations, hazards and accidents. Sealing and recovery of mines. Design of mine emergency plans, safety methods and health hazard control plans. Acid mine drainage, minerals waste disposal environmental remediation. Prerequisite: 310, 315, consent of instructor for graduate students and non-majors.

460-3 Senior Design. Projects in planning and design of surface and underground mining systems. Evaluate and design mining subsystems; integrate subsystems and procedures into a preliminary mine design; and optimize operations from exploration to closure. Two lectures and two two-hour laboratories per week. Prerequisite: 310, 315, 420, 425, 431, or consent of instructor.

475-3 Analysis and Design of Mine Excavations. Rock classification; design of shafts, slopes, tunnels, and underground chambers; support requirements; design of slopes; design of mining systems from ground

control point of view; design of impoundments. Prerequisite: 310, 315, and 431, consent of instructor for graduate students and non-majors.

492-1 to 5 Special Problems in Mining Engineering. Topics and problems selected either by the instructor or the student with the approval of the instructor. Five hours maximum course credit. Not for graduate credit. Prerequisite: senior standing and consent of instructor.

Mining Engineering Faculty

Chugh, Yoginder P., Professor, Ph.D., Pennsylvania State University, 1971.

Harpalani, Satya, Professor and *Chair*, Ph.D., University of California, Berkeley, 1985.

Kroeger, E. Bane, Assistant Professor, Ph.D., University of Alaska Fairbanks, 1997.

Mohanty, Manoj, Associate Professor, Ph.D., Southern Illinois University, 1997.

Paul, Bradley C., Associate Professor, Ph.D., University of Utah-Salt Lake, 1989.

Sevim, Hasan, Professor and *Associate Dean*, Ph.D., Columbia University, 1984.

Sinha, Atmesh K., Professor, *Emeritus*, Ph.D., University of Sheffield, 1963.

Mortuary Science and Funeral Service (Major,

Courses)

The mission of the Mortuary Science and Funeral Service program is to challenge students to achieve academic and professional excellence; prepare students to acquire entry level positions in the funeral service profession; provide quality instruction and stay current with trends of the profession; cultivate and maintain excellent relations with local, state, and national organizations; enhance University and community relations; and work toward the continued improvement of the Mortuary Science and Funeral Service program as an ongoing process.

This program is the only mortuary science and funeral service program offered in a public university in the state of Illinois. The initial program was developed in response to a request from the Illinois Funeral Directors Association. The Mortuary Science and Funeral Service program at SIUC is accredited by the American Board of Funeral Service Education (ABFSE), 3432 Ashland Ave., Suite U, St Joseph, MO 64506, (816) 233-3747. Web:<www.abfse.org> Graduates meet licensing requirements established by the Illinois Department of Financial and Professional Regulation. This program in mortuary science and funeral service is recognized by other state licensing boards.

The program is designed to accept students directly from high school or to accommodate students transferring from other accredited post-secondary institutions. Thirty students will be selected to begin the professional sequence each fall semester. Enrollment in the program is limited due to variety of circumstances, including rules of accreditation, limitations of facilities/internship sites, and faculty-student ratio.

To be considered for admission to the program, a Mortuary Science and Funeral Service application must be completed. The application packet will be sent to a prospective student following admission to the University. It is important that all application procedures be completed as soon as possible. Selection will be based on a candidate's high school rank, grades in high school mathematics and science courses, and ACT results. For transfer students, the grade point average as calculated by SIUC and the earned college level credits will be used for selection criteria. Recommendations from funeral directors, essay responses, and professional references are also required of all applicants. Decisions on who is selected into the professional sequence will be made beginning in January on a rolling basis.

Prospective students attending another college or university prior to transferring to SIUC should concentrate on completing courses articulated or approved as substitutes for SIUC's University Core Curriculum requirements. Prior to taking courses that appear to equate to the professional sequence, the applicant should consult with an adviser within the Mortuary Science and Funeral Service program.

The Mortuary Science and Funeral Service program has a Linkage Agreement with Southeastern Illinois College, Rend Lake College and Shawnee College. If you have questions about this agreement, contact the community college advisor or SIUC School of Allied Health at (618) 453-7287.

In addition to the professional course work, the student will be responsible for the University Core Curriculum as well as a number of courses, which will lead to an understanding of the psychological, sociological and theological implications of life and death. Each student will serve a semester-long internship at an approved off-campus facility. The expenses related to the internship courses are the responsibility of the student. The Internship Coordinator and/or Program Director will assign the internship location. Prior to participation in the internship, students may be required to undergo an "Internship Site Required" criminal background check and drug screening. Faculty members in the professional courses are licensed funeral directors and embalmers with experience in the profession. The program's Advisory Committee is composed of mortuary science and funeral service professionals.

The student is required to complete the Hepatitis B vaccine series before participating in the laboratory classes. The vaccine may be acquired at the SIUC Health Service, a local health department, or through a private physician. The cost of this vaccine is the responsibility of the student and documentation showing completion of the vaccine series must be presented to the advisor prior to registration. In addition to the Hepatitis B vaccine requirement, a laboratory uniform, personal protective equipment and instruments must be purchased.

In accordance with accreditation standards, each student will be required to take the National Board Examination prior to graduation. The expense for the exam is the responsibility of the student. The annual passage rate of first-time takers on the National Board Examination (NBE) for the most recent three-year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE web site: <<http://www.abfse.org>>. Since laws governing the profession are enacted at the state level, licensing and qualification requirements vary among states. Prospective students should contact the licensing body of the state in which they wish to attempt licensure. Career opportunities are excellent and to date all graduates who desire placement within the profession have been offered entry-level employment.

The Mortuary Science and Funeral Service program can be completed at Southern Illinois University Carbondale or in combination with other institutions of higher education.

The specific goals and objectives for the mortuary science and funeral service program may be found at <<http://www.siu.edu/~hcp/msfs/mshome.html>>.

Bachelor of Science Degree in Mortuary Science, College of Applied Sciences and Arts

<i>University Core Requirements</i>	41
ENGL 101 and 102, MATH 113, SPCM 101, ZOOL 115/118, CHEM 106, PSYC 102, SOC 108, MUS 103, PHIL 103a and 104, PHSL 201, HIST 202 and SOC 304i or other approved Integrative Studies.	
<i>Requirements for Major</i>	75
MSFS 101, 108, 225a,b, 240, 245, 255, 256, 257, 270, 302, 340, 351, 352, 360, 401, 410, 411, 412, Allied Health 241, Information Systems and Applied Technologies 120 and Information Systems Technologies 208.	
<i>Approved Career Electives</i>	4
<i>Total</i>	120

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ZOOL 115 or 118, PHIL 103a	3-4	3	ENGL 102, MSFS 256	3	3
MATH 113, ENGL 101	3	3	CHEM 106, IST 208	3	3
PSYC 102, ISAT 120	3	3	SPCM 101, MSFS 245	3	4
MUS 103, SOC 108	3	3	AH 241, MSFS 240	4	3
MSFS 101, 108	3	3	Major Elective, Core Elective	4	3
<i>Total</i>	15-16	15	<i>Total</i>	17	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MSFS 302, Core Elective	4	3	MSFS 360, MSFS 412	4	2
MSFS 225a,b	4	4	MSFS 351	4	-
MSFS 255, MSFS 340	3	3	MSFS 352	3	-
MSFS 257, PHIL 104	3	3	MSFS 401, 410	3	5
MSFS 270, PHSL 201	2	2	MSFS 411	-	5
<i>Total</i>	16	15	<i>Total</i>	14	12

Courses (MSFS)

101-3 Orientation to Funeral Service. Students will trace the history of funeral services from ancient times through contemporary practices with emphasis on the development of funeral practices in the United States. Students study the customs of various cultures throughout the world including customs in the United States. They will demonstrate a knowledge of funeral service organizations and will discuss current topic areas of the profession. Lecture three hours. Prerequisite: consent of school.

108-3 Funeral Service Psychology. Designed to provide the student with an overview of psychology in funeral service as applied to death, grief and mourning. Students will examine interpersonal and public relations as they affect the funeral service practitioner. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Lecture three hours. Prerequisite: Psychology 102 and English 101, Mortuary Science and Funeral Service 101 or consent of school.

225A-4 Embalming Theory and Practice I. The student will be introduced to techniques of embalming through a study of the body, sanitation, embalming agents, instruments and methods of embalming. The student studies the theory, practices and techniques of sanitation as well as restoration and preservation of deceased human remains. Laboratory experiences consist of embalming deceased remains and of other related activities. Lecture three hours. Laboratory two hours Lab fee: \$50. Prerequisite: restricted to mortuary science and funeral service majors, 240, and proof of Hepatitis B vaccine or Titre test.

225B-4 Embalming Theory and Practice II The student will study the anatomy of the circulatory system, the autopsied case, the cavity embalming, the contents of the thoracic and abdominal cavities and various embalming treatments. Laboratory experience is a continuation of 225a. Lecture three hours. Laboratory two hours. Must be taken in a, b sequence. Lab fee: \$50. Prerequisite: restricted to mortuary science and funeral service majors, 240 and proof of Hepatitis B vaccine or Titre test.

230-4 Mortuary Anatomy. The student will study the structure and function of the human body as a whole including: general organization, structural organization, tissues, skeletal system, nervous system, circulatory system, physiology of circulation, glands, respiratory system, digestive system, genitourinary system, integument and special senses. Lecture three hours. Prerequisite: restricted to major and Zoology 115/118.

240-3 Mortuary Regulations. The student will have knowledge of the federal, state and local regulations pertaining to the funeral profession. Studies will include the Occupational Safety and Health Administration regulations, Americans with Disabilities Act, Uniform Anatomical Gift Act, the Federal Trade Commission requirements, Rules and Regulations for the Control of Communicable Disease and other such regulations governing funeral service. Lecture three hours. Prerequisite: restricted to majors or consent of school.

245-4 Restorative Art. Students will build upon knowledge of the anatomical structures of the cranial and facial areas of the human skull gained through anatomy. Students will develop a knowledge of facial proportions, modeling, expressions, and materials and techniques necessary to rebuild the human face. Laboratory assignments will include bone and tissue restoration, facial modeling, hair restorations, and others. Lab fee: \$150. Prerequisite: Allied Health 241.

255-3 Embalming Chemistry. The student will study the chemistry of the body, sanitation, toxicology, chemical changes in deceased human remains, disinfection, and embalming fluids. Laboratory experiences in 225a will complement lecture material. Lecture three hours. Prerequisite: Chemistry 106 and concurrent enrollment in 225a.

256-3 Introductory Microbiology. The student will survey microbiology: morphology, physiology, populations of microbial organisms, microbial destruction, immunology, and pathogenic agents. Lecture three hours. Prerequisite: restricted to major, Zoology 115 or Plant Biology 115 or 118 and Chemistry 106.

257-3 Pathology. Students will be introduced to the study of the cause, course and effects of diseases upon the human body, with stress on ways in which tissue changes affect the embalming process. Lecture three hours. Prerequisite: 256 and Allied Health 241.

270-2 Computers in Funeral Service. The student will be given the opportunity to enhance their understanding of the applications of computers to the funeral profession. This course is designed to instill an appreciation for computer as an effective funeral home management tool. Lecture 2 hours. Prerequisite: restricted to major.

299-1 to 16 Individual Study. Provides students with opportunity to explore studies that fit a particular need or interest. Enrollment provides access to the resources of the facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: consent of school.

302-4 Restorative Color and Cosmetics. The student will learn advanced procedure and techniques for restoration and cosmetology. Special attention will be placed upon pigments, visual aspects of color and color

schemes, lighting, complexion types and materials, corrective shaping, rouging, waxing and powdering. Lecture three hours. Laboratory two hours. Lab fee: \$50. Prerequisite: 245.

340-3 Mortuary Law. Deals with the statutory laws and practices pertaining to funeral service. The student will trace the laws that govern the funeral director and the embalmer and their legal responsibilities to the consumer. Knowledge will be gained concerning the legal status of a dead human body, necessities of disposition, methods of disposition, rights and parties undertaking responsibility of disposition, custodial rights of the dead human remains, contract laws, right of disposition, control of the funeral, general rules of priority pertaining to next of kin, mental anguish, photographs, confidentiality, negligent acts by the funeral director and/or embalmer, mutilation laws, injury to invitees, injury to pallbearers, Clergy and staff, physical impact, collection against an estate, primary obligor, estate liability, cremation, authorization, commingling of remains, personal effects, storage and shipping of remains. Lecture three hours. Prerequisite: restricted to major.

350-1 to 32 Mortuary Science and Funeral Service Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. Mandatory Pass/Fail. Prerequisite: consent of school.

351-4 Funeral Service. The student will learn skills necessary to effectively manage a funeral home. Included are the funeral director's responsibilities from the first call to the completion of the funeral service. Topics include completing pre-need and post-need forms, human resource management, financial management, facilities management, maintenance of records, religious ceremonies and professional ethics. Lecture four hours. Prerequisite: 240 and Information Systems and Applied Technologies 120.

352-3 Funeral Service Merchandising and Marketing. The student will learn the fundamentals of merchandising, product mix and pricing of funeral service merchandise (i.e., caskets, burial vaults, urns, etc.). Other topics include developing a funeral home marketing plan and applying small business marketing techniques to funeral homes. Lecture three hours. Prerequisite: concurrent enrollment in 351.

360-4 Advanced Embalming Procedures. The student will study the proper procedures of embalming and other necessary preparations of special cases. Studies will include techniques and procedures used for embalming unique cases such as decomposition cases, burn victims, car accident victims and other traumatic faces of death. Students will be required to submit several written research papers and present oral presentations of specific topics throughout the semester. Lecture four hours. Prerequisite: 225b.

401-3 Funeral Service Counseling. The student will be taught specific counseling procedures used when counseling the bereaved family. Specific attention will be paid to the counseling and communication techniques and skills that will assist individual family members with handling grief and the mourning process. In addition, students will explore the concepts of pre-need and after-care services. Lecture three hours. Not for graduate credit. Prerequisite: 108 or Psychology 102.

410-5 Funeral Service Internship-Management. Students will be assigned to a University approved funeral home learning in actual practice situations: functional organization, procedures, and policies of the establishment. They will perform duties and services directly relating to the practice of funeral service as assigned by the preceptor, licensed funeral home staff, and faculty members. These duties will include surveillance of and participation in the execution of total services rendered to a family. The student will perform or assist in the performance of those other duties required for the successful operation of a funeral facility. This will be conducted under the direct supervision of a licensed funeral director. The course is 14 weeks in length. Not for graduate credit. Prerequisite: all other requirements of the mortuary science and funeral service major must be met including a grade point average of at least 2.0 in major. Must be taken concurrently with 411.

411-5 Funeral Service Internship-Embalming. Students will be assigned to a University approved funeral home to be given the opportunity to learn embalming techniques by active participation in the preparation room under the direct supervision of a licensed embalmer. The student will perform or assist in the performance of those other duties required for the successful operation of a funeral facility. The course is 14 weeks in length. Not for graduate credit. Prerequisite: all other requirements of the mortuary science and funeral service major must be met including a grade point average of at least 2.0 in major. Must be taken concurrently with 410.

412-2 Funeral Service Seminar. Formal discussions are held to evaluate the experiences and progress of the participants in the internship program. The student will participate in mock funeral arrangements and will evaluate themselves on style, knowledge and confidence via video tape. The second part of the seminar is a review for the National Board Examination. In accordance with accreditation standards, each student will be required to take the National Board Examination prior to graduation. The expense for the exam is the responsibility of the student. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: concurrent enrollment in 410 and 411.

415-3 On Dying and Death. Students will study the processes of death, grief, and bereavement. Emphasis on the practical aspects of coping with the many problems concerning death. Not for graduate credit.

Museum Studies (Minor)

Museum studies are available as an undergraduate interdisciplinary minor. The purpose of the minor is to introduce students to various aspects of museum work, to acquaint them with the opportunities and problems faced by museums and museum personnel, and to create career opportunities for students who might

seek employment in a museum. Emphasis will be placed on actual work situations in such diverse museum functions as exhibition, curation, cataloging, acquisition, education and administration.

Minor

The museum studies minor consists of 18 hours, with 12 hours of required core courses and 6 hours of electives.

Core Courses: 12 hours selected from Anthropology 450a,b; Art 207 and 447; History 497; Political Science 446.

Electives: 6 hours selected from Anthropology 304, 442 or 460; Art 499; Political Science 441; Geology 440; History 490, 493 or 496; or courses listed above which are not used for the core.

Music (School, Major, Courses, Faculty)

The requirements for entrance and for graduation as set forth in this bulletin are in accordance with the published regulations of the National Association of Schools of Music, 11250 Roger Bacon Drive, Suite 21, Reston, Virginia, of which this school of music is a member.

Admission and Advisement. All students who plan to major in Music will first be admitted as Pre-Music students provided they meet the University's admission policy. Beginning freshmen and transfer students are required to audition in person or by recording prior to admittance to the desired specialty in music. Following a successful audition, students will be granted the status of music major and be allowed to register for classes in the desired specialty.

Students admitted to the program in the Pre-Music status and unsuccessful in the audition process will have to complete additional preparation, which may extend the time to graduation beyond four academic years. This preparation is to include the following courses with a grade of C or better: Music 101, 102, 030a,b and two hours chosen from Music 031, 040 or 036a,b. Music credits earned at other accredited institutions will apply toward requirements, but the transferring student remains subject to evaluation by the appropriate music faculty for proper placement in the music curriculum.

All pre-music and music majors will be advised by the School of Music advisor for the purpose of completing the courses required.

All Music majors must maintain satisfactory membership in one of the following ensembles: Music 011, 013, 014, 017, 020, 021, or 022 every term in residence. Students are exempt from this requirement during the session of student teaching. Piano performance and piano pedagogy majors may substitute Music 341 during the junior and senior years. Students who are unable to meet the major ensemble entrance requirements for one semester will be placed on probation by the School of Music. Students who are denied entrance into a major ensemble a second time will be reviewed by the undergraduate committee for possible continued probation or suspension from all music degree programs. The choice of major ensembles must be compatible with the student's applied field. Instrumental music education students must enroll in Music 011 for a minimum of one semester. Students also may elect additional large or small ensembles, not to exceed three in any one session. Students enrolled as Music Education majors are required to attend Lab Ensemble every semester in residence.

Each student with a major or minor in music must designate a principal applied field and complete the credits specified within the selected specialization. Changes in the principal applied field are permissible so long as the student accumulates the required credit total and meets the required level of proficiency.

Credits in one's principal applied field are based on private lessons with a member of the faculty; weekly participation in Studio Hour and Convocations (Tuesday, at 10:00 a.m.); and recorded attendance each semester at seven campus

recitals or concerts, approved for that purpose by the School of Music faculty. The student may not be a participant. Students who fail to fulfill either the Studio Hour or attendance at campus recitals or concerts requirement will receive a grade of Incomplete, which can be removed only by making up the deficiency during the ensuing semester. A student who wishes to attempt the performance specialization in applied music must have prior approval of the appropriate faculty jury, and thereafter enrolls for and receives two lessons per week for 4 credits per semester.

A student may elect private instruction in a second field or fields, but this is for one credit per semester since the studio hour and recital attendance requirements pertain only to the principal applied field.

Students not majoring or minoring in music may elect private applied music instruction if: 1) they can exhibit sufficient ability; 2) they are participating simultaneously in one of the University performing groups; and 3) faculty loads will allow. Registration is at one credit per semester, with no studio hour or recital attendance requirement. Those wishing such instruction should arrange for an interview and audition with the appropriate instructor.

Students specializing in music education should apply for admission to the Teacher Education Program as soon as they have accumulated 30 semester hours of credit. After being admitted, they must complete a series of specific requirements in order to qualify for student teaching and for the Illinois teaching certificate. Additional information is given under Education, Professional Education Experiences, and Curriculum and Instruction in this chapter.

Upper Division Examination, 240 Level Exit Examination and Undergraduate/Graduate/History/Harmony Examination

All Bachelor of Music degree students must pass an upper division examination in order to be admitted to the 340 level of applied music. It is normally taken before finishing 60 hours of academic study and in the second semester of Music 240. The upper division examination for transfer students is normally taken at the end of the first semester at Southern Illinois University Carbondale. All Bachelor of Arts degree students must pass a 240 level exit exam prior to registering for Music 487, 488 or 489 Senior Project. The exam is normally taken in the second semester of Music 240. The Upper Division and 240 exit examinations consist of an applied music jury performance. The upper division examination consists of an applied music jury performance before the entire music faculty. Students will provide a complete repertoire list at the time of the jury.

As part of the University Assessment program, majors in music must take the Undergraduate/Graduate/History/Harmony Exam in their final semester of coursework.

Financial Information

Special grants and awards are available to students enrolled in the School of Music who are qualified and in need of financial assistance. Opportunities for employment in the student work program are excellent. In addition, there are scholarships (tuition awards) and loan programs available through the Office of Student Work and Financial Assistance.

A \$20 instrument maintenance fee is assessed every student enrolled in applied music or using a school instrument each semester. Students are responsible for purchase their own textbooks, solo literature, and incidental supplies for music lessons and classes. Such costs normally range from \$50 to \$100 per semester.

Bachelor of Music Degree, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
Including Music 357a as University Core Curriculum substitute	
<i>Requirements for Major in Music</i>	85

Theory: Music 104a,b; 105a,b; 204a,b; 205a,b; 207; 321; 322	23
History-Literature: Music 102; 357a,b	(3) + 5'
Conducting: Music 316	1
Partial Recital: Music 398	1
Beginning Piano: Music 030	4 ²
Specialization	51

Total 126

MUSIC MAJOR — PERFORMANCE SPECIALIZATION, INSTRUMENTAL (STANDARD ORCHESTRAL AND BAND INSTRUMENTS)

Music 140-440, principal field, 8 semesters	28
Orchestra Major performing ensembles	6
Music 498	2
Music 461	3
Music 407, 421 or any of 470 series	6
Music 365	2
Approved music electives	4
<i>Total</i>	51

MUSIC MAJOR — PERFORMANCE SPECIALIZATION, GUITAR

Music 140-440, principal field, 8 semester	28
Major performing ensembles	6
Music 107	1
Music 498	2
Music 250	3
Music 407, 421, 461 or any of 470 series	6
Approved music electives	5
<i>Total</i>	51

MUSIC MAJOR — PERFORMANCE SPECIALIZATION, KEYBOARD (PIANO, ORGAN AND HARPSICHORD)

Music 030 not required	
Music 140-440, principal field, 8 semesters	28
Major performing ensembles	6
Music 498	2
Music 461	3
Music 407, 421, or any of 470 series	7
Music 341	3
Approved music electives	2
<i>Total</i>	51

MUSIC MAJOR — PERFORMANCE SPECIALIZATION, VOICE

Music 140-440, principal field, 8 semesters	28
Major performing ensembles	4
Music 498	2
Music 407, 421, 461, or any of 470 series	5
Approved foreign language, 2 semesters	8
Music 401, 402	2
Music 363	2
<i>Total</i>	51

MUSIC MAJOR — PIANO PEDAGOGY SPECIALIZATION

Music 140-440, principal field, 8 semesters	16-22
Major performing ensembles	6
Music 398-1, and 498-2 or 398-2	2-3
Music 398-1,1 or Music 398-1 and Music 498-2	2-3

Music 110-4, 210, 211, 310, 311, 410-4	16
Approved music electives	<u>5-11</u>
Total	51

MUSIC MAJOR — MUSIC THEORY/COMPOSITION SPECIALIZATION

Music 140-340, principal field, 6 semesters	12
Major performing ensembles	6
Music 280	4
Music 380	4
Music 480, 407, 447 or 481	6
Music 421	2
Music 470 series	6
Approved music electives, 300 level or above	<u>11</u>
Total	51

Bachelor of Music Degree, College of Liberal Arts

MUSIC MAJOR —MUSIC EDUCATION SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
Including Mathematics 108 or higher; English 101, 102, and 121 or 204; Speech Communication 101; Psychology 102; History 110; Political Science 114; one of the following: Plant Biology 301i, 303i or Zoology 312i; one of the following: Chemistry 106, Geology 110 or Physics 101; one of the following: Anthropology 202, History 202, 210 or Sociology 215; one of the following: Plant Biology 115, 117 or Zoology 115; Health Education 101; and Music 357a as a University Core Curriculum substitute.	
<i>Requirements for Major in Music</i>	59
Theory: Music 104a,b; 105a,b; 204a,b, 205a,b; 207; 321, 322	19
History-Literature: Music 102, 357a,b	(3) ¹ + 5
Major performing ensembles	5
Music 140-340, principal field, 6 semesters	12
Music 398	1
Music 031	1
Music 304	2
Music 305	2
Music 306	2
Music education specialization	12
Music 030	2
Music 032, 033a,b, 034, 035	4
Music 316, 318, 324	6
or	
Music 030	4
Music 316, 317, 325	4
Music 032-036 series	2
Music 363	2
<i>Professional Education Requirements</i>	31
See Teacher Education Program.	
Additional course required for Teacher Certification: History 101a	<u>3</u>
Total	133

¹University Core Curriculum substitute.
²Exceptions for Music 030 and consequent credit hour adjustment in keyboard performance, piano pedagogy and instrumental music education specialization.

Music Education Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102.....	3	3	Science Group 1, 2.....	3	3
MATH (any except 107 or 114), MUS 031.....	3	1	HIST 110, POLS 114.....	3	3
MUS 104a,b.....	1	1	MUS 204a,b.....	1	1
MUS 105a,b.....	3	3	MUS 205a,b.....	3	3
MUS 102, SPCM 101.....	2	3	MUS 207.....	-	2
MUS 030a,b.....	1	1	MUS 030c or 032, EDUC 311..	1	2
MUS 031.....	-	1	MUS 240.....	2	2
HED 101 or PE 101.....	-	2	Major ensemble.....	1	1
MUS 140.....	2	2	EDUC 310.....	2	-
Major ensemble.....	1	1	MUS 035 or 363b.....	-	1
<i>Total</i>	16	18	MUS 034 or 363a.....	1	-
			<i>Total</i>	17	18
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MUS 357a,b.....	3	3	HIST 202 or 210 or ANTH 202 or SOC 215.....	3	-
MUS 321, 305.....	2	2	PLB 301i or 303i or ZOOL 312i.....	3	-
MUS 321.....	2	-	MUS 398.....	2	-
HIST 101a, ENGL 121 or 204..	3	3	MUS 324 or 325.....	1	-
MUS 316, 318.....	1	2	Major ensemble.....	1	1
Major Ensemble.....	1	1	EDUC 315, 401.....	3	12
MUS 340.....	2	2	EDUC 316.....	2	-
PSYC 102.....	3	-	EDUC 317.....	2	-
EDUC 314, 308.....	2	3	<i>Total</i>	17	12
<i>Total</i>	19	16			

Bachelor of Arts Degree, College of Liberal Arts

The Bachelor of Arts degree is individually tailored to meet the educational goals of each student pursuing it. Three areas of specialization are available: Open Studies, Music Theater, and Music Business. All specializations have a common core of 18 to 19 hours of music literature and music theory courses.

Of the 56 to 57 hours required to complete the Open Studies Specialization, the required courses are Music 357a,b, 488 and 11-16 hours of approved music electives. In addition, at least one year of foreign language is required. This can be met by one of the following: (a) passing an 8-hour 100-level sequence in one language; (b) by earning 8 hours of 100-level credit in one language by proficiency examination; or (c) completing three years of one language in high school with no grade lower than C. The 29 to 34 cores of elective hours necessary to complete the degree program are selected by the student with the approval of the student's faculty sponsor and the undergraduate committee. At least 40 hours toward the B.A. Open Studies Specialization must be at the 300-400 level. This planning should be done during the first semester of the student's admittance to the School of Music with undergraduate committee approval secured no later than the end of the second semester. Changes may be made if agreed upon by the student, the undergraduate committee and the student's faculty sponsor. The B.A. degree does not provide the necessary prerequisites for graduate study in a Master of Music degree program.

Of the 55 to 56 hours required to complete the Music Business Specialization, 18 to 19 hours are in specific music courses, 14 to 15 hours in music electives, and 27 hours of accounting, economics, finance and marketing courses.

Of the 55 hours required to complete the Music Theater Specialization, 23 hours are in music, 18 hours in theater, 8 hours in a foreign language and 6 hours in physical education (dance)

Bachelor of Arts Degree, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
Including Music 357a as University Core Curriculum substitute	
<i>Requirements for Major in Music</i>	80
Theory: Music 104a,b; 105a,b	8
Literature and History: Music 102, 357a,b	(3) + 5 ¹
Major performing ensembles	4
Applied Music 140-240, principal field, 4 semesters	7-8

Specialization (see below)	55-56
Total	121

MUSIC MAJOR — OPEN STUDIES SPECIALIZATION

Music 488	2
Approved Music Electives	11-16
Foreign Language	8
Elective Core	29-34
Total	55-56

MUSIC MAJOR —MUSIC THEATER SPECIALIZATION

Foreign Language.....	8
Required Music Courses	23
Music 204a, 205a	4
Music 030a,b,c.....	3
Music 363a,b, 401, 402, 468.....	8
Approved Music Theater or Open History elective	3
Music 489	2
Approved Music Electives	3
Required Department of Theater Courses	18
Theater 217, 303a, 317a, 403.....	12
Approved Electives	6
Required Department of Physical Education Courses	6
Physical Education 103	
Total	55

MUSIC MAJOR — MUSIC BUSINESS SPECIALIZATION

Required Music Courses	
Music 030	2
Music 031A	1
Music 323 or three of the following: 032a, 032b, 033a,b, 034, 035, 036a, 036b	3
Music 307	2
Music 174	3
Music 487	4
Approved Music Electives	16
Required Business Courses²	
Accounting 220, 230	6
Management 304	3
Economics 240	(3) ³
Finance 280	3
Marketing 304, 363, 401, 438	12
Total	55

¹University Core Curriculum substitute.
²Up to six hours in related areas may be substituted for Required Business Courses with the approval of the undergraduate committee.
³University Core Curriculum substitute (for Economics 113).

Open Studies Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Science Group 1, 2	3	3
MATH (except 107 or 114)	3	-	Foreign Language.....	4	4
SPCM 101	-	3	Social Science.....	3	3
MUS 104a,b	1	1	MUS 240	2	2
MUS 105a,b	3	3	Major Ensemble.....	1	1
MUS 140	2	2	Approved Elective Area.....	3	3
Major Ensemble	1	1			
MUS 102, Health.....	2	2			
Total	15	15	Total	16	16

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MUS 357a	3	-	Integrative Studies (UCC)	3	-
Humanities Group 1, 2	3	3	Interdisciplinary (UCC)	-	3
MUS 357b	-	3	Approved Music Elective	3	6
Major Ensemble	1	1	Major Ensemble	1	1
Approved Music Elective	3	3	Approved Elective Area	9	3
Approved Elective	6	6	MUS 488	-	2
<i>Total</i>	16	16	<i>Total</i>	16	15

Music Business Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Science Group 1, 2	3	3
MATH (any but 107 or 114)	3	-	SPCM 101, Soc Sci	3	3
MUS 102	-	2	ECON 240	3	-
MUS 104a,b	1	1	ACCT 220, 230	3	3
MUS 105a,b	3	3	MUS 240	2	2
MUS 030a,b	1	1	MUS 032a or b	-	1
MUS 140	2	2	MUS 031a	1	-
Major Ensemble	1	1	Major Ensemble	1	1
Health, MUS 174	2	3	FIN 280	-	3
<i>Total</i>	16	16	<i>Total</i>	16	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
MUS 357a, MUS 307	3	2	Integrative Studies	3	3
Humanities Group 1, 2	3	3	MKTG 363, 438	3	3
MUS 357b	-	3	MKTG 401	3	-
MKTG 304, MUS 034	3	1	Approved Music Elective	3	5
MUS 240, MGMT 304	2	3	Major Ensemble	1	1
Major Ensemble	1	1	MUS 035, 487	1	2-4
MUS 033, 316	1	1	MUS 036	1	1
Approved Music Elective	3	3	<i>Total</i>	15	15-17
<i>Total</i>	16	17			

Music Theater Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Foreign Language	4	4
MATH (any but 107 or 114)	3	-	MUS 030c	1	-
SPCM 101	-	3	MUS 204a	1	-
MUS 030a,b	1	1	MUS 205a, MUS 363b	3	1
MUS 102	2	-	MUS Elective, UCC	2	3
MUS 104a,b	1	1	MUS 240p	1	1
MUS 105a,b	3	3	MUS 020 or 022	1	1
MUS 140p	1	1	THEA 317a	3	-
MUS 020 or 022	1	1	THEA elective (300 level or above)	-	3
MUS 217	-	3	<i>Total</i>	16	13
<i>Total</i>	15	16			
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
UCC	3	3	UCC	3	3
UCC	3	3	UCC	3	2
MUS 357a,b	3	3	PE 103	2	2
MUS 363a	1	-	MUS 240p	1	1
MUS 240p	1	1	MUS 402, 403	-	2
MUS 402, 403	-	2	MUS 468	2	-
MUS 020 or 022	1	1	MUS 470, 471	-	3
THEA 303a	3	-	MUS 489	-	2
THEA elective (300 level or above)	-	3	MUS 020 or 022	1	1
<i>Total</i>	15	16	THEA 403a	3	-
			<i>Total</i>	15	16

Minor

The minor in music includes Music 102, 030a,b, 104a,b, 105a,b, 357a,b; two semesters of performing ensembles, two hours; and two semesters of 040 or 140, four hours for a total of 24 credits. Students must comply with the studio hour and recital requirements listed above. Students wishing to pursue the minor curriculum must make a declaration of intent at the Music Advisement Office before registering for classes.

Courses (MUS)

011-1 to 4 (1, 1,1,1) Marching Salukis. Fall semester only. Open to all students with experience in bands. Performs at all home football games, and one or two away. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: experience in bands.

012-1 to 4 (1,1,1,1) Pep Band. A select group which performs at all home basketball games. Prerequisite: audition prior to first registration.

013-1 to 8 (1,1,1,1,1,1,1,1) Symphonic Band. Open to all students with experience in bands. Performs standard literature. Two or three concerts per year. Counts as major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: experience in bands.

014-1 to 8 (1,1,1,1,1,1,1,1) Concert Wind Ensemble. A select group which performs advanced contemporary literature. Three concerts and tour per year. Counts as major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration.

015-1 to 8 (1,1,1,1,1,1,1,1) Jazz Ensemble. For students experienced with popular literature. Concerts and tours when feasible. Prerequisite: audition prior to first registration.

016-1 to 8 (1,1,1,1,1,1,1,1) Jazz Combos. A select group, performing literature scored for this instrumentation. Two or three concerts per year and tour as feasible. Prerequisite: audition prior to first registration.

017-1 to 8 (1,1,1,1,1,1,1,1) Symphony. Open to all experienced string, woodwind, brass, and percussion players. Plays standard and advanced orchestral literature, performs three or four concerts per year. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration.

018-1 to 16 (1 or 2 per semester) Civic Orchestra. Open to all students who wish to perform major orchestral literature. Prerequisite: audition prior to first registration. Counts as major ensemble for music pre-majors studying at the 040 level.

020-1 to 8 (1,1,1,1,1,1,1,1) Choral Union. Open to qualified students who desire to perform major choral-orchestral literature. Two concerts per year. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition required.

021-1 to 8 (1,1,1,1,1,1,1,1) Chamber Choir. Open to all experienced singers. Emphasis on contemporary literature. Three or four concerts per year and tours as feasible. Prerequisite: audition required.

022-1 to 8 (1,1,1,1,1,1,1,1) Concert Choir. A select group which performs advanced choral literature of all eras. Three or four concerts per year and tours as feasible. Counts as a major ensemble, one of which must be taken each semester by resident music majors. Prerequisite: audition prior to first registration.

023-1 to 8 (1,1,1,1,1,1,1,1) Vocal Jazz Ensemble. Open to all experienced singers. Emphasis on light, popular literature. Two or three appearances per year.

030-4 (1,1,1,1) Piano Class. (a) Level 1; (b) Level 2; (c) Level 3; (d) Level 4. Designed to develop functional command of basic keyboard skills needed in the further study of music and the teaching of music. Take in sequence unless assigned advanced placement by instructor. Prerequisite: major or minor in music, elementary education, early childhood education, or consent of instructor.

031A-1 Voice Class. Designed to develop functional command of basic vocal skills needed in teaching music. Prerequisite: consent of instructor.

032-2 (1,1) String Techniques Class. (a) Upper strings; (b) lower strings. Designed to develop essential techniques and principles which can be used in teaching young string pupils. Prerequisite: music major or minor.

033-2 (1,1) Woodwind Techniques Class. (a) Clarinet, saxophone; (b) Flute, double reeds. Designed to develop essential techniques and principles which can be used in teaching young woodwinds pupils. Students may begin on one instrument and shift to another at midterm, or they may continue with the same instrument with the consent of the instructor. Prerequisite: music major or minor or consent of instructor.

034-2 (1,1) Brass Techniques Class. Trumpet, French horn, trombone, tuba. Designed to develop essential techniques and principles which can be employed in teaching beginning brass pupils. Students may begin with one instrument and shift to another at midterm or they may continue with the same instrument with the consent of the instructor. Prerequisite: music major or minor.

035-1 Percussion Techniques Class. Designed to develop basic techniques and principles which can be employed in teaching young percussion pupils. Prerequisite: music major or minor.

036-2 (1,1) Guitar Class. (a) Level 1, (b) level 2. Designed to develop basic techniques and principles which can be employed in teaching music. Prerequisite: major or minor in music, elementary education, or early childhood education, or consent of instructor.

040, 140, 240, 340, 440, 540-1, 2 or 4 Applied Music. Offered at six levels in the areas listed below. May be repeated for credit as long as passing grade is maintained. Students must attend the weekly studio class and be concurrently enrolled in one of the performing groups. Prerequisite for 040: satisfactory completion of beginning class instruction offered in that area, or the equivalent. Prerequisite: for 140: three or more years of prior study or performing experience, or two semesters of C or better at 040 level. Prerequisite: for 240, 340: two semesters of C or better at previous level, or consent of applied jury. Prerequisite: for 440, 540: two semesters of B or better at previous level, or consent of applied jury. Music majors and minors enroll for two credits on their principal instrument, taking one half-hour private lesson and studio class, Tuesdays at 10:00. Those with prior approval by their applied jury for the specialization in performance enroll for four credits, taking two half-hour private lessons and the student class each week. Non-music majors or minors, and those music majors taking a second instrument, enroll for one credit, taking one private or class lesson per week. Six hours of individual practice per week required for each lesson. For shorter sessions, credit is reduced or lesson time is increased proportionately.

(a) Flute	(f) Horn	(k) Percussion	(p) Voice	(u) Recorder
(b) Oboe	(g) Trumpet	(l) Violin	(q) Piano	(v) Coaching
(c) Clarinet	(h) Trombone	(m) Viola	(r) Organ	
(d) Bassoon	(i) Baritone	(n) Cello	(s) Harpsichord	
(e) Saxophone	(j) Tuba	(o) String bass	(t) Guitar	

101-3 Music Fundamentals. Rudiments of music for those with little or no musical background. One lecture and one piano laboratory session per week. Provides basic music vocabulary and keyboard competency for Curriculum and Instruction 325, 326.

102-2 Survey of Music Literature. Characteristic forms and styles. Analysis and listening. Examples from the leading composers of each era. Prerequisite: music major or minor.

103-3 Music Understanding. (University Core Curriculum) [IAI Course: F1 900] A study of the historical development of Western Music and the listening skills necessary to perceive the expressive aspects of each style.

104-2 (1,1) Aural Skills. A laboratory course designed to complement 105a and b. Practice in recognition and singing of basic pitch and rhythm materials, and their realization in standard musical notation. For those planning a major or minor in music, take a and b in sequence or with prior consent of instructor, concurrently. Prerequisite: grade of C or better in 104a for registration in b section.

105-6 (3,3) Basic Harmony. Study of traditional diatonic tonal materials and standard notational practice. Includes keyboard skills. For those with performing experience and planning a major or minor in music. Take a and b in sequence. Prerequisite: concurrent registration in 104 or equivalent aural skill, grade of C or better in 105a prior to enrollment in 105b.

107-1 Applied Harmony for Fretted Instruments. Application of basic harmonic functions to the fretted instruments including guitar. Prerequisite: concurrent enrollment in 140 or 540 or consent of instructor.

110-4 (2,2) Introduction to Piano Pedagogy. Introduction to a broad range of studies that influence the development of effective piano teaching. Seminar discussions, lectures, observation of piano teaching, piano studies, readings, listening projects and written essays deal with the history of piano pedagogy and performance, studies of teaching and learning concepts of music education and educational psychology, piano literature, keyboard musicianship and practical aspects of teaching.

140-1, 2, or 4 Applied Music. (See 040.)

174-3 Commercial Music. Introductory course for students interested in the commercial aspects of the music industry. Lectures given by outstanding executives and performers in the various segments of the industry such as management, cash show, contracts, the recording of music and video, and publishing. Students go to Nashville, Tennessee, where various activities take place, including tours of recording studios, publishing houses, performance rights societies, and video and television studios. Designed to clarify the qualifications student must have, or develop, to be successful in the commercial music world. Field trip: \$150. Prerequisite: major in music.

203-3 Diversity and Popular Music in American Culture. (University Core Curriculum) [IAI Major Course: F1 905D] A study of the development of American popular music, particularly in relation to the different cultural groups which spawned it.

204A-1 Advanced Aural Skills. Continuation of 104. Designed to complement 205a. Prerequisite: 104b with a grade of C or better.

204B-1 Advanced Aural Skills. Continuation of 204a. Designed to complement 205b. Prerequisite: 204a with a grade of C or better.

205A-3 Advanced Harmony. The study of 19th Century Western European tonal materials, including keyboard skills. Prerequisite: 104b and 105b with a grade of C or better and concurrent registration of 204a.

205B-3 Advanced Harmony. The study of 19th Century Western European tonal materials, including keyboard skills. Prerequisite: 204a and 205a with a grade of C or better and concurrent registration of 204b.

207-2 Contrapuntal Techniques. Basic contrapuntal principles and skills, especially as applied to 18th and 19th century styles. Extensive writing practice, and analysis of stylistic models. Introduction to major contrapuntal forms. Prerequisite: 204 and 205 with a grade of C or better, or take 204 concurrently.

210-2 Analytic Techniques for the Pianist. Studies the process by which piano teachers analyze piano music and performance. Extensive projects in piano music analysis, sight-reading, interpreting and memorizing piano compositions, lecture/discussions, reading and listening assignments and observation of studio and piano class teaching provide increasing readiness for piano teaching as it relies on analytic and problem-solving techniques.

211-2 Piano Literature Seminar. A survey course that acquaints students with piano music for teaching at all levels of advancement from baroque, classical, romantic and contemporary music style periods. Piano literature, sight-reading, recorded music listening assignments, score study, writing assignments and lecture/performance presentations in class include studies of piano methods, piano music editions, collections and publishers highlighting the keyboard literature of sixteen major composers.

240-1, 2, or 4 Applied Music. (See 040.)

250-3 The History and Literature of the Guitar and Related Fretted Instruments. A survey of the history and literature of the guitar and related fretted instruments from the Renaissance to the present with emphasis on interpretation.

257-1 to 12 Intern-Work Experience. Practical experience in music retailing, wholesaling, and publishing under the supervision of professional firms. Open only to candidates for the Bachelor of Arts degree with emphasis in music business. Prerequisite: music business specialization and consent of instructor.

280-2 to 4 (2,2) Beginning Composition. Application of contemporary compositional techniques. Prerequisite: 105b or consent of instructor.

303I-3 Women, Blues and Literature. (University Core Curriculum). Explores traditional aesthetic processes of the blues as a mode of self expression. Examines the images/voices projected by vaudeville blues women (1920s/30s), along with various manifestations/extensions – instrumental and vocal, musical and literary – from fiction and poetry to jazz, r&b, and rap. In-depth analysis of blues music and literature.

304-2 General Music in the Schools, K-12. Administration of the school general music program, classroom and non-performance classes, in grades Kindergarten through high school. Topics include: history and

general philosophy of music education, general music teaching methods, materials, and teaching strategies, technology, classroom management, assessment in music, special learners and multicultural music. Observations of school music and youth music programs are required. Prerequisite: admission to the teacher education program.

305-2 Instrumental Music in the Schools, 4-12. Administration of the school instrumental music program in grades four through high school. Topics include: history and general philosophy of instrumental music education, the beginning instrumental program, instrumental methods and materials, facilities and the equipment, structure and management of school instrumental programs and marching band administration and techniques. Prerequisite: admission to the Teacher Education Program, Music 304.

306-2 Vocal/Choral Music in the Schools, K-12. Administration of the school vocal/choral music program in grades Kindergarten through 12. Topics include: vocal development, choral methods, choral literature, rehearsal technique, literacy in the rehearsal, and management of vocal/choral ensembles. Prerequisite: 304; admission the Teacher Education Program.

307-2 Computers and Music. An introduction to essential computer tools for musicians. Topics covered will include music notation software, searching the Internet for musical resources, and midi keyboard basics. Prerequisite 102, 104b, 105b.

310-2 Piano Technique Seminar. An exhaustive study of three classics on the subject of piano technique by authors Reginald Gerig, Paul Roes and Abby Whiteside. This historical perspective is practically applied in a weekly routine of technical and theoretical studies at the piano. The course provides a foundation from which to deal with all aspects of piano technique development in teaching.

311-2 Advanced Piano Literature Seminar. In-depth study of an extensive catalogue of piano works for specific selection and design of a sequential curriculum of piano literature for teaching. Piano literature sight-reading, recorded music listening assignments and score study culminate in a final course project that details specific piano works for teaching baroque, classical, romantic and contemporary literature to students of elementary, intermediate and advanced abilities. Prerequisite: 211.

316-1 Introduction to Conducting. An introductory conducting course designed to teaching beginning rehearsal techniques. Prerequisite: music major or minor and junior standing.

317-2 Choral Conducting and Methods. Score reading, baton techniques, and rehearsal techniques, organization and management problems of school choral groups. Prerequisite: 316, music major or minor and junior standing.

318-2 Instrumental Conducting. Score reading, baton techniques, and rehearsal management. Supervised application in ensemble. Prerequisite: 316, music major or minor and junior standing.

321-2 Form and Analysis. Comprehensive study of harmonic and formal structures and typical stylistic traits of 18th and 19th century music. Prerequisite: 204 and 207.

322-3 Principles of 20th Century Music. Comprehensive study of harmonic techniques and other stylistic traits of major 20th century idioms. Prerequisite: 321.

323-3 Instrumentation. A study of musical instruments history, construction, major manufacturers, cost, accessories, conventional ranges, transposition, traditional and expanded performance techniques, problems/diosyncracies, performance roles, commercial/recording applications and sources for information.

324-1 Instrumental Arranging. Practice in scoring of transcriptions, arrangements, and original compositions for standard instrumental groups. Prerequisite: 205.

325-1 Choral Arranging. Practice in scoring arrangements and/or original compositions for choral groups. Prerequisite: 205.

331-1 to 4 (1,1,1,1) Jazz Improvisation. Ear training, phrasing in extemporaneous playing, use of chord symbols and chord progressions, special effects peculiar to jazz playing and styles of playing. Prerequisite: consent of instructor.

340-1, 2 or 4 Applied Music. [IAI Major Course: MUS 909] (See 040.)

341-1 to 8 (1 or 2 per semester) Accompanying Laboratory. Experience, under supervision, in accompanying soloists and groups. Counts as a major ensemble for music majors studying at the 340 level or above specializing in keyboard performance and piano pedagogy only. Prerequisite: studying at 340 level or above.

357-6 (3,3) Music History. (Advanced University Core Curriculum course) [IAI Course: F1 901] Study of musical examples and techniques evolving from the ancient period to the present. May take a or b in either order. Prerequisite: 102 with a grade of C or better and junior standing. Satisfies the College of Liberal Arts Writing Across-the-Curriculum music major requirement. Both a and b satisfies University Core Curriculum Fine Arts requirement in lieu of 103.

362I-3 Sound Art and Practice. (University Core Curriculum)(Same as Radio and Television 362) Create a unified view of how sound impacts media, society, and to some extent, the individual in a variety of applications and careers. This course will provide students with a philosophical understanding of the concepts and practices used in sound art and practice today and historically; and more importantly, in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in media society, regardless of their desire to pursue sound as a career.

363-2 (1,1) Pronunciation and Diction for Singers. (a) English and French, (b) German and Italian. Establishment of proper pronunciation as applied to vocal literature. Prerequisite: one or more semesters of private or class voice instruction.

364-2 The Alexander Technique of Body Control. A controlled discipline to counteract tension habits that are harmful to correct use of the body, particularly as they relate to music, speech, dance, and theater.

365-1 to 64 (1 per section) Chamber Music. Groups of two to sixteen performers as organized and sponsored by individual faculty members. Includes duo-piano teams, and piano in combination with other per-

formers. Regular weekly rehearsals of appropriate music and public performance as feasible. Section (g) counts as a major ensemble for music majors specializing in guitar and for juniors and seniors with non-performance specializations whose principal instrument is the guitar: (a) Chamber music-vocal; (b) Chamber music-string; (c) Chamber music-woodwind; (d) Chamber music-brass; (e) Chamber music-percussion; (f) Chamber music-keyboard; (g) Chamber music-classical guitar; (h) Chamber music-20th century. Instrumentalists and singers experiment with new musical techniques and styles. Small ensembles and/or one large ensemble will rehearse weekly. Each subject may be repeated up to 8 hours.

375-3 Introduction to Recording Engineering. (Same as Radio and Television 375) Specializes in recording and engineering. Intended to be a general introduction to the world of multi-track recording. Seventy percent of the course involved with basic information about sound, test equipment, microphones, recorders, signal processing equipment, consoles, noise reduction devices, and the most recent developments in the perception of sound. Thirty percent consists of actual live recording sessions and mix-down sessions. Each student given hands-on experience in recording and mixing and will receive a copy of the master tape. Enrollment limited. Preference given to music majors. Prerequisite: junior music major.

376-3 Advanced Recording Engineering. Continues the skills developed in 375. Student familiarized with duties of the professional engineer through practical experience.

380-2 to 4 (2,2) Composition. Original composition in a contemporary language, intermediate in scope and form. Individual instruction and weekly seminar. Prerequisite: 280 or consent of instructor.

398-1 to 2 (1,1) Partial Recital. Preparation and presentation of a partial recital in any applied field. Prerequisite: prior or concurrent registration in 340 and approval of applied jury.

400-1 to 2 (1,1) Performance Techniques. Individual instruction in any secondary applied field. Designed to provide added depth of preparation for teaching instrumental and vocal music. Prerequisite: completion of 340 level or the equivalent in some field of applied music.

401-1 to 12 (1 to 2 per semester) Opera Workshop. Open to all appropriately experienced singers, actors, dancers, instrumentalists and theater technicians. Study of opera/opera repertoire and performance techniques. Prerequisite: consent of the instructor.

402-1 to 12 (1 to 2 per semester) Musical Theater Workshop. Open to all appropriately experienced actors, singers, dancers, instrumentalists and theater technicians. Study of musical theater/musical revue repertoire and performance techniques. Prerequisite: consent of the instructor.

403-1 to 16 (1 to 2 per semester) Lyric Theater Ensemble. (1 to 2 per semester) A select group which performs operatic or musical theater literature, usually in the form of a fully mounted production each semester. May be repeated for credit. Prerequisite: audition or consent of instructor.

407-2 Modal Counterpoint. Study of Renaissance contrapuntal techniques. Extensive writing practice, and analysis of stylistic models. Prerequisite: 207.

410-2 Piano Pedagogy Practicum. Provides undergraduate and graduate piano pedagogy majors with the opportunity for supervised practice piano teaching. Course activities include lesson-planning, conducting and evaluating studio piano and class piano lessons, and a survey of important educational issues that impact on effective piano teaching. Prerequisite: consent of instructor.

420-1 to 2 (1,1) Instrument Repair. A shop-laboratory course dealing with the selection, tuning, adjustment, maintenance, and repair of musical instruments. Prerequisite: two semesters of instrumental techniques courses or consent of instructor.

421-2 Advanced Analysis. Structure, form, and design in music as the coherent organization of all of its factors. Analysis of works chosen from a variety of styles and genres. Prerequisite: 321.

440-1, 2, or 4 Applied Music. [IAI Major Course: MUS 909] (See 040.)

447-4 (2,2) Electronic Music. (a) Introduction to classical studio equipment and techniques; use of voltage controlled equipment. Individual laboratory experience available. (b) Emphasis upon creative projects, more sophisticated sound experimentation, and analysis. Enrollment limited. Must be taken in a,b sequence. Prerequisite: 280 or consent of instructor.

453-2 to 4 (2 per semester) Advanced Topics in Choral Music. Practicum in the selection, rehearsal, and performance of appropriate literature. Study of techniques for achieving proficient performance and musical growth. For experienced teachers and advanced students.

454-2 to 4 (2 per semester) Advanced Topics in Instrumental Music. Practicum in the selection, rehearsal, and performance of appropriate literature. Study of techniques for achieving proficient performance and musical growth. Designed for experienced teachers and advanced students.

455-2 to 4 (2 per semester) Advanced Topics in Elementary School Music. Practicum in the selection and use of materials for the elementary school program. Study of techniques for achieving balanced musical growth. For experienced teachers and advanced students.

456-4 (2,2) Music for Exceptional Children. (a) Theories and techniques for therapeutic and recreational use of music with physically and mentally handicapped children. Includes keyboard, autoharp, guitar, and tuned and untuned classroom instruments. (b) Applications for the gifted, emotionally disturbed, and culturally disadvantaged child. Take in sequence. Prerequisite: 302 or prior consent of instructor.

461-3 Applied Music Pedagogy. Specialized problems and techniques employed in studio teaching of any particular field of music performance. Study of music literature appropriate for the various levels of performance. Opportunity, as feasible, for supervised instruction of pupils. Meets with appropriate instructor, individually or in groups.

468-2 to 4 (2,2) Music Productions. Practicum in the techniques for staging operas and musicals.

470-3 History of Opera. The development of the music, libretti and staging of opera from the late Renaissance to the present. Prerequisite: 357b, or consent of instructor.

471-3 History of Musical Theater. The development of the music, book, lyrics and staging practices of musical theater from its late 19th Century beginnings to present, with a detailed study of selected contributors and their works. Prerequisite: 357b or consent of instructor.

472-3 Chamber Music Literature. A study of literature for the principal types of chamber music groups.

475-3 Baroque Music. The development of vocal and instrumental music in the period 1600-1750, from Monteverdi to Bach and Handel. Oratorio and Cantata, the influence of opera, sonata, suite, and concerto. Prerequisite: 357a with a grade of C or better, or graduate standing.

476-3 Classical Music. Development of the sonata, symphony, concerto, and chamber music in the 18th and early 19th centuries, with emphasis on the music of Haydn, Mozart, and Beethoven. Prerequisite: 357b with a grade of C or better, or graduate standing.

477-3 Romantic Music. Development of the symphony and sonata forms, chamber music, and vocal music in the 19th and early 20th centuries. Rise of nationalism and impressionism. Prerequisite: 357b with a grade of C or better, or graduate standing.

479-2 to 4 (2 per topic) Solo Performance Literature. Topics presented will depend upon the needs of students and upon instructors scheduled. (a) Piano literature, including an introductory study of harpsichord music; (b) organ literature, in relation to the history of the instrument; (c) song literature; (d) guitar and lute literature; (e) solo string literature; (f) solo wind literature.

480-2 to 4 (2, 2) Advanced Composition. Original composition involving the larger media. Individual instruction. Prerequisite: two semesters of 380 with a grade of C or better and approval of composition jury.

481-1 to 4 Readings in Music Theory. Assigned readings and reporting of materials pertaining to a particular phase of music theory in historical perspective. Approximately three hours' preparation per week per credit (adjusted for shorter sessions). Prerequisite: 321 and 322 or prior consent of instructor.

482-1 to 4 Readings in Music History and Literature. Assigned readings and reporting of materials pertaining to a particular phase of history or literature. Approximately three hours preparation per week per credit. Prerequisite: 357a and b, or prior consent of instructor.

483-1 to 4 Readings in Music Education. Assigned readings and reporting of materials pertaining to a particular phase of music education. Approximately three hours preparation per week per credit (adjusted for shorter sessions). Prerequisite: consent of instructor.

487-2 to 4 Music Business Senior Project. This capstone course offers an opportunity for students to pursue original projects or investigations of music business topics. The details and parameters of each project/investigation are dependent on the students' individual focus area. Each project is planned to occupy typically three hours preparation per week credit hour. Not for graduate credit. Prerequisite: senior standing and consent of selected music business instructor.

488-2 Open Studies Senior Project. This capstone course offers an opportunity for students to pursue original projects or investigations which combine music with their approved secondary focus. The details and parameters of each project/investigation are established one-on-one with the appropriate school of music faculty and completed with that instructor's guidance. Each project will result in a major paper and/or lecture recital. Not for graduate credit. Prerequisite: senior standing and consent of instructor.

489-2 Music Theater Senior Project. Designed as a capstone course for the bachelor of arts in music theater, student will prepare audition materials for a voice, acting and dance jury. Not for graduate credit. Prerequisite: senior standing and consent of instructor.

498-2 to 4 (2,2) Recital. Preparation and presentation of a full solo recital in any applied field. Prerequisite: prior or concurrent registration in 440 and approval of applied jury.

499-1 to 8 Independent Study. Original investigation of selected problems in music and music education with faculty guidance. Project planned to occupy approximately three hours preparation per week per credit (adjusted for shorter sessions). Not more than three hours toward 30 required for graduate degree. Prerequisite: prior consent of selected instructor.

Music Faculty

Allison, Robert, Associate Professor, D.M.A., University of Illinois, 1988.

Barta, Michael, Professor, M.M., Franz Liszt Academy of Music (Hungary), 1977.

Barwick, Steven, Professor, *Emeritus*, Ph.D., Harvard University, 1949.

Beattie, Donald, Associate Professor, M.Mus., University of Colorado, 1977.

Benyas, Edward, Professor, M.M., Northwestern University, 1994.

Best, Richard, Professor, Northwestern University.

Bottje, Will Gay, Professor, *Emeritus*, D.M.A., Eastman School of Music, 1955.

Bough, Thomas, Assistant Professor, D.M.A., Arizona State University, 1998.

Breznikar, Joseph, Professor, M.Mus., University of Akron, 1977.

Brown, Philip, Associate Professor, M.M.E., University of North Texas, 1983.

Carter, Clarence, Assistant Professor, M.Mus., Southern Illinois University Carbondale, 1973.

Delphin, Wilfred, Professor, *Emeritus*, D.M.A., University of Southern Mississippi, 1976.

Fink, Timothy, Associate Professor, M.F.A., Southern Illinois University Carbondale.

Fligel, Charles, Associate Professor, *Emeritus*, M.M., University of Kentucky, 1966.

Ginther, Kathleen, Lecturer, D.M.A., Northwestern University, 1996.

Grizzell, Mary Jane, Assistant Professor, *Emerita*, M.Mus., Eastman School of Music, 1943.

Hanes, Michael, Professor, M.M.E., Southern Illinois University, 1965.

Hartline, Elisabeth, Assistant Professor, *Emerita*, M.Mus. Northwestern University, 1936.

House, Mary Elaine Wallace, Professor, *Emerita*, M.Mus., University of Illinois, 1954.

Hussey, George, Professor, *Emeritus*, M.A.Ed., Washington University, 1963.

Johnson, Maria, Associate Professor, Ph.D., University of California, 1992.

Lenz, Eric, Assistant Professor, D.M.A., University of Alabama, 2002.

Lord, Suzanne, Associate Professor, D.M.A., Louisiana State University, 1996.

Mackey, Melissa, Assistant Professor, D.M.A., University of Southern California, 2003.

Mandat, Eric P., Professor, D.M.A., Eastman School of Music, 1986.

McHugh, Catherine, Professor, *Emerita*, Ed.D., Columbia University, 1959.

Mellado, Daniel, Associate Professor, *Emeritus*, Ph.D., Michigan State University, 1979.

Mochnick, John, Professor, D.M.A., University of Cincinnati, 1978.

Mueller, Robert, Professor, *Emeritus*, Ph.D., Indiana University, 1954.

Poulos, Helen, Associate Professor, *Emerita*, D.M., Indiana University, 1971.

Resnick, Robert, Professor, *Emeritus*, M.Mus., Wichita State University, 1949.

Rewoldt, Todd, Assistant Professor, D.M.A., Eastman School of Music, 2001.

Roomers, Henry, Visiting Associate Professor, M.M.E., Oberlin College, 1955.

Roubos, Robert, Professor, *Emeritus*, D.M.A., University of Michigan, 1966.

Simmons, Margaret, Professor, M.M., University of Illinois, 1976.

Stemper, Frank, Professor, Ph.D., University of California, 1981.

Taylor, Charles, Associate Professor, *Emeritus*, Ed.D., Columbia University, 1950.

Underwood, Jervis, Professor, *Emeritus*, Ph.D., North Texas State University, 1970.

Wagner, Jeanine, Professor, D.M.A., University of Illinois, 1987.

Webb, Marianne, Professor, *Emerita*, M.Mus., University of Michigan, 1959.

Weiss, Robert L., Jr., Professor and *Director*, Ph.D., Southern Illinois University, 1984.

Werner, Kent, Associate Professor, *Emeritus*, Ph.D., University of Iowa, 1966.

Williams, Heidi, Assistant Professor, DMA, Peabody Institute, 1999.

Natural Resource Economics

(SEE AGRIBUSINESS ECONOMICS)

Nursery Management

(SEE PLANT AND SOIL SCIENCE)

Nutrition

(See Food and Nutrition)

Outdoor Recreation

(SEE FORESTRY)

Paralegal Studies (Major, Courses, Faculty)

The program leads to the Bachelor of Science degree in paralegal studies. It prepares the graduate to function as a paraprofessional in the legal profession and as a legal assistant in private practice, legal aid offices, or the law-related operations of business, industry, education, or government.

In overall philosophy, the paralegal studies program is based on the proposed *Curriculum for the Training of Law Office Personnel* as stated by the American Bar Association Standing Committee on Paralegals. The program provides two curricula, professional competency and a pre-law specialization, to provide the intellectual background for the student's future professional life including an understanding of law and its function in society. Students must meet a minimum 2.25 grade point average requirement for admission. Paralegal majors can satisfy the CoLA Writing-Across-the-Curriculum requirement by passing Paralegal Studies 300a and b.

Students majoring in paralegal studies must complete core and elective requirements listed below for a minimum of 33 hours of which at least 15 must be earned at Southern Illinois University Carbondale.

Qualified students may be admitted to the Capstone Option with a major in paralegal studies. The Capstone Option is explained in Chapter 3.

Bachelor of Science Degree, College of Liberal Arts - Paralegal Studies - General

University Core Curriculum	41
College of Liberal Arts Academic Requirements (See Chapter 4)	8
Requirements for Major in Paralegal Studies	46-49
Paralegal Courses	32-34
Paralegal Studies 300a,b, 310, 320, 330, 350, 360, 370, 380, 405	28-29
Paralegal Studies 305 or Political Science 330 (general law)	3
Paralegal Studies 340, Internship	3
Student must take an average of ten hours per week for fifteen weeks for each three hours of credit. A student may earn 12 hours of internship credit, but not more than three will count toward the major,	
Administration related courses	14-15
Introduction to computers	3
Accounting 210, or approved substitute	2-3
Approved Business/Computer Course	9
Electives	22-25
Total	120

Paralegal Studies General Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Multicultural	3	-
Science	3	3	Human Health, Interdiscipln ¹	2	3
POLS 114, Social Science.....	3	3	SPCM 101, POLS 330 or		
Humanities	3	3	PARL 305	3	3
Mathematics	3	-	Foreign Language	4	4
Fine Arts.....	-	3	Intro to Computers	3	-
			ACCT 210 or approved subs.....	-	2-3
			Business/computer related		
			course	-	3
Total	15	15	Total	15	15-16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PARL 300a,b.....	3	3	PARL 320, 340	3	3
PARL 310, 330	3	3	PARL 360, 380	3	1
PARL 350	-	3	PARL 370	-	3
Business/computer related			PARL 400	-	3
course	3	3	PARL 405 (sub for 340 and		
Elective	6	3	400)	-	4
			Electives	9	5-8
Total	15	15	Total	15	15-16

¹ For the purposes of this program core curriculum courses at the 300 level can be used to meet the 15 hour upper division liberal arts requirements.

Bachelor of Science Degree, College of Liberal Arts – Paralegal Studies – Pre-Law Specialization

Paralegal Studies majors preparing for law school must meet the basic requirements for the general paralegal major. Students opting for the pre-law specialization will be given the choice whether to take an internship or an additional three hours of law related courses. Students will also take nine additional 300- 400-level liberal arts hours instead of the business/computer courses required under the general paralegal major.

University Core Curriculum	41
----------------------------------	----

College of Liberal Arts Academic Requirements (See Chapter 4)	8
Requirements for Major in Paralegal Studies	46-49
Paralegal Courses	32-34
Paralegal Studies 300a,b, 310, 320, 330, 350, 360, 370, 380, 400, 405	28-29
Paralegal 305 or Political Science 330	3
Internship or other approved law-related courses	3
Students who take the internship will be required to work an average of ten hours a week for 15 weeks for each three hours of credit. A student may earn 12 hours of internship credit, but not more than three will count toward the major.	
Administration related courses	5-6
Introduction to computers course	3
Accounting 210 or approved substitute	2-3
Liberal Arts Courses	9
These hours must be 300- 400-level courses. Core cur- riculum courses at the 300-level may be used. A minor in another Liberal Arts discipline can be credited for these hours.	
Electives	22-25
Total	120

Paralegal Studies – Pre-Law Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102.....	3	3	Human Health, Interdiscipln ¹ .	2	3
Science	3	3	SPCM 101, POLS 330 ¹ or		
POLS 114, Social Science	3	3	PARL 305	3	3
Humanities	3	3	Foreign Language	4	4
Mathematics	3	-	Intro to Computers	3	-
Fine Arts	-	3	ACCT 210 or approved sub-		
			stitutes	-	2-3
			LAC 300 or 400	-	3
			Multicultural, PARL 405 (sub		
			for 340 and 400)	3	4
Total	15	15	Total	15	15-16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PARL 300a,b.....	3	3	PARL 320, PARL 400	3	3
PARL 310, 330	3	3	PARL 360, 380	3	1
PARL 350	-	3	PARL 370	-	3
LAC 300 ¹ or 400	3	3	Internship or approved sub-		
Elective	6	3	stitutes	-	3
			PARL 405(sub for 340 and		
			400)	-	4
			Electives	8	5-6
Total	15	15	Total	14	15-16

¹ For the purposes of this program core curriculum courses at the 300 level can be used to meet the 15 hour upper divi- sion liberal arts requirements.

Minor

A minor in paralegal studies requires 15 hours. Paralegal Studies 300a,b and ei- ther 305 or Political Science 330 are required. The remaining six hours should be chosen from Paralegal Studies 310, 320, 330, 340, 350, 360, 370, 400 or 405.

Courses (PARL)

300A-3 Legal Analysis, Research and Writing I. After examining the litigation process and the structure of the federal and state court systems, students will be introduced to case and statutory analysis and to an understanding of the role of paralegals in the litigation process. They will learn how to analyze and synthe- size written opinions and will complete several writing projects. This course meets the CoLA Writing-Across- the-Curriculum requirement.

300B-3 Legal Analysis, Research and Writing II. Students will continue to develop their analytical skills and will learn how to conduct effective legal research. Students will use the results of their research in connection with several additional writing projects, including memoranda of law and appellate briefs. Em-

ployment opportunities for paralegals and their professional responsibilities will be stressed throughout the course. This course meets the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 300a, grade of C or better.

305-3 Introduction to Law. This course will provide a basic background of the United States legal process. It will provide an introduction to civil and criminal processes, legal terminology, a history of common law, and cover various areas of substantive law. Ethics, regulations, and professional responsibilities involved in the legal profession will be discussed, along with the basic legal concept and legal analysis. Students will learn to read and brief legal cases.

310-3 Civil Procedure. Students will examine the lawyers' and paralegals' roles in handling civil cases, and the means by which the objectives of litigation may be achieved. Strategy and mechanics of civil procedure will be explored in depth, and students will be required to prepare a complaint, discovery requests, and initial appellate documents.

315-3 Introduction to Criminal Law. (Same as Administration of Justice 310) The nature and theories of law and social control; legal reasoning and case analysis; simple legal research; statutory construction; principles and history of punishment; constitutional, historical and general legal principles applicable to the criminal law. Prerequisite: Minimum six hours of other paralegal courses.

320-3 Estates and Trusts. Students will study the more common forms of wills and trusts and the fundamental principles of law applicable to each; the course will analyze the administration of estates under the Illinois Probate Act.

325-3 Basic Contract Law for Paralegals. This course will introduce students to basic principles of contract law, and assist them in developing skills for drafting simple contracts.

330-3 Legal Forms of Business Organizations. Includes a review of the lawyer's role in the formation of business entities, including sole proprietorship, partnerships, and corporations, with a survey of the fundamental principles of law applicable to each and the preparation of documents necessary to the organization and operation of each. The student will be prepared to draft articles of incorporation and other legal documents relevant to the role of a paralegal in a modern law office.

340-1 to 12 Internship in Paralegal Studies. Supervised on-the-job training and experience in public or private offices typically employing paralegals. Student must work ten hours per week for fifteen weeks for each 3 hours of credit. Only three hours of internship credit applicable to major requirements. Prerequisite: completion of 300a and b with a grade no lower than B and consent of coordinator of paralegal studies program.

350-3 Family Law. This course is a review of the law as it relates to the various aspects of domestic relations including marriage, divorce and separation, alimony, child custody and support, taxes, and illegitimacy and adoption.

360-3 Torts. This course will provide an introduction to the broad area of civil wrongs and their appropriate remedies. Tort law principles in the traditional areas of intentional torts, negligence, absolute liability, product liability, nuisance and commonly employed defenses.

370-3 Bankruptcy and Creditor's Rights. This course will provide an introduction to bankruptcy and the debtor-creditor relationship. The main purpose of this course is to give a basic understanding of the laws that apply to debtors and creditors, as a foundation to unraveling the intricacies of the bankruptcy process.

380-1 to 6 Technology in the Law Office. This course will introduce the paralegal student to various law office technology, such as case management programs, database development, and billing. Topics and hours will vary, and will be announced in advance. Prerequisite: consent of director or instructor.

400-3 Advanced Paralegalism. A course that shall review the many areas that will assist a student in a paralegal career, including; interviewing and investigation in the law office, use of computer in the office, office administration, lawyer and paralegal ethics, job opportunities, professionalism. Lab fee: \$20. Not for graduate credit. Prerequisite: senior standing and consent of instructor.

405-5 4 to 7 Advanced Internship. This course has two components. The first is in class and will assist students in preparing for their careers, including investigating potential employers, job interviews, how to perform their anticipated employment functions. Skills training will include interviewing, use of computers in the office, administration, ethics, and professionalism. The class will coordinate with the internship component, supervised on-the-job training and experience in public or private offices. Students must complete 150 hours for each three hours of credit for the internship component. Only four credit hours applicable to major requirements. Not for graduate credit. Lab fee: \$20. Prerequisite: completion of 300a and b with a grade no lower than a "C" and consent of the paralegal studies coordinator.

Paralegal Studies Faculty

Daly, Reona, Lecturer, J.D., Southern Illinois University, 1994.

Dibble, Elizabeth, Lecturer, J.D., Southern Illinois University, 1983.

Hughes, Kenneth, Lecturer, J.D., Southern Illinois University, 1982.

Murray, Richard, Lecturer, J. D., Southern Illinois University Carbondale, 1982.

Silver, Dan, Lecturer, J.D., Southern Illinois University School of Law, 1993.

Smoot, Carolyn, Director, Lecturer, J.D., Southern Illinois University Carbondale, 1983.

Thomas, Gail, Lecturer, J.D., Southern Illinois University School of Law, 1996.

Park Management

(SEE FORESTRY)

Philosophy (Department, Major, Minor, Courses, Faculty)

Philosophy is a critical, speculative, and reflective discipline concerned with the exploration of ideas. The questions with which it deals can be found in every human pursuit and subject matter. Among the subjects it embraces are the nature of truth and reality, the possibility of knowledge, the quest for moral values and political justice, and the nature of mind, language, art, and reason. The field of logic is a formal study of the art of exact thinking. Given this breadth, philosophy can be related to almost any subject or profession.

Recent studies have shown that strong liberal arts majors are in much demand in the world outside the University. While preprofessionals may enter the job market with higher salaries, those with liberal arts majors tend to rise higher in their professions. This is because a liberal arts degree indicates a capacity for thinking, learning, writing, and breadth of understanding. Philosophy is a strong liberal arts major, and majors in philosophy rank in the highest percentages for GRE, LSAT, and GMAT scores. In addition to academic work, philosophy contributes toward careers in law, medicine, business, government, journalism, religion, computers, and education.

The Department of Philosophy at SIUC is a pluralistic department, representing a variety of traditions, such as analytic philosophy, phenomenology, American philosophy, Asian philosophy, and feminism. It has faculty who specialize in the history of philosophy, logic, ethics, metaphysics, political and legal philosophy, the philosophy of science, the philosophy of technology and the philosophy of religion, among others. The undergraduate program is chartered by the national honor society in philosophy, *Phi Sigma Tau*.

The student electing to major in philosophy should consult the department's director of undergraduate studies. Majors may request to take a graduate level seminar (for undergraduate credit) as a substitute for three credit hours at the 400-level. Philosophy majors will satisfy the College of Liberal Arts Writing-Across-the-Curriculum requirement by passing Philosophy 304 and 305a or b. A minor is not required for a major in philosophy, though it is recommended that the student take foreign languages such as Greek, Latin, French or German.

Bachelor of Arts Degree in Philosophy, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4.)	14
<i>Requirements for Major in Philosophy</i>	33
Logic requirement: Philosophy 105 or 320	3
Ethics requirement: Philosophy 104 or 340	3
History of Philosophy requirement: Philosophy 304 and 305a,b	6
Six hours from 300 level courses in addition to 304 and 305a or b (not including courses offered in the Interdisciplinary Studies component of the University Core Curriculum)	6
At least nine hours of 400-level courses	9
<i>Electives</i>	32
<i>Total</i>	120

Philosophy Minor

A minor in philosophy requires 15 hours, a maximum of 6 of which may be selected from philosophy courses offered in the University Core Curriculum and

below the 300-level, 6 of which must be selected from the courses listed above for the major. Philosophy 304 and 305a or b are recommended.

Honors

Honors in philosophy will be granted to eligible majors who maintain a 3.50 average in philosophy and a 3.00 overall average.

Courses (PHIL)

102-3 Introduction to Philosophy. (University Core Curriculum) [IAI Course: H4 900] Introduction to fundamental philosophical issues across a broad spectrum. Problems in metaphysics, epistemology and ethics will be among the areas explored. Emphasis throughout is upon developing in the student an appreciation of the nature of philosophical questioning, analyzing and evaluating arguments and reflecting on the nature of human existence.

103-6 (3,3) World Humanities. (University Core Curriculum) [IAI Course: (a) HF 904N] This course will explore the rise, development and interaction of the major world civilizations as embodied in ideas and their expressions in religion, philosophy, literature and art. The great traditions of Near Eastern, European, Central Asian, Indian, Chinese and Japanese cultures will be examined. (a) The first semester will cover the early civilization of the Near East, the classical world of Greece and Rome, early China and India. (b) The second semester will look at the integrative civilizations of Buddhism, Medieval Christianity and Islam, and Modern Europe.

104-3 Ethics. (University Core Curriculum) [IAI Course: H4 904] Introduction to contemporary and perennial problems of personal and social morality, and to methods proposed for their resolution by great thinkers past and present.

105-3 Elementary Logic. (University Core Curriculum) [IAI Course: H4 906] Study of the traditional and modern methods for evaluating arguments. Applications of logical analysis to practical, scientific and legal reasoning, and to the use of computers.

210-3 The American Mind. (University Core Curriculum) [IAI Course: HF 906D] This course will survey the diverse traditions, ideas and ideals that have shaped American culture in the past and today. Major works from Native American, African American, feminist, Puritan, Quaker and American Zen Buddhist writers may be used as well as those from such intellectual movements as the Enlightenment, Transcendentalism and Pragmatism.

211-3 Philosophy and Diversity: Gender, Race and Class. (University Core Curriculum) This course is a philosophical introduction to diverse perspectives within modern American culture. It will address through reading and discussion important contemporary moral and social issues from the perspective of nontraditional orientations including African American, Native American and American feminism. The resources of philosophy and other related disciplines such as psychology, sociology and literature will be used to develop a culturally enriched perspective on important contemporary issues.

300-3 Elementary Metaphysics. An introduction to some of the basic issues in metaphysics, understood as the study of ultimate reality. The approach is systematic and contemporary rather than historical. Topics include space, time, individual substance, realism, anti-realism, idealism, personal survival, the nature of persons, free will, and God.

301-3 Philosophy of Religion. An analysis of problems in the psychology, metaphysics, and social effects of religion. Among topics discussed are the nature of mystical experience, the existence of God, and problems of suffering, prayer, and immortality.

303I-3 Philosophy and the Arts. (University Core Curriculum) [IAI Course: H9 900] An interdisciplinary examination of (1) literary and other artistic works which raise philosophic issues and (2) philosophic writings on the relationship between philosophy and literature. Possible topics include: source of and contemporary challenges to the traditional Western idea that literature cannot be or contribute to philosophy; the role of emotion, imagination and aesthetic value in philosophic reasoning; the role of literature in moral philosophy; and philosophic issues of interpretation.

304-3 Ancient Philosophy. (Advanced University Core Curriculum course) The birth of Western philosophy in the Greek world, examining such Pre-Socratics as Anaximander, Heraclitus, Pythagoras, and Parmenides; focusing upon the flowering of the Athenian period with Socrates, Plato, and Aristotle. The course will conclude with a discussion of the Hellenistic systems of Stoicism, Epicureanism, and the Neo-Platonic mysticism of Plotinus of the Roman period. Fulfills CoLA Writing-Across-the-Curriculum requirement. Satisfies University Core Curriculum Humanities requirement in lieu of 102.

305-6 (3,3) Modern Philosophy. (Advanced University Core Curriculum course) A survey course covering the major figures and themes in the development of modern philosophy up to Kant. Concentration on the Rationalist and Empiricist traditions and the simultaneous development of modern science. (a) Metaphysics and epistemology. (b) Moral and Political philosophy. Either 305a or 305b fulfills the CoLA Writing-Across-the-Curriculum requirement. 305a or b satisfies the University Core Curriculum Humanities requirement in lieu of 102.

306-3 Nineteenth Century Philosophy. Survey of 19th century European philosophy, focusing on the development of idealism and romanticism. Readings include selections from Fichte, Schelling, Hegel, and others.

307I-3 Philosophy of Science, Nature and Technology. (University Core Curriculum) Interdisciplinary study of major humanistic critiques of technology, science and nature; analysis of topics such as ecology, the

information revolution, aesthetics and ethics in various branches of science and technology, relation of science to technology.

3081-3 Asian Religion: A Philosophical Approach. (University Core Curriculum) [IAI Course: H4 903N] This course examines three major areas of Asian religious traditions from a philosophical perspective: South Asia, East Asia, and Buddhist traditions. Since it is not possible to be all inclusive, concentration will be on those with continuing significant spiritual, philosophical, social, political, aesthetic and literary influence. More specifically, it is an introduction to some of the major Asian religious traditions, such as Hinduism, Buddhism, Confucianism, Taoism, and Zen Buddhism, approached through philosophical reflection. Emphasis is on classical traditions, since this provides a solid foundation upon which students are than able to pursue further independent readings in more recent developments. Furthermore, this emphasis permits an extended exploration of the interaction among contemporary economic, sociological and religious developments and classical traditions.

3091-3 Philosophy of Politics, Law and Justice. (University Core Curriculum) An interdisciplinary exploration of classical and modern theories of law and justice with special attention to their implications for important contemporary political issues.

320-3 Deductive Logic. An introduction to first order logic, including the Boolean connectives, conditionals, and identity. The emphasis is on the concept of logical consequence and the related concepts of tautological and analytic (semantic) consequence. Other topics include truth functional and non-truth functional connectives, truth-tables, informal proofs, proofs of non-consequence, derivations using a Fitch natural deduction system, and translations to and from English.

340-3 Ethical Theories. (Advanced University Core Curriculum course) [IAI Course: H4 904] Nature of ethics and morality, ethical skepticism, emotivism, ethical relativism, and representative universalistic ethics. Bentham, Mill, Aristotle, Kant, Blanshard, and Brightman. Satisfies University Core Curriculum Humanities requirement in lieu of 104.

344-3 The Biomedical Revolution and Ethics. Changes in biology and medicine have brought into sharp focus such problems as allocation of scarce medical resources, use of human subjects in experiments, abortion, euthanasia, genetic screening, truth-telling in medical practice, moral rights of patients and other matters. This course brings ethical principles to bear on these issues.

351-3 The Mission of the University. This course focuses on the idea and practice of University education and its particular mission (or missions). This class investigates the mission of the University in three ways. First, it examines the history of the University. Second, it investigates the meaning of the University, primarily, by studying key philosophical texts that deal directly with the nature of the University and its vocation. Third, it provides a forum for collaboratively generating our own mission of the University. Prerequisite: minimum of one 100 level course in the humanities.

371-3 Introduction to Contemporary Phenomenology. Introductory survey of individual thinkers and questions in the contemporary phenomenological tradition: Husserl, Sartre, Merleau-Ponty, Levinas, and Ricoeur.

375-3 Ecology and Ethics. An exploration of several views of the relationship between human beings and the natural world. This course will examine the changing paradigms of environmental studies for insights about our epistemological and moral approaches to nature. Both classical and contemporary literature on nature will be used. Such topics as the Gaia hypothesis, ecofeminism, deep ecology, and the use of nature for human purposes will be addressed.

385-3 Mystical Literature and Meditation. This course will introduce and explore the profound tradition of literature that has nourished religious, ethical, as well as philosophical and literary, developments in Western and Eastern cultures, but has often been overlooked, not only by the sciences, but also by the humanities: the tradition of mystical literature. In addition to reading primary sources representative of Western and Eastern mystical traditions, this course will include a weekly lab during which the student will be exposed to meditative techniques and actual meditative practices. Finally, this course will integrate guest speakers/practitioners, audio and visual supports pertaining to the course, and work on the Web, allowing students to broaden their connections to others who also share an interest in this field of study and practice. Prerequisite: at least one course (three hours) in the humanities on the 100 or 200 level.

389-3 Existential Philosophy. Surveys the two main sources of existentialism, the philosophies of Kierkegaard and Nietzsche, with occasional reference to thinkers such as Sartre, Heidegger, Buber, Marcel, and others.

400-3 Philosophy of Mind. An investigation of the philosophic issues raised by several competing theories of mind, focusing on the fundamental debate between reductionistic accounts (e.g., central state materialism, identity theories of the physical and mental) and views which reject such proposed reductions. Traditional and contemporary theories will be examined. Designed for students in the life and social sciences with little or no background in philosophy as well as philosophy students.

415-3 Logic of Social Sciences. (Same as Sociology 415.) An examination of the theoretical structure and nature of the social sciences and their epistemological foundations. The relationship of social theory to social criticism; theory and praxis. Historical experience and social objectivity. Social theory as practical knowledge.

420-3 Symbolic Logic. An introduction to first order logic with an emphasis on quantification. Topics include the semantics of the quantifiers, first-order validity, quantifier equivalences, functions, informal proofs, proofs of non-consequence, derivations using a Fitch natural deduction system, translations to and from English, soundness and completeness, the axiomatic method, first order set theory, and mathematical induction. Prerequisite: 320 or consent of the instructor.

441-3 Philosophy of Politics. (Same as Political Science 403.) The theory of political and social foundations; the theory of the state, justice, and revolution. Classical and contemporary readings such as: Plato,

Aristotle, Hobbes, Locke, Rousseau, Marx, Dewey, Adorno and others. Prerequisite: 340 or Philosophy 102 or consent.

443-3 Philosophy of History. The rise of historical objectivity and the science of history. Classical and modern theories of history. History as the foundation of social knowledge. The critique of history as universal perspective. Prerequisite: consent of instructor.

446-3 Feminist Philosophy. (Same as Women's Studies 456.) (a) Feminist Philosophy. A survey of feminist theory and philosophical perspectives. (b) Special Topics in Feminist Philosophy. A special area in feminist philosophy explored in depth, such as Feminist Ethics, French Feminism, Feminist Philosophy of Science, etc. (c) Women Philosophers. Explores the work of one or more specific women philosophers, for example, Hannah Arendt, Simone DeBeauvoir, etc.

460-3 Philosophy of Art. We will examine several important theories that define art by focusing in on only one aspect, for example, imitation, expression, form, institutional setting, or even indefinability. What role does imagination play in each of these accounts, and does this tell us something important about how people experience their world?

468-9 (3,3,3) Kant (a) Theoretical Philosophy; (b) Practical Philosophy; (c) Aesthetics, Teleology and Religion.

469-3 Hellenistic and Roman Philosophy to Augustine. The career of philosophy during the Hellenistic, Roman and Early Medieval period, especially as a means of personal salvation, exploring such figures and movements as: Epicurus, Stoicism, the Middle Academy, Skepticism, Gnosticism, Plotinus, Early Christianity, Augustine, and Boethius. Prerequisite: 304 or consent of instructor.

470-6 (3,3) Greek Philosophy. (a) Plato. A general survey of the Platonic dialogues from the Socratic period through the middle, with some selections from the Late period. Such Dialogues will be emphasized as: Protagoras, Gorgias, Euthydemus, Charmides, Meno, Phaedo, Symposium, Republic, Phaedrus, Sophist and Timaeus. (b) Aristotle. A general survey of the Aristotelian philosophy including the theory of nature, metaphysics, ethics, and political philosophy. Readings will consist of selections from the corpus. Prerequisite: 304 or consent of instructor.

471A-3 History of Medieval Philosophy. An examination of some of the most important figures and themes in medieval philosophical thought. Medieval debates in the area of metaphysics, natural philosophy, epistemology, ethics and politics will be explored in reading the works of such figures as Augustine, Boethius, Abelard Avicenna, Averroes, Maimonides, Bonaventure, Thomas Aquinas, Duns Scotus, Ockham and Nicholas of Cusa. Prerequisite: 304 or consent of instructor.

471B-3 The Medieval Thinker. An examination of the thought of one of the central and most influential figures of the medieval world. Possible subjects of the course are Augustine of Hippo, Al-Ghazali, Moses Maimonides, Bonaventure, Thomas Aquinas, Duns Scotus, Dante Alighieri or William Ockham. Prerequisite: 304 or consent of instructor.

472-6 (3,3) The Rationalists. (a) Descartes. A study of the Philosophy of Rene Descartes, concentrating on his major writings, *Meditations*, *Discourse on Method* and *Principles of Philosophy*, as well as his philosophical correspondence. May include study of Descartes' relation to the later Rationalists. (b) Study of the philosophy of one or more of Spinoza, Leibniz, Arnauld, Malebranche, Wolff. May include study of the relation of these philosophers to Descartes. Prerequisite: 305 or consent of instructor.

473-6 (3,3) The Empiricists. (a) Locke; (b) Hume. Study of the principles of British empiricism as represented by either Locke or Hume. May also include study of Berkeley. Prerequisite: 305 or consent of instructor.

475-3 Topics in Asian Philosophy. Extended examination of one or two major texts, figures or philosophical schools in Asian philosophy. Topics vary; students are advised to consult with the instructor.

476-3 Islamic Philosophy. An understanding of medieval Islamic philosophy and theology focusing on the period of time from Al-Kindi (9th Century) to Averroes (12th Century).

477-3 Indian Philosophy. An examination of several major traditions and texts of Indian philosophy, such as the *Upanishads*, the *Bhagavad Gita*, Vedanta, Nyaya, and contemporary philosophy, with an emphasis on their social and historical contexts.

478-3 Buddhist Philosophy. An examination of several major philosophical traditions or figures in Buddhism, such as Madhyamika, Yogacara, Zen, Mind-Only, and the Kyoto school, emphasis on their social and historical contexts.

479-3 Chinese Philosophy. An examination of several major traditions of Chinese philosophy, such as Confucianism, Taoism, Mohism and Maoism, Neoconfucianism, emphasis on their social and historical contexts.

480-3 History of Analytic Philosophy. An introduction to the works of several major 20th Century philosophers in the analytic tradition, including several of the following: Frege, Russell, Moore, Wittgenstein (early and later), members of the Vienna Circle, Ayer, Ryle, Quine, Putnam, Davidson. Includes discussion of challenges to the tradition that have developed within it.

482-3 Recent European Philosophy. Philosophical trends in Europe from the end of the 19th Century to the present. Phenomenology, existentialism, the new Marxism, structuralism, and other developments. Language, history, culture and politics.

486-3 Early American Philosophy. From the Colonial period to the Eve of World War I. This course will trace the transplantation of European philosophy to the New World. Puritanism, Quakerism, the theory of the American Revolution, the philosophical basis of the Constitution, transcendentalism, idealism, Darwinism and pragmatism and such figures as: Jonathan Edwards, John Woolman, Thomas Jefferson, James Madison, Ralph Waldo Emerson, Josiah Royce, Charles Sanders Peirce, and William James.

487-3 Recent American Philosophy. From World War I to the Present. The major American philosophers of the 20th Century, covering such issues as naturalism, emergentism, process philosophy, and neopragmatism. Figures include: John Dewey, George Herbert Mead, George Santayana, Alfred N. Whitehead, C. I. Lewis, W. V. Quine, and Richard Rorty.

490-1 to 8 Special Problems. Hours and credits to be arranged. Courses for qualified students who need to pursue certain topics further than regularly titled courses permit. Special topics announced from time to time. Students are invited to suggest topics. Prerequisite: consent of department.

491-1 to 6 Undergraduate Directed Readings. Supervised readings for qualified students. Open to undergraduates only. Prerequisite: consent of instructor. Additional hours beyond three (3) must have approval of the Director of Undergraduate Studies.

499-3 Senior Thesis. A paper on a topic agreed to by the student and a faculty thesis director. The paper should be of sufficient length to manifest the student's mastery of a philosophical area and logical and critical skills. Not for graduate credit. Prerequisite: consent of instructor and department.

Philosophy Faculty

Alexander, Thomas, Professor, Ph.D., Emory University, 1984.

Anderson, Douglas, Professor, Ph.D., Pennsylvania State University, 1984.

Auxier, Randall E., Professor, Ph.D., Emory University, 1992.

Beardsworth, Sara, Assistant Professor, Ph.D., University of Warwick, 1994.

Berger, Douglas L., Assistant Professor, Ph.D., Temple University, 2000.

Clarke, David S., Jr., Professor, *Emeritus*, Ph.D., Emory University, 1964.

Delahoussaye, Gerard L., Assistant Professor, Ph.D., University of Ottawa, 2004.

Eames, Elizabeth R., Professor, *Emerita*, Ph.D., Bryn Mawr College, 1951.

Gatens-Robinson, Eugenie, Associate Professor, *Emerita*, Ph.D., Southern Illinois University, 1984.

Gillan, Garth J., Professor, *Emeritus*, Ph.D., Duquesne University, 1966.

Hahn, Robert A., Professor, Ph.D., Yale University, 1976.

Hickman, Larry A., Professor, Ph.D., University of Texas at Austin, 1971.

Howie, John, Professor, *Emeritus*, Ph.D., Boston University, 1965.

Kelly, Matthew J., Associate Professor, *Emeritus*, Ph.D., University of Notre Dame, 1963.

Kunz, Arthur A., Lecturer, M.A., Southern Illinois University, 2001.

Manfredi, Pat A., Associate Professor, Ph.D., University of Notre Dame, 1982.

Plochmann, George Kimball, Professor, *Emeritus*, Ph.D., University of Chicago, 1950.

Price, Thomas W., Lecturer, M.A., Southern Illinois University, 1989.

Schedler, George E., Professor and *Chair*, Ph.D., University of California at San Diego, 1973; J.D., Southern Illinois University, 1987.

Steinbock, Anthony J., Professor, Ph.D., SUNY, Stony Brook, NY, 1993.

Stikkers, Kenneth W., Professor, Ph.D., De Paul University, 1982.

Tyman, Stephen, Associate Professor, University of Toronto, 1980.

Youpa, Andrew, Assistant Professor, Ph.D., University of California, Irvine, 2002.

Physical Education (See Kinesiology)

Physical Therapist Assistant (Major, Courses)

The physical therapist assistant program is fully accredited by the Commission on Accreditation in Physical Therapy Education. It is designed to prepare the graduate to work under the supervision of a physical therapist to treat disabilities resulting from birth defects, disease, or injury. Physical therapy helps the patient to develop strength, mobility, coordination, and skills needed to manage pain. Successful completion of the program provides graduates with the educational requirements necessary to take state licensing examinations for physical therapist assistants.

Students are provided hands-on experience in exercise, physical agents, and other therapeutic techniques in actual practice in the University's Physical Therapy Department. They will work with physical therapists and physical therapist assistants performing therapeutic techniques and carrying out the patient's physical therapy plan of care. While the regular semesters will utilize classroom, laboratory and clinical education experiences, the final summer semester requires two full time six-week internships at two separate facilities away from the University campus. This degree requires the successful completion of a clinical practicum and two internships. In accordance with Federal and State guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, and rubella, tetanus, TB, and Hepatitis B, current CPR card, and proof of completion of HIPAA and blood borne pathogens training. Affiliation sites will also re-

quire students to undergo a criminal background check and drug screening.

The program is served by an advisory committee made up of practicing physical therapists, physical therapist assistants, students and educators who provide expertise to assure a curriculum which will prepare graduates to meet the physical therapy needs of the public.

Increasing numbers of elderly and chronically ill persons and the rapid expansion of health care programs in both urban and rural areas have created a demand for physical therapy personnel. Employment opportunities are available in hospitals, rehabilitation centers, extended care facilities, outpatient clinics and schools. Physical therapy provides a unique service and requires a close interpersonal relationship with the patient. The student must possess the following qualities to work with people: (1) good mental and physical health, (2) stamina, (3) good coordination and manual dexterity, and (4) spirit of cooperation and a positive attitude, and (5) the ability to problem solve.

Prospective applicants should make early application to the University. Once admitted in the Pre-Physical Therapist Assistant category, the student will receive a second application specific to the program. Since enrollment is limited, the Physical Therapist Assistant Program Application should be completed as early as possible. Selection into the program is based upon evaluation of applications in relationship to other applicants with classes being admitted only in the fall semester.

The Physical Therapist Assistant program has Linkage Agreements with Southeastern Illinois College, Rend Lake College, John A Logan College, Frontier College, Lakeland College, Southeast Missouri State University, Olney College, Wabash Valley College, and Shawnee College. If you have questions about a linkage agreement, please contact the appropriate Community College advisor or SIU's School of Allied Health at (618) 453-8869.

Associate in Applied Science Degree in Physical Therapist Assistant, College of Applied Sciences and Arts

Requirements for Major in Physical Therapist Assistant

Zoology 118, Physiology 201 and 208 or Allied Health 241 and either Chemistry 106 or Physics 101 or Information Systems and Applied Technologies 229	10-11
Psychology 102	3
English 101	3
Speech Communication 101	3
Allied Health 105	2
Health Education 334	3
Physical Education 321	3
Psychology 301, or 303, or 304, or 305	3
Physical Therapist Assistant 107, 113, 202, 203, 204, 205, 207, 208, 209a, 209b, 213, 214, 217, 321a,b, 322 (each with a minimum grade of C).....	42
Total	72-73

Courses (PTH)

- 107-3 Introduction to Physical Therapy Practice and Procedures.** Students will be able to describe the historical background, professional, ethical, and legal aspects of physical therapy practice. They will be able to describe the relationship of physical therapy to total health care. They will explain and demonstrate basic skills such as sterile techniques, wound care, and vital signs monitoring. They will be able to perform massage techniques to selected patients. Lecture two hours. Laboratory two hours. Prerequisite: program major or consent.
- 113-2 Physical Agents I.** Students will be able to demonstrate and explain procedures used in the safe application of superficial and deep heat, cryotherapy, radiant energy, paraffin, and hydrotherapy. Lecture one hour. Laboratory two hours. Prerequisite: program major or consent of instructor.
- 199-1 to 10 Individual Study.** Provides first-year students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the re-

sources of facilities. Each student will work under the supervision of a staff member. Prerequisite: approval of the program director and department chair.

202-2 Physical Rehabilitative Techniques. Students will be able to demonstrate and explain rehabilitative procedures such as bed positioning, range of motion exercises, transfer activities, gait training, chest physical therapy, goniometry. Emphasis will be placed on the concepts of total rehabilitation. Lecture one hour. Laboratory two hours. Prerequisite: program major or consent of instructor.

203-2 Pathology. Students will be able to describe the fundamental basis of disease including inflammation, cardiovascular diseases, vascular diseases, orthopedic conditions and repair of bone and soft tissue injuries. Emphasis will be placed on those conditions treated through physical therapy procedures. Lecture two hours. Prerequisite: Physiology 201 and 208; or Health Care Professions 241; program major or consent of instructor.

204-2 Physical Therapist Assistant, Practicum I. Students will be able to carry out routine physical therapy procedures with selected patients. They will be able to demonstrate skills in massage, hydrotherapy, range of motion therapeutic exercises, activities of daily living, and the application of heat, cold, and radiant energy. Students will also be able to assist in maintaining records and equipment. Lecture one hour. Clinic four hours. Prerequisite: program major or consent of instructor.

205-2 Physical Therapy Science. Students will be able to describe selected medical and surgical conditions from the standpoint of etiology, clinical signs and symptoms, and physical therapy treatment. Lecture two hours. Prerequisite: Physiology 201 and 208 or Health Care Professions 241; program major or consent of instructor.

207-3 Human Neuromusculoskeletal Anatomy. Student will be able to describe and identify the structure, function, and integration of the component parts of the skeletal, muscular, and nervous systems of the human body. Lecture three hours. Prerequisite: program major or consent of school.

208-3 Therapeutic Exercise I. Students will be able to perform basic exercises for individual muscles or muscle groups, including postural exercises, manual muscle testing, and gait analysis, training and balance. Students will learn to select exercises for specific results; i.e., increasing strength, coordination, endurance, flexibility, and balance. Lecture two hours. Laboratory two hours. Prerequisite: Physical Education 300 with a minimum grade of C; program major or consent of instructor.

209A-2 Neurologic Therapeutic Exercise. Students will be able to administer therapeutic exercise techniques for specific clinical neurological conditions through demonstrations and supervised application of exercise for selected patients. Students will understand and safely apply the principles of advanced therapeutic exercise techniques such as motor reflexes, sensory integration, normal motor development, and utilization of synergies. Lecture one hour. Laboratory two hours. Prerequisite: 208 with a minimum grade of C; program major or consent of instructor, must be taken concurrently with 209b.

209B-2 Orthopedic Therapeutic Exercise. Students will be able to administer therapeutic exercise techniques for specific clinical orthopedic conditions through demonstrations and supervised application of exercise for selected patients. Students will understand and safely apply the principles of advanced therapeutic exercise techniques such as PNF, peripheral joint mobilization and muscle balancing. Lecture one hour. Laboratory two hours. Prerequisite: 208 with a minimum grade of C, program major or consent of instructor. Concurrent enrollment in 209a.

213-3 Physical Agents II. Students will be able to demonstrate procedures used in the safe application of electrical currents, electrical muscle stimulation and electrotherapy for pain and healing functions; and other modalities including pelvic traction, cervical traction and intermittent compression. The student will be able to describe the physiological effects, indications and contraindications for each physical agent covered. Lecture two hours. Laboratory two hours. Prerequisite: program major or consent of instructor.

214-3 Physical Therapist Assistant, Practicum II. Students will be able to perform the skills acquired in Practicum I as well as more complex physical therapy assisting procedures with selected patients. They will be able to demonstrate skills in therapeutic exercise and safe application of physical agents. They will be able to assist in maintaining records and develop cooperative spirit with other members of the department. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Lecture one hour. Clinic five hours. Prerequisite: minimum grade of C in 107, 113, 202, 203, 204, 208, 213 and English 101.

217-3 Physiology of Exercise. Students will be able describe fundamental physiological response to exercise; focusing on therapeutic exercise and the neuromuscular system. Prerequisite: Allied Health 241 with a minimum grade of C; program major or consent of school.

299-1 to 16 Individual Study. Provides students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a staff member. Prerequisite: approval of the sponsor, program supervisor and department chair is required.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

321-8 (4,4) Clinical Internship. Students will be able to apply previously learned theories and techniques of patient care through closely supervised practicum experience in two separate physical therapy facilities. (a) First six week internship. (b) Second six week internship. Must be taken in a,b sequence. Prerequisite: must be taken concurrently with 322; completion of 107, 113, 202, 203, 204, 205, 208, 209, 213, and 214 with a grade of C or better.

322-2 Clinical Seminar. Students will be able to discuss with the program director or program faculty patient care and problems encountered during internships. They will have the opportunity to evaluate their educational experience at Southern Illinois University Carbondale and their clinical internship experience. Prerequisite: concurrent enrollment in 321. Mandatory Pass/Fail.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions and health service occupations offered through various workshops, special short courses and seminars. Hours and credit to be individually arranged. This course may be classified as individual study. Prerequisite: consent of program director and department chair.

Physician Assistant (Major, Courses)

The Physician Assistant program is offered by the School of Allied Health in the College of Applied Sciences and Arts in collaboration with the Department of Family and Community Medicine of the School of Medicine. The program utilizes a problem-based learning curriculum and clinical rotations to prepare primary care physician assistants to practice medicine with physician supervision.

The physician assistant is often the first health care provider to see a patient and performs a variety of primary care tasks including collecting historical and physical data from the patient and ordering appropriate laboratory tests. Working with the physician, the physician assistant synthesizes patient information and participates in formulating and executing a treatment plan to meet the patient's needs. The physician assistant makes assessments and provides therapy for basic health-related problems. Also, the physician assistant can evaluate psychological aspects of a patient's health, counsel when appropriate, and teach patients about primary health problems. The physician assistant makes referrals when indicated. The physician assistant can perform technical skills, such as EKGs, venipuncture, minor suturing and injections. The physician assistant prescribes medications as delegated by the supervising physician, according to state law. Graduates of the PA program are trained as primary care providers and awarded the BS degree.

To be considered for enrollment in the Physician Assistant program, prospective students must be admitted to the University, have had medical terminology or its equivalent, and have completed both the University Core and support course requirements. Prospective students must have completed at SIUC or have University approved substitutions for the following support courses: Allied Health 105 (medical terminology), Chemistry 140a,b (chemistry); Mathematics 108 (college algebra) or Mathematics 110 (non-technical calculus); Microbiology 201 (elementary microbiology); Physiology 201 and 208 (physiology); Physiology 301 (anatomy); Psychology 102 (introductory psychology); Sociology 108 (introductory sociology); and Zoology 115 (college biology). Students who are interested in the SIUC Physician Assistant program and who have not completed the University Core and support course requirements should contact the College of Applied Sciences and Arts, Physician Assistant academic advisor for advisement on the University Core and support courses.

Students who have completed the University Core and support course requirements should contact the academic advisor, Physician Assistant Program, College of Applied Sciences and Arts for program application information. Enrollment in the Physician Assistant program is limited and based on a competitive process. Selection is based on grade point average and earned credits according to SIUC's calculations, evidence of health care experience, completion of the program application, and an interview. Preference will be given to applicants who have significant health care experience, exceptional academic performance, and those from rural areas. Approximately 60-70 students will be selected for an interview with a maximum of 30 being admitted to the professional sequence.

Students will be selected for the professional sequence to begin study only in the summer session. Those accepted into the program will be notified of acceptance during the spring semester prior to the summer of entry. The curriculum is

a 26-month sequence with the first 12 months consisting of problem-based learning activities and clinical experiences and the next 14 months consisting of clinical rotations with seminars and a summer preceptorship. During the clinical rotation phase, students may be asked to relocate to one of five locations: Springfield, Carbondale/West Frankfort, Decatur, Mattoon or Olney. Students who participate in internships may be required to undergo a criminal background check and drug screening. For information about problem-based learning and the Physician Assistant Program, visit our web site at: <<http://mccoy.lib.siu.edu/~paprogram/>>.

Bachelor of Science Degree in Physician Assistant, College of Applied Sciences and Arts

<i>University Core Requirements</i>	41
Including Chemistry 140a, Mathematics 108 or 110, Psychology 102, Sociology 108, Zoology 115	
<i>Support Course Requirements</i>	15
Chemistry 140b, Microbiology 201, Physiology 201, 208 and 301	
<i>Requirements for Major in Physician Assistant Program</i>	66
First Year Sequence	30
Physician Assistant 300, 310, 320	
Second Year Sequence	36
Physician Assistant 420, 430, 440, 450	
<i>Total</i>	122

Physician Assistant Suggested Curricular Guide

SUMMER	SUMMER					
PA 300.....	6					
PA 420.....	6					
PA 450.....	6					
<i>Total</i>	18					
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING	
PA 310a,b.....	12	-	PA 430.....	12	-	
PA 320a,b.....	-	12	PA 440.....	-	12	
<i>Total</i>	12	12	<i>Total</i>	12	12	

Courses (PA)

300-6 Physician Assistant I. Introduction to the role and skills of the physician assistant. Students are introduced to patient history, physical exam, interviewing and triage skills. Focus on health concerns, physiological and psychosocial development of young adults, ages 19-44. Problem Based Learning format. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: English 101 and 102 and acceptance into the Physician Assistant Program. Graded Pass/Fail.

310-12 (6,6) Physician Assistant II. This course is divided into two parts: a and b. Each is nine weeks in length. The first nine-weeks focuses on health concerns, physiological and psychosocial development of middle aged adults, ages 45-64. The second nine-weeks focuses on health concerns, physiological and psychosocial development of geriatric adults, ages 65-plus. Students learn additional skills of the Physician Assistant through observation, learning/practice sessions, and clinic participation 1/2 day per week. Problem Based Learning format utilized. Graded Pass/Fail. Prerequisite: 300 or consent of school.

320-12 (6,6) Physician Assistant III. This course is divided into two parts: a and b. Each is nine weeks in length. The first nine-weeks focuses on health concerns, physiological and psychosocial development of pregnant women and newborns through toddlers. The second nine-weeks focuses on health concerns, physiological and psychosocial development of children, ages 3-18. Students learn additional skills of the Physician Assistant through observation, learning/practice sessions, and clinic participation 1/2 day per week. Problem Based Learning format utilized. Graded Pass/Fail. Prerequisite: 310 or consent of school.

420-6 Physician Assistant Clinical Rotation I. This is the first and introductory course in a three course sequence. During the three-course sequence, students will complete eight clinical rotations including family medicine, obstetrics, pediatrics, surgery, psychiatric, gerontology, emergency and internal medicine and an elective. Rotations vary from five to six weeks at each clinical site. Students will observe and work under close supervision with a clinical supervisor and physician. Students attend a continuity clinic weekly and also participate in weekly Problem Based Learning tutor groups at their designated hubsites. Graded Pass/Fail. Not for graduate credit. Prerequisite: restricted to physician assistant majors, successful completion of the first year didactic sequence, or consent of the school.

430-12 Physician Assistant Clinical Rotation II. This is the second and intermediate course in a three-course sequence. During the three-course sequence, students will complete nine clinical rotations including family medicine, obstetrics, pediatrics, surgery, psychiatric, gerontology, emergency, internal medicine and

an elective. Rotations vary from five to six weeks at each clinical site. Students will observe and work under close supervision with a clinical supervisor and physician. Students attend a continuity clinic weekly and also participate in weekly Problem Based Learning tutor groups at their designated hubsites. Graded Pass/Fail. Not for graduate credit. Prerequisite: restricted to physician assistant majors. 320 or consent of school.

440-12 Physician Assistant Clinical Rotation III. This is the third and advanced course in a three-course sequence, students will complete nine clinical rotations including family medicine, obstetrics, pediatrics, surgery, psychiatric, gerontology, emergency, internal medicine and an elective. Rotations vary from five to six weeks at each clinical site. Students will observe and work under close supervision with a clinical supervisor and physician. Students attend a continuity clinic weekly and also participate in weekly Problem Based Learning tutor groups at their designated hubsites. Graded Pass/Fail. Not for graduate credit. Prerequisite: restricted to physician assistant majors, 320, or consent of school.

450-6 Preceptorship. The preceptorship simulates the role of the graduate Physician Assistant, with appropriate student supervision by the clinical preceptor. The preceptorship is completed in a primary care area of medicine. Students may choose the preceptor site, with approval by faculty. The preceptorship may serve as non-paid pre-employment experience. Graded Pass/Fail. Not for graduate credit. Prerequisite: restricted to physician assistant majors, satisfactory completion of 420, 430 and 440; or consent of school.

Physics (Department, Major, Courses, Faculty)

The undergraduate major in physics leading to the Bachelor of Science degree provides for a mastery of basic principles and methods of classical and modern physics and prepares the student for a wide variety of career opportunities. A degree in physics can lead to a challenging and interesting career. Physics as a profession has always been at the center of exciting discoveries, and much of modern science is originally based on the research done by physicists.

The Physics Department at SIUC offers a first-rate undergraduate program in physics. Individual attention is provided to physics majors. We offer advanced laboratory courses in modern physics, digital and analog electronics and lasers and modern optics. Most importantly, the Department of Physics is research-oriented with its entire faculty active in research. Participation by advanced undergraduates in the research program of a faculty member is encouraged and can be very useful to students, providing them with technical skills not available through formal coursework and giving them a taste of *real* physics. The physics faculty at Southern Illinois University Carbondale is engaged in a wide range of research activities in both experimental and theoretical physics. Our undergraduates can participate in experimental projects in such areas as low-temperature physics, surface physics, applied physics, material physics, fluid physics, super-conductivity, magnetism, synchrotron radiation, and infrared spectroscopy. For those students who have an interest in theoretical physics, research projects are available in high-interest areas such as quantum physics, solid state physics, atomic and molecular physics, computational physics, statistical mechanics and nuclear physics.

Employment opportunities in physics are varied and abundant, from industrial research and development to teaching. Physicists are employed in all sectors of society, including corporations, government research agencies and universities. Physicists are presently enjoying unusual opportunities in the development of new concepts that are expected to have far-reaching consequences in the high technology of the future. Totally new applications are arising from understanding basic physics principles. Some of these emerging technologies include laser communications, holography, synchrotron radiation light sources, opto-electronics, high-temperature superconductors and physics applications in medicine. At a time when technological developments and discoveries are creating a heavy demand for physicists, projections indicate the possibility of a critical shortage of trained physicists.

In summary, physics is an exciting field; its graduates are in demand and enjoy high salaries. At SIUC, you have the opportunity to achieve a well-rounded education in becoming a physicist. Students considering a major in physics are urged to consult with the undergraduate adviser of the physics department or with the department chair.

A minimum gpa of 2.0 in all physics and mathematics course work is needed in order for student to receive a degree in Physics. In terms of credit hour requirements toward a degree in Physics, a course will be counted only once. A student cannot repeat a course or its equivalent in which a grade of *B* or better was earned without the consent of the department.

Bachelor of Science Degree in Physics, College of Science

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Requirements</i>	(3) + 9 ¹
Biological Science (not University Core)	(3) + 3 ¹
Supportive Skills	6
Choose six hours from the following:	
One to two semesters of any foreign language offered at Southern Illinois University Carbondale	
English 290 or 291 or Management 202 (select only one)	
Computer Science 105, 201, 202, Engineering 222 (select one)	
<i>Requirements for Major in Physics</i>	(3) + 71 ¹
Chemistry 200, 201, 210, 211	(3) + 5 ¹
Mathematics 150, 250, 251, 305	14
Mathematics 306 or 406 or 407 or 409	3
Physics 205a,b,c and 255a,b,c	12
Physics 301, 310, 320, 345, 410, 420, 430	21
Physics electives chosen from: 100, 328, 390, 424, 425, 428, 431, 432, 445, 450, 458, 470, 490	16
<i>Total</i>	121

¹Number in parenthesis are hours which may be substituted into the University Core Curriculum.

Physics Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	Core Social Science	3	3
PHYS 205a, 255a	-	4	Core Humanities	-	3
MATH 150, 250	4	4	PHYS 205B, 255B	4	-
CHEM 200, 201	4	-	PHYS 205C, 255C	-	4
CHEM 210, 211	-	4	MATH 251, 305	3	3
Core Humanities	3	-	SPCM 101, PHYS 301	3	3
Human Health	2	-	Fine Arts	3	-
<i>Total</i>	16	15	<i>Total</i>	16	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PHYS 345, Biological Science..	3	3	PHYS 430, Free Elective.....	3	3
PHYS 310, 410	3	3	PHYS Elective	6	8
PHYS 320, 420	3	3	Biological Science	3	-
Math, PHYS Elective	3	2	Multicultural	3	-
CS Tools	3	3	Interdisciplinary	-	3
<i>Total</i>	15	14	<i>Total</i>	15	14

Physics Minor

A minor in physics requires 17 hours and must include Physics 203a,b and 253a,b, or 205a,b and 255a,b as well as 205c and 255c and 5 hours from any 300- or 400-level physics course except Physics 470.

Courses (PHYS)

100-1 Undergraduate Seminar. Lectures and discussions by students, faculty and invited guests on topics in physics. Will include discussions on employment opportunities, graduate school admission and undergraduate research. Graded: Pass/Fail.

101-3 Physics that Changed the World. (University Core Curriculum) This course will survey some of the most important developments in physics which have occurred over the past two millennia. Along the way, students will be introduced to fundamental physical principles such as energy conservation. Topics will include early astronomy, laws of motion, electricity, magnetism, waves, quantum mechanics and relatively. Lab fee: \$10.

102-1 Everybody's Einstein. A non-mathematical presentation of Einstein's relativity theories on a popular level. No prerequisite.

103-3 Astronomy. (University Core Curriculum) Fundamental concepts of the physical sciences are used in the exploration of the observable universe. Studies include the history and techniques of astronomy, planets, stars, black holes, galaxies and cosmology. Lectures are supplemented by outdoor astronomical observations and/or indoor laboratory exercises. Lab fee: \$10.

203-6 (3,3) College Physics. (Advanced University Core Curriculum course) [IAI Course: (a) P1 900, (a) Mechanics, heat, and sound. Prerequisite: Mathematics 108 and 109, or 111; or either Mathematics 125 or 140 with a grade of C or better. (b) Electricity, magnetism, light, aspects of modern physics. Prerequisite: 203a. Physics 203 (a) or (b) with Physics 253 satisfies the Core Curriculum Science Group I requirement in lieu of Physics 101 or 103.

205-9 (3,3,3) University Physics. (Advanced University Core Curriculum course) Designed to meet requirements of physics, engineering, and chemistry majors. (a) [IAI Course: P2 900] Mechanics, heat, and thermodynamics. Prerequisite: Mathematics 150 with grade of C or better. With physics 255a, satisfies the University Core Curriculum Science Group I requirement in lieu of Physics 101 or 103. (b) Electricity, magnetism, and optics. Prerequisite: 205a and Mathematics 250 with a grade of C or better. With Physics 255b, satisfies the University Core Curriculum Science Group I requirement in lieu of Physics 101 or 103. (c) Concepts in modern atomic, molecular, nuclear physics, quantum physics, and relativity. Prerequisite: 205a,b with a grade of C or better or consent of instructor.

253-2 (1,1) College Physics Laboratory. (Advanced University Core Curriculum course) [IAI Course: P1 900L] One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 203a,b respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 203a or b, satisfies the University Core Curriculum Science Group I requirement in lieu of Physics 101 or 103. Lab fee: \$10.

255-3 (1,1,1) University Physics Laboratory. (Advanced University Core Curriculum course) [IAI Course: (a) P2 900L; One two-hour laboratory per week. Prerequisite: completion of or concurrent enrollment in 205a,b,c respectively; if the corresponding lecture course is dropped, the laboratory course must also be dropped. With 205a or b, satisfies the University Core Curriculum Group I requirement in lieu of Physics 101, 103. Lab fee: \$10 for a, b, and c.

301-3 Theoretical Methods in Physics. Introduction to theoretical methods of general usefulness in intermediate and advanced undergraduate physics, with particular emphasis on applications of vector algebra and calculus, complex numbers, matrices, ordinary differential equations and Fourier series to selected topics in physics. Required of all physics majors prior to or concurrently taking 310 or 320. Prerequisite: 205a, Mathematics 250 with a grade of C or better.

302-3 Astronomy — Honors. Current knowledge of the universe and the gathering of that knowledge. Includes properties of the solar system and theories of its origin, the structure and evolution of stars. Supplemented by occasional hours of evening observation. Prerequisite: one of 203a, 204a, 205a, plus Mathematics 111, or consent of instructor.

310-3 Mechanics I. Motions of systems of particles and rigid bodies. Prerequisite: 301 or Mathematics 305 or concurrent enrollment, and 205a,b with grade of C or better.

320-3 Electricity and Magnetism I. The theory of electric and magnetic fields; electrostatic fields in vacuum and in material media, special methods for the solution of electrostatics problems, energy, and force relations in electrostatic fields; stationary electric fields in conducting media, electric currents, magnetic fields, magnetic properties of matter. Prerequisite: 301 or Mathematics 305 or concurrent enrollment, and 205a,b and Mathematics 251 with grade of C or better.

328-2 Light. Light propagation, reflection, refraction, interference, diffraction, polarization, and optical instruments. Prerequisite: 203b or 205b with grade of C or better.

345-3 Thermodynamics and Statistical Physics. Thermal behavior of macroscopic matter, the laws of thermodynamics; basis for thermodynamics in statistical mechanics; basic methods and applications of classical and quantum statistical mechanics. Elementary kinetic theory of matter. Prerequisite: 301, Mathematics 251 with grade of C or better.

390-1 to 4 Undergraduate Research. An introduction to investigations in physics. Individual work under the supervision of a physics faculty member on a special topic in physics. Not for graduate credit. Prerequisite: consent of instructor.

410-3 Mechanics II. Gravitation, continuous media, transformation properties, Lagrangian and Hamiltonian formalisms. Prerequisite: 310 with grade of C or better.

420-3 Electricity and Magnetism II. Induced electromotive force, quasisteady currents and fields, Maxwell's equations, electromagnetic waves and radiation, with applications. Prerequisite: 320 with grade of C or better.

424-4 Electronics for Scientists. Coordinated two-hour lecture and four-hour laboratory study of electronics. Emphasis is on overall modern electronics and its applications in the experimental research laboratory setting. Topics include DC and AC circuit theory, measurement techniques, semiconductor active devices, operational amplifiers and feedback, digital circuits, Boolean algebra, microprocessors and large scale integration, digital to analog/analog to digital conversion, and data acquisition. Prerequisite: 203b or 205b and Mathematics 111 with a grade of C or better.

425-3 Solid State Physics. Structure of a crystalline solid; lattice vibrations and thermal properties; electrons in metals; band theory; electrons and holes in semiconductors; opto-electronic phenomena in solids; dielectric and magnetic properties; superconductivity. Prerequisite: 310, 320, 345, and 430 with grade of C or better.

428-3 Modern Optics and Lasers. Properties of electromagnetic waves in space and media, polarization and interference phenomena and devices, electro- and magneto-optic effects, optical gain, and lasers. Prerequisite: 420 with grade of C or better.

430-3 Quantum Mechanics I. An introduction to quantum mechanics including its experimental basis and application in atomic physics. Prerequisite: 205c, 310 and 320 with grade of C or better. Prior or concurrent enrollment in 410 and 420 is desirable.

431-3 Atomic and Molecular Physics I. Atomic spectra and structure; molecular spectra and structure. Prerequisite: 430 with grade of C or better.

432-3 Nuclear Physics I. Basic nuclear properties and structure; radioactivity, nuclear excitation, and reactions, nuclear forces; fission and fusion. Prerequisite: 430 with grade of C or better.

445-3 Statistical Mechanics I. An introductory course in the principles and applications of classical and quantum statistical mechanics, and the elementary kinetic theory of matter. Prerequisite: 345 with a grade of C or better.

450-1 Modern Physics Laboratory. Introduces students to experimental research and encourages them to develop and carry out experiments. Prerequisite: 205c with grade of C or better.

458-2 Laser and Optical Physics Laboratory. Properties of laser beams and resonators, fluorescence and two photon spectroscopy, diffraction, Fourier transformation and frequency filtering, electro- and magneto-optic modulation, fiber propagation and related experiments. Prerequisite: 428 with grade of C or better.

470-1 to 3 Special Projects. Each student chooses or is assigned a definite investigative project or topic. Prerequisite: 310, 320 or consent of instructor.

490-1 to 4 Advanced Undergraduate Research. Advanced undergraduate research under the supervision of a physics faculty member. A presentation of the results will be made at the end of the term. Not for graduate credit. Prerequisite: 310, 320 or consent of instructor and undergraduate advisor.

Physics Faculty

Ali, Naushad, Professor, Ph.D., University of Alberta, 1984.

Aouadi, Samir, Assistant Professor, Ph.D., University of British Columbia, Vancouver British Columbia, 1994.

Byrd, Mark, Assistant Professor, University of Texas, Austin, 1999.

Calbi, Maria De Las Mercedes, University of Buenos Aires, Argentina, 1999.

Cutnell, John D., Professor, *Emeritus*, Ph.D., University of Wisconsin, 1967.

Gaitan, Frank, Associate Professor, Ph.D., University of Illinois at Urbana-Champaign, 1992.

Gruber, Bruno J., Professor, *Emeritus*, Ph.D., University of Vienna, Austria, 1962.

Henneberger, Walter C., Professor, *Emeritus*, Ph.D., Gottingen University, Germany, 1959.

Johnson, Kenneth W., Professor, *Emeritus*, Ph.D., Ohio State University, 1967.

Kolmakou, Audrei, Assistant Professor, Kurchatov Institute, Moscow, Russia, 1996.

Malhotra, Vivak, Professor, Ph.D., Indian Institute of Technology, Kanpur, 1978.

Malik, F. Bary, Professor, *Emeritus*, Ph.D., Gottingen University, West Germany, 1958.

Masden, J. Thomas, Associate Professor, Ph.D., Purdue University, 1983.

Migone, Aldo, Professor and Chair, Ph.D., Pennsylvania State University, 1984.

Sanders, Frank C., Associate Professor, *Emeritus*, Ph.D., University of Texas, 1968.

Saporoschenko, Mykola, Professor, *Emeritus*, Ph.D., Washington University, 1958.

Stadler, Shane, Assistant Professor, Tulane University, 1998.

Tsige, Mesfin, Assistant Professor, Case Assistant Professor, Case Western Reserve University, Ohio, 2001

Watson, Richard E., Professor, *Emeritus*, Ph.D., University of Illinois, 1938.

Physiology (Department, Major, Courses, Faculty)

The Department of Physiology offers training in mammalian, cellular and comparative physiology, pharmacology, biophysics, and human anatomy. Students majoring in physiology are encouraged to gain research experience under faculty supervision. The undergraduate major provides general rather than specialized training in physiology. To become a professional physiologist usually requires the completion of an advanced degree in the field. An undergraduate major in physiology would provide an excellent foundation for those planning a career in teaching or research or a medical field such as medicine, dentistry, veterinary science, nursing or medical technology. Students considering a major in Physiology should discuss their program with the undergraduate adviser in the Department of Physiology. A grade of C or better is required in every Physiology course used to satisfy departmental requirements for a degree in Physiology. A student cannot repeat a course or its equivalent in which a grade of B or better was earned without the consent of the department.

Bachelor of Science in Physiology Degree, College of Science

University Core Curriculum Requirements 41¹

College of Science Requirements	6
Supportive Skills to include foreign language (two semesters at 200 level) ² ; or two from the following: English 290 or 291 or 391 or 491; Plant Biology 360 or Mathematics 282 or 283; Computer Science 200, 201	
Requirements for Major in Physiology	(10) + 60 ¹
Physiology 430	3
Physiology 410a,b	8
Physiology electives (14 hours at the 300 or 400-level)	(2) + 12 ¹
Biology 200a,b ¹	(3) + 3
Biology 305, 306, 308, 309 (any two)	6
Chemistry 200, 201, 210, 211, 340, 341, 350, 351	(3) + 14 ¹
Physics 203a,b; 253a,b	8
Mathematics 150 ^{1,3} , 250	(3) + 5
Electives	14
Total	120

¹Total of eleven hours of biology, chemistry, mathematics and physiology elective course work are accounted for in the 41-hour Core Curriculum requirement.

² If two years of a foreign language are taken to complete this requirement, the total hours will be 16. The elective hours are reduced by 10 hours.

³ Prerequisites are Mathematics 111 or Mathematics 108 or 109. The elective hours are reduced by 3-6 hours for students who place into a course lower than calculus.

Physiology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
CHEM 200, 201, BIOL 200b ...	4	3	BIOL 200a, 300-level.....	3	3
CHEM 210, 211	-	4	MATH 150, 250.....	4	4
ENGL 101, 102	3	3	PHSL 492	1	1
MATH 108, 109	3	3	PHYS 203a, 253a	4	-
Social Science	3	3	PHYS 203b, 253b	-	4
Elective	2	-	SPCM 101, Humanities.....	3	3
Total	15	16	Total	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
BIOL 300-level	-	3	Interdisciplinary	3	-
CHEM 340, 341	5	-	PHSL 430	3	-
Fine Arts, CHEM 350, 351	3	4	PHSL 410a,b	4	4
Humanities, Multicultural	3	3	PHSL Elective.....	-	3
PHSL 310, 301.....	5	4	Supportive Skill	3	3
Total	16	14	Electives	-	5
			Total	13	15

Physiology Minor

A minor in physiology requires completion, with at least a C grade, of Physiology 410 (8 hours) and 8 hours of 300 or 400-level courses offered by the department.

Junior-Senior Honors Program

Juniors who have shown outstanding ability in biology courses and related subjects in their freshman and sophomore years may apply for acceptance into the honors program. Honors students do independent study in the physiological sciences (Physiology 491) during their junior and senior years.

Courses (PHSL)

201-3 Human Physiology. (Advanced University Core Curriculum course) (University Core Curriculum) [IAI Course: L1 904] A course which relates the normal function of the human body to the disruptions which occur in a variety of disease states. Three lecture hours per week. Not open to students who have taken 310. With 208 (if not used for health) satisfies University Core Curriculum Science Group II requirement.

208-1 Laboratory Experiences in Physiology. (Advanced University Core Curriculum course) [IAI Course: L1 904L] Laboratory course which provides experiences with small animal experimentation and measurements made on the human subject. One two-hour laboratory per week. Lab fee: \$20. Prerequisite: completion of, or current enrollment in, 201. With 201 (if not used for health) satisfies the University Core Curriculum Science Group II requirement.

257-1 to 6 Concurrent Work Experience. Under exceptional circumstances, and with prior approval of the departmental chair, credit may be granted for practical experience or other work directly related to physiology. Mandatory Pass/Fail.

258-1 to 6 Previous Work Experience. Under exceptional circumstances, and after petition to the departmental chair, credit may be granted for practical experience or other work directly related to physiology. Mandatory Pass/Fail.

259-2 to 8 Occupational Education Credit. Under special circumstances, advanced training in a para-medical or other field directly related to physiology can be used as a basis for granting credit in physiology. Such credit is sought by petition to the chair of department and requires approval of dean of the College of Science.

300-3 Human Musculoskeletal Anatomy. Lectures, demonstrations and observations of human muscles, supporting tissues and nerves. Primarily for physical education and physical therapy students. Offered in fall and spring semesters.

301-4 Survey of Human Anatomy. Lectures, demonstrations, and observations of the prosected body, plus experiences in the anatomy laboratory. Course is designed for students in nursing, mortuary science, biological science, and related disciplines. Three lecture hours and one two-hour laboratory per week. Not open to students who have taken 300. Lab fee: \$20.

310-5 Principles of Physiology. (Advanced University Core Curriculum course) Beginning course in human physiology designed for majors in physiology and other biological sciences, and recommended to pre-medical and other students considering biological sciences and health professions. Three lectures per week, one hour discussion and one two-hour laboratory. Lab fee: \$20. Prerequisite: one year of biological science and a reasonable knowledge of chemistry. Satisfies the University Core Curriculum Human Health requirement in lieu of 201.

320-3 Reproduction and Sexuality. Comprehensive course examining the physiological basis of mammalian reproduction and the behavioral aspects of sexuality. Human sexuality and reproductive function is the primary focus. Topics include hormonal control, anatomy, ovulation, sexual response and behavior, fertilization, pregnancy and parturition. Human specific topics include reproductive medicine, STDs, paraphilias, birth control and infertility. Prerequisite: one year of biology or permission of instructor.

401-5 Advanced Human Anatomy with Laboratory. A-B sequence. Laboratory dissection of the human body with lectures as needed. Primarily for students majoring in physiology biological sciences, or anthropology. Prerequisite: 301 or comparative anatomy. Enrollment by consent of instructor. Lab fee: \$20. Prerequisite: 301, comparative anatomy or vertebrate anatomy.

410-8 (4,4) Mammalian Physiology. Physical and chemical organization and function in mammals, with emphasis on the human. Physiology of blood and circulation, respiration, digestion, metabolism, excretion, endocrines, sensory organs, nervous system, muscle and reproduction. Primary course for all students majoring in physiology or related sciences. Four lectures and one three-hour laboratory session per week. May be taken in any sequence. Lab fee: \$20. Prerequisite: college level chemistry and physics and at least junior standing.

420-6 (3,3) Principles of Pharmacology. Examines basic principles of pharmacology (pharmacokinetics) and the action of various classes of drugs on living organisms. Drug classes covered include those affecting most organ systems of the human body, such as the nervous, cardiovascular, gastrointestinal and renal systems as well as drugs used for antibiotic and cancer chemotherapy. Three lectures per week. Prerequisite: 310 or 410, Chemistry 340 and 342 (or equivalent).

430-3 Cellular and Molecular Physiology. This course will examine the molecular and cellular aspects of physiology, with special emphasis on the experiments used to examine the regulation of gene expression, protein activities, and cellular functions in eukaryotes. Topics include: mechanisms regulating gene expression, signaling pathways, cancer biology, and the use of experimental model organisms. Required of Physiology majors. Prerequisite: one year of Biological Sciences and/or biochemistry.

433-6 (3,3) Comparative Physiology. Variations of physiological processes in animal phyla, and comparison of these with human physiology. (a) Osmotic and ionic regulation; digestion, nutrition, and metabolism; excretion; respiration; defense and resistance. (b) Muscles and movement; circulation; nervous systems and sensory information; coverings and support; endocrine regulation; reproduction. Three lectures per week. Prerequisite: one year of biological science.

440-6 (3,3) Biophysics. (a) Biomathematics, biomechanics and biotransport. (b) Bioelectrics and bio-optics applied to physiological problems. Three lectures per week. Prerequisite: Mathematics 141 or equivalent; one year of college biological science including Physiology 310 or its equivalent; one year of college physics. May be taken in b,a sequence with consent of instructor.

450-3 Advanced Human Sexuality. This course is an advanced course intended to supplement and expand the critical examination of those topics covered in 320, Reproduction and Sexuality. The objective of this course is to examine the physiological and behavioral basis of human reproduction and sexuality. Examines how humans reproduce from a physiological perspective and all of the aberrations and clinically relevant dysfunctions including: physiology and pathophysiology of hormonal control, developmental anatomy, pregnancy, parturition and reproductive technologies. Prerequisite: 320.

460-2 Electron Microscopy. Lecture course designed to introduce the student to the theory and principles of electron microscopy. Two lecture hours per week. Prerequisite: senior standing or permission of instructor.

462-3 Biomedical Instrumentation. (Same as Electrical and Computer Engineering 462.) Diagnostic and therapeutic modalities related to engineering. Cardiovascular, neural, sensory and respiratory instrumentation. Prerequisite: consent of instructor.

470-3 Biological Clocks. Study of the temporal aspects of diverse physiological and behavioral functions which possess diurnal and sectional periodicity. Species covered will include many eukaryotic organisms

including plants, but will mainly stress mammals. Oscillations in sleep-wake cycle, locomotion, reproduction, hormonal secretion and numerous other processes will be explored. In addition, the effects of biological clocks in humans and the effect of jet lag and depression will be examined. Prerequisite: 310.

490-1 Senior Seminar. Readings, writings, presentations and discussions of current topics in physiology. One hour per week. Not for graduate credit. Prerequisite: senior standing or consent of instructor.

491-3 to 8 Independent Research for Honors. Supervised readings and laboratory research in physiology directed by a member of the physiology faculty. Undergraduate honors students only. By special arrangement with the instructor in the physiology department with whom the student wishes to work.

492-1 to 8 Special Problems in Physiology. Supervised readings and laboratory research in physiology directed by a member of the physiology faculty. Open to undergraduate students only. By special arrangement with the instructor in the physiology department with whom the student wishes to work. No more than 3 hours may be counted as electives towards the major in physiology.

Physiology Faculty

Adler, Stuart, Associate Professor, M.D., Ph.D., Duke University, 1982.

Arbogast, Lydia A., Associate Professor, Ph.D., Indiana University, 1988.

Banerjee, Chandra M., Professor, *Emeritus*, M.D., University of Calcutta, 1959; Ph.D., Medical School of Virginia, Richmond, 1967.

Bany, Brent, Assistant Professor, Ph.D., University of Western Ontario, 1997.

Bartke, Andrzej, Professor, Ph.D., University of Kansas, 1965.

Browning, Ronald A., Professor, Ph.D., University of Illinois Medical Center, Chicago, 1971.

Chandrashekar, Varafaraj, Research Professor, *Emeritus*, Ph.D., Rutgers, University of New Jersey 1975; 1980.

Collard, Michael W., Associate Professor, Ph.D., Washington State University, 1987.

Coulson, Richard L., Professor, *Emeritus*, Ph.D., University of Toronto, 1971.

Cox, Thomas C., Professor, Ph.D., Arizona State University, 1979.

Dunagan, Tommy T., Professor, *Emeritus*, Ph.D., Purdue University, 1960.

Ellert, Martha S., Associate Professor, *Emerita*, Ph.D., University of Miami, 1967.

Falvo, Richard E., Professor, *Emeritus*, Ph.D., University of Wyoming, 1970.

Ferraro, James S., Associate Professor, Ph.D., The Chicago Medical School, 1984.

Huggenvik, Jodi I., Associate Professor, Ph.D., Washington State University, 1985.

Hunter, William S., Associate Professor, *Emeritus*, Ph.D., Michigan State University, 1971.

Johnson, Anne K., Instructor, *Emerita*, M.S., Ohio State University, 1962.

Murphy, Laura L., Associate Professor, Ph.D., Medical College of Georgia, 1983.

Myers, J. Hurley, Professor, *Emeritus*, Ph.D., University of Tennessee, Health Science Center at Memphis, 1969.

Narayan, Prema, Assistant Professor, Ph.D., University of Minnesota, 1984.

Nequin, Lynn G., Associate Professor, *Emerita*, Ph.D., University of Illinois, College of Medicine, Chicago, 1970.

Patrylo, Peter, Assistant Professor, Ph.D., Rutgers University/UMDNJ-RWJMS, 1991.

Pierson, Todd, Instructor, N.D. Southwest College of Naturopathic Medicine, 2001.

Raymer, Angela M., Instructor, M.S., Southern Illinois University Carbondale, 1999.

Shanahan, Michael F., Professor, *Emeritus*, Ph.D., University of Michigan, 1976.

Steger, Richard W., Professor, and Chair, Ph.D., University of Wyoming, 1974.

Steinle, Jena, Assistant Professor Ph.D., University of Kansas Medical Center, 2001.

Strader, April, Assistant Professor Ph.D., University of Wisconsin, 2002.

Wade, David R., Associate Professor, *Emeritus*, Ph.D., Cambridge University, England, 1967.

Yau, William M., Professor, *Emeritus*, Ph.D., Medical College of Virginia, 1971.

Yother, Michael L., Instructor, *Emeritus*, M.S., Southern Illinois University, 1975.

Plant and Soil Science (Major, Courses, Faculty)

The plant and soil science major is administered through the Plant, Soil and Agricultural Systems department. The program includes concentrations in agronomy (crop and soil science) and horticulture science. There are many widely varied opportunities for students with an interest in plants or soils. Students may choose a general option within the department and select most of their upper division credits from a wide choice of electives throughout the College of Agricultural Sciences and the University. If interests are more specialized, students may elect the science option and specialize in one particular area, or may elect a specialization which will combine a broad background in plants and soils with selected business courses and business related electives. A specialization in envi-

ronmental studies would familiarize the student with environmental problems relating to plants and soils.

Students selecting the landscape horticulture specialization can prepare for interesting careers in landscaping or gardening in parks, playgrounds, residential or industrial areas, road and street parkway improvement and maintenance, and in other public and private work to make the environment more pleasing and useful.

Opportunities for individual program development within the various options may be realized through work experience, internships, special studies, and seminars; however, no more than 30 hours of such unstructured coursework may be counted toward the degree. Students in all specializations are urged to make use of them to meet the goals and needs of their respective programs.

Students in all specializations must complete the plant and soil science core. These courses are Plant and Soil Science 200 or 220, 240, one hour of 381, and Agricultural Systems 118 or 418 or an acceptable substitute.

There may be extra expenses for field trips, manuals, or supplies in some courses.

Technology Fee

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of \$4.58 per credit hour up to twelve credit hours. The fee is charged Fall and Spring semesters.

Bachelor of Science Degree in Plant and Soil Science, College of Agricultural Sciences

	SPECIALIZATIONS		
	General	Science	Business
<i>University Core Curriculum Requirements</i>	43 ⁴	43 ⁴	43 ⁴
Foundation Skills			
English 101 and 102	6	6	6
Mathematics 125 (may substitute for 113)	3	—	3
Mathematics 108 ¹	—	3	—
Speech Communication 101	3	3	3
Disciplinary Studies			
Fine Arts	3	3	3
Human Health	2	2	2
Humanities	6	6	6
Science ⁴			
Chemistry 140a substitutes for Chemistry 106.....	4	—	4
Chemistry 200 and 201 substitutes for Chemistry 106	—	4	—
Plant Biology 200 substitutes for Plant Biology 115.....	4	4	4
Social Science			
Agribusiness Economics 204 substitutes for one Social Science requirement.....	3	3	3
Psychology 102	—	—	3
Anthropology 104, Geography 103, History 110, 112, Political Science 114, Psychology 102 or Sociology 108	3	3	—
Integrative Studies			
Multicultural: Diversity in the U.S.	3	3	3
Interdisciplinary	3	3	3
<i>Requirements for Major in Plant and Soil Science</i>	58	73	69
Course in one other major other than General			
Agriculture or Plant and Soil Science.....	3	3	3
Agricultural Systems 318 (or approved substitute) ...	3	3	3
Physics 203a ² and b (or approved substitute).....	—	6	—
Plant Biology 320 or PLSS 409	3-4	3-4	3-4

Chemistry 140b.....	4	—	4
Chemistry 210, 211, 340, 341, 350	—	13	—
Mathematics 109, 140	—	7	—
Plant and Soil Science 200 or 220, 240, 381-1	9	9	9
Other PLSS courses at 300- and 400- level ³	21	21	21
Other Agriculture electives.....	15	8	10
Accounting 210, Management 301 or 304, Marketing 304 or Agribusiness Economics 360, Agribusi- ness Economics 333 or Agriculture 323	—	—	11-12
Business electives and supporting courses.....	—	—	4-5
<i>Electives</i>	18-19	3-4	7-8
<i>Total</i>	120	120	120

¹Mathematics 111 may be substituted.
²Physics 205a may be substituted.
³PLSS electives must include 18 hours of structured coursework at the 300- or 400-level, with no less than 12 hours at the 400-level.
⁴The UCC requires 41 hours of courses. Chemistry and Plant Biology are 4 hour courses, but only 3 hours count toward core curriculum requirements.

Plant and Soil Science, General Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
CHEM 140a, PLB 200.....	4	4	Multicultural, PLSS 200	3	3
Computer Requirement	3	-	Humanities	3	3
Fine Arts, Social Science.....	3	3	Agriculture Elective	4	3
ENGL 101,102.....	3	3	MATH 113, SPCM 101.....	3	3
Human Health, ABE 204.....	2	3	PLSS 220 or 240	-	4
Interdisciplinary.....	-	3	CHEM 140b	4	-
<i>Total</i>	15	16	<i>Total</i>	17	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PLB 320 or PLSS 409	3-4	-	PLSS 381.....	1	-
Agriculture Elective.....	3	6	PLSS Upper Level Course	3	6
PLSS Upper Level Courses.....	6	6	Open Electives	10	8
AG Elective (no PLSS or AGSY).....	-	3-4	<i>Total</i>	14	14
<i>Total</i>	12-13	15-16			

Plant and Soil Science, Science Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
CHEM 200, 201	4	-	PHYS 203a,b.....	3	3
CHEM 340, 341	-	5	CHEM 210, 211	-	4
ENGL 101, 102	3	3	PLSS 200 or 220	4	-
MATH 108, 109	3	3	ABE 204, Math 140	3	4
Computer Requirement	3	-	SPCM 101, PLSS 240	3	4
Fine Arts, PLB 200.....	3	4	Agriculture Elective	3	-
<i>Total</i>	16	15	<i>Total</i>	16	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PLB 320 or PLSS 409	3-4	-	PLSS 381.....	1	-
Agriculture Elective.....	3	2	Upper Level Courses	6	8
PLSS Upper Level Courses.....	3	3	Social Science.....	-	3
Human Health.....	2	-	Humanities	3	3
Multicultural, CHEM 350.....	3	4	Open Electives	4	-
Interdisciplinary.....	-	3	<i>Total</i>	14	14
Agricultural Elective (no PLSS or AGSY).....	-	3-4			
<i>Total</i>	14-15	15-16			

Plant and Soil Science, Business Specialization Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
CHEM 140a, PLB 200	4	4	Multicultural, Interdisciplinary	3	3
Computer Requirement	3	-	Fine Arts	-	3
PSYC 102, ABE 204	3	3	MATH 113, SPCM 101	3	3
ENGL 101, 102	3	3	Required Business Course	3	-
Human Health, Humanities.....	2	6	PLSS 200 or 220	-	4
			CHEM 140b, PLSS 240	4	4
			Agriculture Elective, Fine Arts	3	3
<i>Total</i>	15	16	<i>Total</i>	16	17
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PLB 320 or PLSS 409	3-4	-	PLSS 381	-	1
Required Business Courses	3	2	PLSS Upper Level Courses	6	6
Agriculture Elective	4	3	Required Business Course	-	3
PLSS Upper Level Courses	3	6	Elective Business Courses	4	-
Agricultural Elective (no PLSS or AGSY)	-	3-4	Electives	4	3
<i>Total</i>	13-14	15-16	<i>Total</i>	14	13

Bachelor of Science Degree in Plant and Soil Science, College of Agricultural Sciences

	SPECIALIZATIONS		
	Landscape Horticulture	Environmental Studies	Turf
<i>University Core Curriculum Requirements</i>	43 ³	43 ³	43 ³
Foundation Skills			
English 101 and 102	6	6	6
Mathematics 125 (may substitutes for 113)	3	—	3
Mathematics 108 ¹ substitutes for 110 or 113	—	3	—
Speech Communication 101	3	3	3
Disciplinary Studies			
Fine Arts	3	3	3
Human Health	2	2	2
Humanities	6	6	6
Science ³			
Chemistry 140a substitutes for Chemistry 106	4	—	4
Chemistry 200 and 201 substitutes for Chemistry 106	—	4	—
Plant Biology 200 substitutes for Plant Biology 115	4	4	4
Social Science			
Agribusiness Economics 204 substitutes for one Social Science requirement	3	3	3
Anthropology 104, Geography 103, History 110, 112, Political Science 114, Psychology 102 or So- ciology 108	3	3	3
Integrative Studies			
Multicultural: Diversity in the U.S.	3	3	3
Interdisciplinary	3	3	3
<i>Requirements for Major in Plant and Soil Sci- ence</i>	59-61	72-74	65-68
Biology 307	3	3	—
Plant Biology 320 or PLSS 409, PLSS 401 and 403a,b and 420	3-4	7-8	—
PLSS 409	—	—	3
Chemistry 140b	4	—	4
Chemistry 210, 211, 340, 341 and 350	—	12-13	—
Agricultural Systems 371, 374	4	—	—
Agricultural Systems 118	3	3	3
Agribusiness Economics 401	—	3	—
Agribusiness Economics 333 or Speech Communi- cation 280	—	—	3

Geography 471 & 434 or Civil Engineering 310.....	—	7	—
Political Science 445 or Geography 320 ² or 426.....	—	3-4	—
Mathematics 109 ¹ and 140.....	—	7	—
Plant and Soil Science 220, 240, 381-1, 420, 447, 468	—	21	—
Plant and Soil Science 200, 220, 240, 381-1	12	—	—
Plant and Soil Science 220, 240, 381-1, 359-3	—	—	12
Plant and Soil Upper Level 322, 325, 327, 328a, b, 359, 422, 423, 424, 428, 429, 430, 432, 434 ⁴	23-24	—	—
Plant and Soil Science Upper Level 322, 401, 403c, 420, 421, 422, 445, 447, 468, 475	—	—	29
Business/Agriculture electives ⁵	10	6	—
Restricted Electives	—	—	11-14
Electives	16-18	0-5	9-12
Total.....	120	120	120

¹Mathematics 111 may be substituted.
²Requires permission from Plant and Soil Science chair.
³The University Core Curriculum requires 41 hours of courses. Chemistry and Plant Biology are 4 hour courses, but only three hours count toward University Core Curriculum requirements.
⁴At least 17 hours must be chosen from structured courses. At least 12 hours must be at the 400 level.
⁵One course must be selected from ABE 333, MKTG 304, 350, MGMT 350 or ACCT 210. Remaining courses may be from above or any College of Agricultural Sciences courses.

Landscape Horticulture Specialization Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
CHEM 140a, PLB 200	4	4	PLSS 200 or 220, Fine Arts	4	3
Computer Course, MATH 113.	3	3	Electives, SPCM 101	4	3
Social Science, Multicultural ..	3	3	CHEM 140b, PLSS 240	4	4
Human Health, ABE 204.....	2	3	Humanities	3	3
ENGL 101, 102	3	3	Agriculture Elective	-	3
Total	15	16	Total	15	16
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
PLB 320 or PLSS 409.....	3-4	-	PLSS Upper Level	6	5-6
PLSS Upper Level.....	6	6	BUS/AGR Elective.....	6	-
BUS/AGR Elective	-	4	PLSS 381.....	-	1
Interdisciplinary, Social Sci.....	3	3	Electives	3	7-8
PLSS Electives	3	3	Total	15	13-15
Total	15-16	16			

Environmental Studies Specialization Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
PLB 200, ABE 204.....	4	3	Humanities, Multicultural.....	3	3
CHEM 200, 201, BIOL 307.....	4	3	CHEM 210, 211, AGRI 333.....	4	2
CHEM 339, 341	-	5	MATH 108, 109.....	3	3
Computer Requirement	3	-	PLSS 200, SPCM 101	3	3
ENGL 101, 102	3	3	PLSS 220 or PLSS 240	4	-
Human Health.....	2	-	Agriculture Elective	-	4
Total	16	14	Total	17	15
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
PLB 320 or PLSS 409	3-4	-	PLSS 420, 468.....	4	3
ABE 401, PLSS 401 and 403a,b.....	4	3	PLSS 381, 447.....	1	3
MATH 140, CHEM 350.....	4	4	CE 310.....	3	3
GEOL 426	-	4	Social Science, GEOG 471.....	3	3
Fine Arts, Humanities	3	3-4	Interdisciplinary, Major Course	3	3
Total	14-15	15-16	Total	14	15

Turf Specialization Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
CHEM 140a,b	4	4	Multicultural, SPCM 101	3	3
PLB 200	-	4	Humanities, Social Science	3	3
AGSY 118.....	3	-	General Electives	3	3
Fine Arts, Social Science	3	3	MATH 108 or 125, PLSS 359 ..	3	1
ENGL 101, 102	3	3	PLSS 220, 240	4	4
PLSS 359	-	1	Restricted Electives.....	-	2
Total	13	15	Total	16	16

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PLB 409	3	-	PLSS 381.....	-	1
Restricted Elective	6	6	PLSS Upper Level Courses.....	9	9
PLSS Upper Level Courses	6	5	ABE 333 or SPCM 280	3	-
General Elective	-	3	Interdisciplinary	-	3
PLSS 359	-	1	Humanities, Human Health ...	3	2
<i>Total</i>	15	15	<i>Total</i>	15	15

Plant and Soil Science Minor

A minor in plant and soil science is also available to those interested in field crop production, horticulture, or soils. A total of 16 hours of credit is required with at least 12 hours taken at the University. One course may be selected from 200, 220, or 240; and at least eight hours from 300- or 400-level structured courses. The chair should be consulted for assistance in selecting this field as a minor.

Certification

Professional standards are needed for those whose activities affect the well being of the general public. Such standards have been in use in medicine, law, engineering, etc. for many years. A certification program that identifies professionals for educational, scientific and service activities with public and private agencies is in the public interest. Certification assures that a student meeting these requirements is highly qualified in their discipline. It is becoming more common that employers require a student be certified as a condition of employment. The American Society of Agronomy through ARCPACS maintains and publishes a registry of certified professionals in several disciplines. Students may be certified as agronomist, crop scientist (specialist), soil scientist, (specialist, classifier), or horticulturist by completing a program approved by ARCPACS: Federation of Certifying Boards in Agriculture, Biology, Earth and Environmental Sciences. Students with any of the above specializations may complete the certification academic requirements, although those with a science specialization will find they can complete the program with a few hours beyond the number required for a bachelor's degree. Most of the certification requirements can be completed with proper selection of courses as University Core Curriculum substitutes and by using elective courses to fulfill certification requirements. Students are encouraged to discuss their interests with a departmental representative to obtain additional information.

	AREA OF CERTIFICATION ¹			
	Agronomist	Crop Scientist	Soil Scientist	Horticulturist
<i>University Core Curriculum Requirements</i>	43 ²	43 ²	43 ²	43 ²
Physics 203a substitutes for Physics 101.....	3	3	3	—
Chemistry 200 and 201 substitutes for Chemistry 106.....	4	4	4	4
Plant Biology 200 substitutes for Plant Biology 115.....	4	4	4	4
Agribusiness Economics 204 substitutes for Economics 113.....	3	3	3	3
English 101 and 102	6	6	6	6
Speech Communication 101	3	3	3	3
Mathematics 108 ³	3	3	3	3
Other UCC requirements	17	17	17	20
<i>Requirements for Major in Plant and Soil Science</i>	77	77	77	77
Courses in two other departments in agriculture (All options must take Agricultural Systems 118. It fulfills additional mathematics requirements for Agronomist and Soil Scientist options).....	6	6	6	—
Biological science elective	2	4	—	—

Plant Biology 320 or PLSS 409	3-4	3-4	3-4	3-4
Chemistry 210, 211, 340, 341, 350,	9	9	9	9
Economics elective	3	3	—	—
Agribusiness Economics 333.....	—	—	—	3
Engineering elective.....	—	—	3	—
Geology 220	—	—	3	—
Plant and Soil Science 305.....	—	—	—	4
Plant and Soil Science 200 or 220, 240, 381	9	9	9	9
Pest management/plant protection (weed science, plant pathology/entomology, pest control, Plant and Soil Science 420	6	6	—	6
Mathematics (including statistics requirement) 140 and 283.....	7	7	7	—
Other PLSS courses ⁴ : Crop sciences.....	3	12	3	—
Soil sciences	3	3	11	—
Agronomy electives.....	9	3	3	—
Horticulture				
Plant and Soil Science 322, 423, 424, 432, 436, 437	—	—	—	12
Plant and Soil Science 442, 445, 446, 447, 448.....	—	—	—	3
Plant and Soil Science 325, 327, 328a, 328b, 422, 428, 429, 430, 434	—	—	—	6
Plant and Soil Science 405, 433, Plant Biology 400, 409, Plant and Soil Science 401 and 403b, Agricultural Systems 318 ⁵	—	—	—	6
Agriculture electives	13-14	8-9	16-17	15-16
Total	120	120	120	120

¹Meets academic requirements for certification by ARCPACS: Federation of Certifying Boards in Agriculture, Biology, Earth and Environmental Sciences (includes Agronomy, Crop Science, Soil Science, Horticulture and other disciplines).

²The UCC requires 41 hours of courses. CHEM and PLB are 4 hour courses, only 3 hours count toward UCC requirements.

³Mathematics 111 may be substituted.

⁴PLSS electives must include 18 hours of structured coursework at the 300- or 400- level with no less than 12 semester hours at the 400 level.

⁵Agricultural Systems 118 or equivalent computer course is a departmental requirement.

Courses (PLSS)

200-3 Introduction to Crop Science. Production of important field crops of the world with greatest emphasis on U.S. and Midwestern field crops; crop production changes and adjustments, crop distribution over U.S., and crop groups and classifications, special agronomic problems, crop enemies, crop ecology, fertilizer and liming practices, tillage, crop improvement through breeding. Field trip (no cost).

220-4 General Horticulture. Introductory horticulture course that will provide students with a foundation for more advanced horticulture courses and an understanding of the growing and care of plants. The course is designed to acquaint students with the science, art and culture of producing the various horticultural crops. Lab fee: \$50. Prerequisite: Plant Biology 200 or equivalent.

225-2 Genetics for the Amateur Gardener. An introduction to the essential principles of genetics and plant hybridization utilizing common garden and house plants.

228-2 Floral Arrangements. Theory and practice in the art of flower and plant arrangement for the home, show, and special occasions. History, elements, and principles of design and use of color. Lab fee: \$50.

238-2 Home Gardening. Gardening techniques for the home gardener including site selection, garden planning, utilization of compost and mulch, pest management, and container gardening. Both inorganic and organic gardening methods are discussed along with the latest recommended varieties for the small garden. Lab fee: \$25.

240-4 Soil Science. Basic and applied chemical, physical, and biological concepts in soils. The origin, classification and distribution of soils and their relationship to humans and plant growth. Lab fee: \$15. Prerequisite: Chemistry 140b; geology suggested.

257-1 to 10 Work Experience. Credit for on-campus work experience in the areas of plant and soil science, or credit through a cooperative program developed between the department and the Office of Student Work and Financial Assistance. Credit awarded based on 4 hours of work per week during the semester for each hour of credit. Prerequisite: consent of instructor. Mandatory Pass/Fail.

300-4 Field Crop Production. Principles of growth and production of field crops and their utilization. Laboratory demonstrating principles including research projects and modern production techniques. Prerequisite: an introductory crops course or consent of instructor.

305-4 Plant Genetics. Principles of genetics and evolution of plants, elementary plant breeding, and the interaction between plant breeding and industry. Prerequisite: a course in biology or plant biology.

322-3 Turfgrass Management. Principles and methods of establishing and maintaining turfgrass for lawns, recreational areas, public grounds and higher-management turf. Identification of plant species, soil properties, and management pertinent to variable environments. A fee of \$50 will be assessed to pay for laboratory materials and field trips. Prerequisite: a biology course.

324-3 Landscape Annuals. Identification, classification, culture, and use of herbaceous annuals or plants treated as annuals in the landscape. Prerequisite: an introductory course in plant biology or consent of instructor. Lab fee: \$50.

326-3 Landscape Perennials. Identification, classification, culture and use of herbaceous perennials, hardy bulbous plants, and perennial ornamental grasses in the landscape. Lab fee: \$50. Prerequisite: an introductory course in plant biology or consent of instructor.

327-3 Landscape Plant Materials. Identification, usage and adaptability to the landscape of woody (deciduous and evergreen) and ornamental shrubs, trees and vines. Use of plant keys. Laboratory fee \$10. Prerequisite: an introductory botany course or consent of instructor.

328A-2 Appreciation of Landscape Design. Introduction to theory and principles of landscape design as applied to the modern home. Property selection and climate control. Prerequisite: 327 and Agricultural Systems 371 and 374 or equivalent.

328B-2 Appreciation of Landscape Design - Laboratory. Practical application in modern methods of property planning including the individual components of the completed landscape plan and selection of plants. Lab fee: \$20. Prerequisite: 327 and Agricultural Systems 371 and 374 or equivalent.

333-3 From the Vine to its Wine. Introduction to grape growing and the making, using and appreciation of wine for pleasure, health and profit. Discover the science and art of growing, making and using wine. Participatory approach to instruction with emphasis on beginning the novice on a successful journey through the wonderful world of grapes and wine. Includes a Midwest perspective. A three-day tour of the regional industry and a Saturday tour of local establishments required. Lab fee: \$245. Must be 21 years of age by September 15 (prior to wine tasting exercises) of semester taken to enroll. Proof of age and signature on informed consent form required at first class meeting. Offered fall semester only. Purchase and use of required textbook mandatory.

359-1 to 6 Intern Program. Supervised work experience program in either an agricultural agency of the government or agri-business. Prerequisite: junior standing and approval of department. Mandatory Pass/Fail.

370-3 Agroecology-Sustainable Agricultural Systems. An introduction to the biotic, natural resource, environmental, social and economic implications and requirements of sustainable agriculture. Prerequisite: an introductory course in plants, animals, soils, or biology or consent of the instructor.

380-4 (2,1,1) Plant and Soil Evaluations. (a) Grain grading to include crop and weed identification and seed identification and analysis. (b) Comparative evaluation and judging of horticultural crops to include flowers, fruits, vegetables, woody ornamentals. Field trip costing approximately \$25. (c) Soil evaluation to include identification of genetic horizons, their physical characteristics and classification. Field trips (no cost). These courses are not required for participation in SIU judging team activities.

381-1 to 2 (1,1) Plant and Soil Science Seminar. Discussion of special topics and/or problems in the various areas of plant and soil science. Prerequisite: Speech Communication 101 and junior standing.

390-1 to 8 Special Studies in Plant and Soil Science. Assignments involving research and individual problems. Prerequisite: consent of school director.

391-1 to 4 Honors in Plant and Soil Science. Independent undergraduate research sufficiently important to three hours per week of productive effort for each credit hour. Prerequisite: junior standing, gpa of 3.0 with a 3.25 in the major, and consent of department chair.

400-2 Trends in Agronomy. A discussion session format will be employed as a means of acquainting students with recent literature and allowing them to remain current with latest developments in their area of specialty. Prerequisite: senior standing.

401-2 Agricultural Plant Pathology. (Same as Plant, Soil and Agricultural Systems 401) A study of micro- and macro organisms and environmental factors that cause disease in plants of agricultural importance; of the mechanisms by which these factors induce disease in plants; and of the methods for managing diseases and reducing the damage they cause. Prerequisite: Plant Biology 200 or equivalent; Plant Biology 320 or Plant and Soil Science/Plant, Soil and Agricultural Systems 409 or equivalent recommended.

403A-2 Field Crops Diseases. (Same as Plant, Soil and Agricultural Systems 403a) A survey of major diseases of important field crops in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: concurrent enrollment in, or prior completion of, 401 or equivalent.

403B-2 Horticultural Crop Diseases. (Same as Plant, Soil and Agricultural Systems 403b) A survey of major diseases of important horticultural crops in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: concurrent enrollment in, or prior completion of 401 or equivalent.

403C-1 Turfgrass Diseases. (Same as Plant, Soil and Agricultural Systems 403c) A survey of major diseases of important turfgrasses in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: concurrent enrollment in, or prior completion of 401 or equivalent.

403D-1 Tree Diseases. (Same as Plant, Soil and Agricultural Systems 403d) A survey of major diseases of important tree species in the United States. Disease identification, cycles, and management strategies will be addressed. Not for graduate credit. Prerequisite: concurrent enrollment in, or prior completion of 401 or equivalent.

405-3 Plant Breeding. (Same as Plant, Soil and Agricultural Systems 405) Principles of plant breeding emphasized together with their application to the practical breeding of agronomic, horticultural, and forest plants. Field trip costs approximately \$10. Prerequisite: 305 or equivalent.

408-3 World Crop Production Problems. (Same as Plant, Soil and Agricultural Systems 408) Ecological and physiological factors influencing production in various areas of the world. Natural limitations on world crop production. Non-agricultural factors influence world crop output. Prerequisite: 200.

409-3 Crop Physiology. (Same as Plant, Soil and Agricultural Systems 409) Principles of basic plant physiology. Topics include cell structure, photosynthesis, respiration, water and mineral relations, vascular transport and plant growth regulators. Fee: \$50. Prerequisite: Plant Biology 200 and a course in organic chemistry.

419-3 Plant Molecular Biology. (Same as Plant, Soil and Agricultural Systems 419, Plant Biology 419) A survey of molecular phenomena unique to plant systems. Topics will include: genome organization and synteny between plant genomes, transcriptional and post-transcriptional control of gene expression, signal transduction, epigenetics, plant-pathogen interactions and responses to biotic- and abiotic-stresses. Prerequisite: junior standing and Biology 305, or Plant and Soil Science 305.

420-4 Crop Pest Control. (Same as Plant, Soil and Agricultural Systems 420) Study of field pests of forest; orchard, field, and garden crops; pest control principles and methods; control strategy; and consequences of pest control operations. Prerequisite: introductory biology or crop science course and/or consent of instructor.

421-3 Turf Management Issues and Strategies. (Same as Plant, Soil and Agricultural Systems 421) Issues in environmental, technical, management, social, political, business, and sports arenas that interact with turf management. Students will utilize periodicals and other references for preparing papers addressing these issues. Lab fee: \$25. Prerequisite: 322 or equivalent, or permission of instructor.

422-3 Turfgrass Science and Professional Management. (Same as Plant, Soil and Agricultural Systems 422) Basic concepts of physiology, growth, and nutrition of turfgrasses and their culture. Application of turfgrass science to management of special turf areas such as golf courses, athletic fields, and sod farms; and to the turfgrass industry. A fee of \$50 is assessed to pay for guest speaker expenses, laboratory materials and field trips. Prerequisite: 240 and 322 or equivalent or consent of instructor.

423-3 Greenhouse Management. (Same as Plant, Soil and Agricultural Systems 423) Principles of greenhouse management controlling environmental factors influencing plant growth; greenhouses and related structures; greenhouse heating and cooling systems. Lab fee: \$40. Prerequisite: 220 or consent of instructor.

424-4 Floriculture. (Same as Plant, Soil and Agricultural Systems 424) Production, timing, and marketing of the major floricultural crops grown in the commercial greenhouse. Each student will have an assigned project. Lab fee: \$40. Prerequisite: 423 or consent.

425-5 Advanced Plant Physiology. (Same as Plant, Soil and Agricultural Systems 425, Plant Biology 425) Physics of plants, membrane phenomena; water relations; mineral nutrition. Prerequisite: 320 and consent of instructor.

426-4 Genomics and Bioinformatics. (Same as Plant, Soil and Agricultural Systems 426, Plant Biology 426) This course is designed to introduce students from a variety of backgrounds and departments to the scope and methodology of genomic and bioinformatic sciences. Real problems and solutions from genome data analysis are studied in this course to see how high throughput genomics is driving bioinformatics, and changing the biological sciences in revolutionary way. Prerequisite: consent.

427-5 Plant Biochemistry. (Same as Plant Biology 427 and Plant, Soil and Agricultural Systems 427) Primary and intermediary metabolism. Exploration of fundamental biochemical pathways in plants with an emphasis upon carbon and nitrogen metabolism. Not for graduate credit. Prerequisite: Plant Biology 320 or consent of instructor.

428-3 Advanced Landscape Design I. (Same as Plant, Soil and Agricultural Systems 428) Development of the design process, graphics and verbal communication of landscape projects. Emphasis on large scale projects and residential design. Lab fee: \$25. Prerequisite: 328-4 or consent of instructor.

429-3 Advanced Landscape Design II. (Same as Plant, Soil and Agricultural Systems 429) Development of the design process, graphics and verbal communication of landscape projects. Emphasis on construction details, color rendering and portfolio development. Lab fee: \$25. Prerequisite: 328-4 or consent of instructor.

430-4 Plant Propagation. (Same as Plant, Soil and Agricultural Systems 43, Plant Biology 430) Fundamental principles of asexual and sexual propagation of horticultural plants. Actual work with seeds, cuttings, grafts, and other methods of propagation. Field trip cost approximately \$5. Lab fee: \$40. Not for graduate credit. Prerequisite: 220.

431-4 Landscape Construction. (Same as Plant, Soil and Agricultural Systems 431) An introduction course in the basic elements of landscape construction dealing with wood, concrete, masonry, and stone. Emphasis will be placed on safety, interpretation of construction drawings, specifications for specific structures, materials selection, cost estimation, site preparation, and construction techniques. Not for graduate credit. Lab fee: \$170. Prerequisite: 220.

432-4 Garden Center and Nursery Management. (Same as Plant, Soil and Agricultural Systems 432) Principles and practices in both fields and container production or ornamental landscape materials and the marketing of landscape plant materials at the nursery and retail garden center. Business management or both nurseries and garden centers will be included. Lab fee: \$50. Not for graduate credit. Prerequisite: 220 or consent of instructor.

433-4 Introduction to Agricultural Biotechnology. (Same as Animal Science 433.) (Same as Plant, Soil and Agricultural Systems 433, Plant Biology 433) This course will cover the basic principles of plant and animal biotechnology using current examples; gene mapping in breeding, transgenic approaches to improve crop plants and transgenic approaches to improve animals will be considered. Technology transfer from laboratory to marketplace will be considered. An understanding of gene mapping, cloning, transfer and expression will be derived. Not for graduate credit. Prerequisite: senior standing or consent of instructor.

434-3 Landscape Maintenance Operations. (Same as Plant, Soil and Agricultural Systems 434) Course is designed as a general introduction to landscape maintenance operations. Topics discussed include plant selection, site selection, climatic effects, planting, fertilization, pruning, diagnosis of plant problems, weed control and pest management. Emphasis given to business management practices and cost estimation skills. Not for graduate credit. Prerequisite: 220 or consent.

435-1 to 4 Agricultural Molecular Biotechnology Seminar. (Same as Plant, Soil and Agricultural Systems 435) Molecular biology is rapidly making important contributions to agricultural science through biotechnology. An appreciation of the techniques of molecular biology and their application to plant improvement is important to all in agriculture and biology. The relationships between plant molecular biology and the biotechnology industry will be discussed. Presentations on particular research problems will be made. Graded P/F. Not for graduate credit.

436-4 Successful Fruit Growing. (Same as Plant, Soil and Agricultural Systems 436) Learn how to grow and use temperate fruit trees for your pleasure and/or economic benefit. Learn to use the basic principles of plant-environment interaction to understand and solve common problems found in the culture of tree fruit crops in the landscape, garden or orchard. Master the secrets of fruit growing through emphasis on hands-on experiential laboratories. Focus on midwest culture of tree fruit and nut crops. One-day field trip. Required textbook mandatory. Lab fee: \$135. Not for graduate credit. Prerequisite: 220 or consent of instructor.

437-4 Vegetable Production. (Same as Plant, Soil and Agricultural Systems 437) Culture, harvesting, and marketing of vegetables; with morphological and physiological factors as they influence the crops. Lab fee: \$25. Not for graduate credit. Prerequisite: 220 or consent.

438-3 Techniques in Plant Molecular Biology. (Same as Plant, Soil and Agricultural Systems 438) Students will gain hands-on experience with current molecular techniques being applied to questions in the plant sciences. These include isozyme electrophoresis, DNA and RNA extraction, restriction endonuclease digestions, Northern blotting, Southern blotting, PCR (polymerase chain reaction), gene cloning and DNA sequencing. Students will also gain some exposure to the use of computers in manipulating and analyzing molecular data. Not for graduate credit. Prerequisite: either Biology 200b or Plant Biology 200 and junior standing.

441-3 Soil Morphology and Classification. (Same as Plant, Soil and Agricultural Systems 441) Development, characteristics, and identification of soils, study of profiles; and interpretation and utilization of soil survey information in land use planning. Field trip costing approximately \$5. Not for graduate credit. Prerequisite: 240 or consent of instructor.

442-3 Soil Physics. (Same as Plant, Soil and Agricultural Systems 442) A study of the physical properties of soils with special emphasis on soil and water relationships, soil productivity, and methods of physical analysis. Not for graduate credit. Prerequisite: 240.

443-3 Soil Management. (Same as Plant, Soil and Agricultural Systems 443) The soil as a substrate for plant growth. Properties of the soil important in supplying the necessary mineral nutrients, water and oxygen and for providing an environment conducive to plant root system elaboration. Soil management techniques important in optimizing plant growth. Not for graduate credit. Prerequisite: 240.

445-3 Irrigation Principles and Practices. (Same as Plant, Soil and Agricultural Systems 445) This course will cover basic principles of irrigation sciences; water requirements of crops; soil water relationship; water application methods including flooding, sprinkler, and drip (or trickle) systems; water conveyance, distribution and measurement; evaluation of irrigation efficiency; and irrigation scheduling. Considerations will also include crop production effects and economic aspects of irrigation. Not for graduate credit. Prerequisite: 240 or consent of instructor.

446-3 Soil and Water Conservation. (Same as Plant, Soil and Agricultural Systems 446) Covers the principles of hydrologic processes and soil erosion. Consideration will be given to the occurrence of soil erosion as it affects humans, food production, and the environment. The methods and technologies for protecting against and controlling of erosion will also be discussed. Not for graduate credit. Prerequisite: 240 and Mathematics 108 or 125, or consent of instructor.

447-3 Fertilizers and Soil Fertility. (Same as Plant, Soil and Agricultural Systems 447) Recent trends in fertilizer use and the implications of soil fertility build up to sufficiency and/or toxicity levels; the behavior of fertilizer material in soils and factors important in ultimate plant uptake of the nutrients; the plant-essential elements in soils and ways of assessing their needs and additions; tailoring fertilizer for different uses and management systems; implication of excessive fertilization in our environment. Not for graduate credit. Prerequisite: 240, concurrent enrollment in 448 suggested.

448-2 Soil Fertility Evaluation. (Same as Plant, Soil and Agricultural Systems 448) A laboratory course designed to acquaint one with practical soil testing and plant analysis methods useful in evaluating soil fertility and plant needs. One hour lecture, two hours laboratory. Lab fee: \$15. Not for graduate credit. Prerequisite: 240; 447 or concurrent enrollment; or consent of instructor.

454-4 Soil Microbiology. (Same as Microbiology 454.) (Same as Plant, Soil and Agricultural Systems 454) A study of microbial numbers, characteristics and biochemical activities of soil microorganisms with emphasis on transformations of organic compounds, nitrogen phosphorus, sulfur, iron, and plant essential nutrients. Lab fee: \$15. Not for graduate credit. Prerequisite: 240 or Microbiology 301.

455-3 Biology of Plant-Microbe Interactions. The molecular basis of host-pathogen interactions and disease development in plants is examined with a critical review of original and current literature focusing on the mechanisms of pathogenesis, virulence, disease development and resistance, and response mechanisms in plants. Prerequisite: Plant and Soil Science/Plant, Soil and Agricultural Systems 401, 433 or consent of instructor

466-4 Vine and Small Fruit Culture. (Same as Plant, Soil and Agricultural Systems 466) Study of the developmental patterns and environmental responses of important vine and small fruit crops; strawberries, brambles, blueberries, grapes and exotic crops. Learn to adapt these crops to profitable culture for the amateur or professional with a Midwest focus. Practical hands-on experience in the classroom and the field. Two one-day field trips required. Required textbooks mandatory. Lab fee: \$150. Not for graduate credit. Prerequisite: 220 or 435 or consent of instructor.

468-3 Weeds — Their Control. (Same as Plant, Soil and Agricultural Systems 468) Losses due to weeds, weed identification and distribution, methods of weed dissemination and reproduction, mechanical, biological, and chemical control of weeds. State and Federal legislation pertaining to weed control herbicides. Herbicide commercialization. Field trips costing approximately \$5. Not for graduate credit. Prerequisite: an introductory biology course.

470-2 Post Harvest Handling of Horticultural Commodities. (Same as Plant, Soil and Agricultural Systems 470) Fundamental principles of post harvest physiology, handling, and evaluation of horticultural commodities will be covered. Specific details will be given on vegetable, fruit, ornamental, and floricultural commodities. Field trip costing approximately \$30. Not for graduate credit. Prerequisite: 220 and Plant Biology 320.

475-4 Golf Course Green Installation and Maintenance. (Same as Plant, Soil and Agricultural Systems 475) This course will focus on the requirements, installation, care and maintenance of the rooting media of golf course putting green and turfgrass on disturbed soils. Not for graduate credit. Prerequisite: 240.

Plant and Soil Science Faculty

Bond, Jason, Associate Professor, Ph.D., Louisiana State University, 1999.

Boren, Amy, Instructor, M.S., Southern Illinois University, 1980.

Chong, She Kong, Professor, Ph.D., University of Hawaii, 1979.

Diesburg, Kenneth, Assistant Professor, Ph.D., Iowa State University, 1987.

Elkins, Donald M., Professor, *Emeritus*, Ph.D., Auburn University, 1967.

Henry, Paul H., Associate Professor, Ph.D., North Carolina State University, 1991.

Hillyer, Irvin G., Professor, *Emeritus*, Ph.D., Michigan State University, 1956.

Kapusta, George, Professor, *Emeritus*, Ph.D., Southern Illinois University, 1975.

Klubek, Brian P., Professor and Chair, Ph.D., Utah State University, 1977.

Lightfoot, David A., Professor, Ph.D., University of Leeds, 1984.

McGuire, James M., Professor, *Emeritus*, Ph.D., North Carolina State University, 1961.

Meksem, Khalid, Associate Professor, Ph.D., University of Cologne, 1995.

Midden, Karen L., Professor, M.L.A., University of Georgia, 1983.

Myers, Oval, Jr., Professor, *Emeritus*, Ph.D., Cornell University, 1963.

Olsen, Farrel J., Professor, *Emeritus*, Ph.D., Rutgers University, 1961.

Preece, John E., Professor, Ph.D., University of Minnesota, 1980.

Russin, John S., Associate Professor and Associate Dean, Ph.D., University of Kentucky, 1983.

Schmidt, Michael E., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1994.

Stucky, Donald J., Professor, *Emeritus*, Ph.D., Purdue University, 1963.

Taylor, Bradley H., Associate Professor, Ph.D., Ohio State University, 1982.

Tweedy, James A., Professor, *Emeritus*, Ph.D., Michigan State University, 1966.

Varsa, Edward C., Professor, *Emeritus*, Ph.D., Michigan State University, 1970.

Walters, S. Alan, Associate Professor, Ph.D., North Carolina State University, 1996.

Young, Bryan G., Associate Professor, Ph.D., University of Illinois, 1998.

Plant Biology (Department, Major, Courses, Faculty)

Plant Biology is the science of plant life, which ranges from the microscopic to giant Sequoia trees. You should consider a major in plant biology if curious about any of these: the kinds of plants that inhabit the earth; how they grow; why they are found where they are; and how or what products they contribute to the lives of humans.

A career in plant biology offers a number of specialties from which one may choose. This diversity allows people with different backgrounds, aptitudes and interests to find careers to their liking. A person with mathematical background might find systems ecology or genetics exciting fields. Persons with an appetite for the out-of-doors might be happy as an ecologist, forester, plant explorer, or

preservationist of rare and endangered species. Those who appreciate detail and beauty found in plant structure would find happiness in cell study, anatomy and morphology. Someone with an interest in chemistry could become a plant physiologist, plant biochemist or molecular plant biologist. Those who find an interest in aquatic microscopic forms will study algae. Those with an interest in fungi become mycologists. Those who enjoy mosses will study bryology. All of these fields offer great opportunities to interact with people and have a wide range of employment opportunities in teaching, research, and government service.

Students planning to major in plant biology should consult with the chair of the department for information concerning the programs in the department.

As a general rule, students who intend to apply for admission to a graduate school to study for an advanced degree in plant biology should include the following in their undergraduate program: inorganic and organic chemistry, mathematics through calculus, statistics, and as many plant biology and biology courses as time and scheduling will permit.

An honors program is available to those juniors and seniors in plant biology who have an overall grade point average of 3.00 or better and an average in plant biology courses of 3.25 or better. Honors students should enroll in Plant Biology 492 during some semester in both junior and senior years.

The department specifies that the College of Science six-hour supportive skills requirement is to be met by completing two designated courses or a foreign language sequence. The two designated courses are to be selected from the following: English 291, Computer Science 105 or 200b, 201, 202. The foreign language requirement can be met by one of the following: (a) passing an eight-hour 100-level sequence in any one foreign language offered at Southern Illinois University Carbondale; (b) by earning eight hours of 100-level credit in any one foreign language offered at Southern Illinois University Carbondale by proficiency examination; or (c) completing three years of one foreign language in high school with no grade lower than C.

A student whose native language is not English may use the native language to satisfy part or the entire plant biology foreign language requirement at the University. If the language is presently taught at Southern Illinois University, academic credit may be earned. If the language is not presently taught at the University, no credit is given, but partial or full satisfaction of the plant biology foreign language requirement may be granted if the plant biology department so recommends. A student whose native language is English but who has learned another language not taught at the University may qualify without credit for partial or full satisfaction of the plant biology foreign language requirement under certain circumstances, including formal recommendation by the plant biology department and availability of an examiner and examination materials within the Department of Foreign Languages and Literatures. For information, the student should consult the department undergraduate advisor and/or the College of Science advisement center.

Bachelor of Arts in Plant Biology Degree, College of Science

<i>University Core Curriculum Requirements</i>	41 ¹
<i>College of Science Academic Requirements</i>	7-11
Supportive Skills,	6-8
Mathematics 108 and 109 or 111 (or its equivalent) or 141	(3) + 1-3
<i>Requirements for Major in Plant Biology</i>	52
Biology 200a, 200b, 305, 306, 307	15
Plant Biology 300, 304, 320, 360, 480	16
Chemistry 200 ² , and 201 ² and either 210, 211 or 340, 341	(3) + 5
Plant Biology Electives	16

Plant Biology Electives can be individualized in one of two ways depending upon the goals and interests of the individual stu-

dent. Individualized options, and any changes thereof, must be arranged with the student's Plant Biology undergraduate advisor. Options available are:

- 1. *General Plant Biology.* Student desiring a diverse background in Plant Biology are required to have 16 elective hours, with at least one course from each of the three specializations listed below.
- 2. *Specializations.* Students wishing to study specific topics in more detail may specialize in one of three areas.

Ecology

Requires sixteen credit hours from the following courses: Plant Biology 410, 416, 435, 439, 440, 443, 444, 445, 447, 450, 452

Molecular and Biochemical Physiology

Requires Plant Biology 418 plus a minimum of 13 credit hours from the following courses: Plant Biology 400, 420, 425b, 427, 433, 475, 476

Systematics and Biodiversity

Requires Plant Biology 449 plus a minimum of 13 credit hours from the following courses: Plant Biology 400, 405, 406, 409, 415, 420, 439, 447, 450, 451

Electives 20

Additional science electives can be selected from chemistry, computer science, microbiology, physics, and zoology.

Total 120

¹The 41-hour requirement may be reduced by taking College of Science or major requirements that are approved substitutes for University Core Curriculum courses.

²CHEM 200 and 201 together satisfy the Disciplinary Studies-Science, group I University Core Curriculum requirement while PLB 200 satisfies the Disciplinary Studies-Science, Group II requirement. The hours for these courses can be contributed to the 41 Core hours.

Plant Biology Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
CHEM 200, 201	-	4	BIOL 306.....	-	3
ENGL 101, 102.....	3	3	BIOL 307, Social Science	3	3
MATH 108, 109	3	3	CHEM 210, 211	4	-
BIOL 200a,b	3	3	PLB 304.....	-	4
Social Science, Human Health...	3	2	SPCM 101, Fine Arts.....	3	3
General Elective.....	3	-	General Elective	3	3
<i>Total</i>	15	15	<i>Total</i>	13	16
THIRD YEAR			FOURTH YEAR		
	FALL	SPRING		FALL	SPRING
BIOL 305, PLB Elective.....	3	4	Interdisciplinary	-	3
Humanities.....	3	3	Multicultural	3	-
PLB 300, 320	4	4	PLB 480	-	1
Supportive Skill, PLB 360	3	3	PLB Electives.....	6	6
General Elective	3	-	General Electives.....	6	3
<i>Total</i>	16	14	Supportive Skills	-	3
			<i>Total</i>	15	16

General Minor

A general minor in plant biology consists of a minimum of 16 semester hours, selected from any plant biology offerings except University Core Curriculum courses (PLB 115, 117, 301i and 303i) and PLB 360, 390, 391, 490, 491, or 492.

Tracked Minors

A. *Plant Biology, with emphasis in Plant Biodiversity:* Consists of 16 credit hours selected from the course listed below. The *or* indicates a one-or-the-other choice option.

PLB 300; 304 or 451; 400 or 415, 404 or 405 or 409; 406 or 410; 430 or 450

B. Plant Biology, with emphasis in Plant Ecology: Consists of 16 credit hours taken from the list of courses below.

BIOL 307, PLB 304, any three of the following courses: PLB 435, 440, 443, 444, 445, 447 or 452

C. Plant Biology, with emphasis in Plant Biotechnology: Consists of 16 credit hours from the following courses:

BIOL 305, 306, PLB 320, 418, 420 or 433

Courses (PLB)

For all field courses in plant biology, students will be assessed a transportation fee. In addition, certain courses may require the purchase of additional materials and supplies.

115-3 General Biology. (University Core Curriculum, Same as Zoology 115) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Lab fee: \$15.

117-3 Plants and Society. (University Core Curriculum) [IAI Course: L1 901L] A multidisciplinary approach to understanding the relationships between plants and humans: basic botanical principles (cell structure, morphology, anatomy, physiology, genetics, systematics, diversity and ecology); historical and modern uses of plant (fibers, building materials, crops, beverages, medicines); crops, poisonous plants, and biotechnology. Observational and experimental labs reinforce lecture topics. Lab fee: \$15.

200-4 General Plant Biology. (Advanced University Core Curriculum course) [IAI Course: L1 901L] An introduction to Plant Biology. Emphasis is placed on structure and reproduction, embryo development, and vital developmental processes needed for plant survival, such as photosynthesis, respiration, water transport and nutrient assimilation. Other topics include cell division, basic Mendelian genetics, DNA, RNA, protein synthesis, taxonomy, evolution, ecology, and conservation. The course also includes a brief overview of medicinal plants and their biologically active compounds. Lab fee: \$15. Satisfies University Core Curriculum Science Group II requirement in lieu of Plant Biology 115 or Zoology 115.

300-4 Plant Diversity. An evolutionary approach to the study of major plant groups -- algae to flowering plants. Emphasis will be placed on cytology, anatomy, and development. Economic and ecological aspects of various groups as they relate to humans will also be considered. Laboratory will stress principles via hands-on study of selected representatives. Three lectures and one 2-hour laboratory per week. Lab fee: \$15. Prerequisite: either Biology 200b or Plant Biology 200.

301I-3 Environmental Issues. (University Core Curriculum) Fundamental biological and ecological processes important in the individual, population and community life of organisms integrating with the philosophical and ethical relationships of the contemporary, domestically diverse human society are examined. Emphasis is placed on a pragmatic understanding of environmental issues. Lab fee: \$15. Prerequisite: strongly recommend completion of core science requirements.

303I-3 Evolution and Society. (University Core Curriculum) An introduction to the basics of biological evolution and the effect of biological evolution on society. Historical and modern interpretations of biological evolution on the human experience will be developed. This will include legal, political, religious, scientific, racist, sexist, philosophical and educational aspects. Topics will be covered via discussions, presentations, papers and debates. Lab fee: \$15. Prerequisite: strongly recommend completion of core science requirement.

304-4 Elements of Plant Systematics. The principles of plant classification including history, nomenclature, specimen collection and preservation, current systematic methodologies, and a survey of major plant families. Two lectures and four laboratory hours per week. A \$15 laboratory fee will be charged to cover costs of laboratory materials. Prerequisite: Biology 200b or Plant Biology 200.

320-4 Elements of Plant Physiology. The functions of plants and their relation to the various organs. Two lectures and four lab hours per week. A \$15 laboratory fee will be assessed. Prerequisite: Biology 200b or Plant Biology 200; organic chemistry recommended.

335-2 Methods in Genetics. Selected organisms and techniques illustrating genetic principles. Two two-hour laboratories per week. Prerequisite: Biology 305 or equivalent.

337-2 Ecology Laboratory. Techniques in vegetation analysis and environmental measurements. One four-hour laboratory per week. Lab fee: \$15. Prerequisite: Biology 307 or equivalent.

360-3 Introductory Biostatistics. Introduction to basic statistical concepts and methods as applied to biological data. Includes descriptive techniques such as measures of central tendency, variability, hypothesis testing, analysis of variance and simple linear regression and correlation. Analysis of computer generated output and report writing will be required. This course does not fulfill the College of Science Biological Sciences requirement. Prerequisite: Mathematics 108 or higher or equivalent.

390-1 to 3 Readings in Plant Biology. Individually assigned readings in botanical literature. Every semester. Prerequisite: consent of departmental chair.

400-4 Plant Anatomy. An introduction to the differentiation, diversification and structure of plant tissues and organs, with emphasis on the organization of seed plants. Laboratory will include instruction in the

techniques of microscopy used in the study of plant structure. Two lectures and two laboratories per week. Lab fee: \$15. Prerequisite: Biology 200b or Plant Biology 200.

404-4 The Algae. A phylogenetic approach to the study of algae with emphasis on comparative cytology, morphology, and ecology. Laboratories include a detailed survey of freshwater algae and a general treatment of representative marine forms. Two lectures and two two-hour laboratories per week. Prerequisite: Plant Biology 300 or consent of instructor.

405-4 The Fungi. A survey of the fungi — their structure, development, relationships, ecological roles, and economic importance. Two lectures and two laboratories. Lab fee: \$15. Prerequisite: Biology 200b or Plant Biology 200 or equivalent, Plant Biology 300 or equivalent recommended.

406-3 Bryology. An introduction to the biology of mosses, liverworts, and hornworts, with emphasis on structure, development, and phylogeny, but also including the study of their genetics, biochemistry, and physiology. Two lectures and one laboratory per week. Lab fee: \$15. Prerequisite: 300.

409-3 Field Mycology. The taxonomy, ecology, and distribution of fungi in southern Illinois and environs with emphasis on techniques of specimen collection, preservation, identification, and recognition. This is a field-based course wherein field trips are made most weeks. Also microscopic examination of living specimens is required. Lab fees are needed for travel and microscope supplies. Prerequisite: Biology 200b or Plant Biology 200; Plant Biology 300 recommended.

410-4 Ecology of Bryophytes. A field-based focus on learning identification of the local flora. Interactions of bryophytes to their environment are examined through lectures, laboratories, and field study. Importance of mosses and liverworts to ecosystems, community analysis, and population interactions are emphasized. Two lecture/laboratory/field trips per week. Lab fee: \$15. Prerequisite: a 300 level course in plant biology or permission of the instructor.

415-5 Morphology of Vascular Plants. The study of external form, internal structure, and relationships of vascular plants. Three lectures and two labs per week. Lab fee: \$15. Prerequisite: Plant Biology 300; 400 recommended.

416-3 Limnology. (Same as Zoology 415.) Lakes and inland waters; the organisms living in them, and the factors affecting these organisms. Two lectures per week and one 4-hour laboratory alternate weeks. Offered fall term. Prerequisite: Zoology 220a.

419-3 Plant Molecular Biology. (Same as Plant, Soil and Agricultural Systems 419, Plant and Soil Science 419) A survey of molecular phenomena unique to plant systems. Topics will include: genome organization and synteny between plant genomes, transcriptional and post-transcriptional control of gene expression, signal transduction, epigenetics, plant-pathogen interactions and responses to biotic- and abiotic-stresses. Prerequisite: junior standing and Biology 305 or Plant and Soil Science 305.

420-3 Techniques in Molecular Biology. Students will gain hands-on experience with current molecular techniques being applied to questions in the plant sciences. These include isozyme electrophoresis, DNA and RNA extraction, restriction endonuclease digestions, Northern blotting, Southern blotting, PCR (polymerase chain reaction) and gene cloning. Students will gain experience in the use of computers in manipulating and analyzing molecular data. \$15 lab fee. Prerequisite: either Biology 200b or Plant Biology 200, and junior standing or consent of instructor.

421-4 Botanical Microtechnique. Introduction to practical methods of preservation and preparation of plant materials for laboratory and microscopic study. Paraffin and plastic embedding and sectioning techniques, and use of general and histochemical stains stressed. Includes chromosome squashing, whole-mount preparation, photomicrography, and other techniques. One lecture and three laboratories per week. Prerequisite: either Biology 200b or Plant Biology 200.

425B-5 Advanced Plant Physiology. (Same as Plant, Soil and Agricultural Systems 425) Physics of plants; membrane phenomena; water relations; mineral nutrition. A \$15 laboratory fee will be assessed. Prerequisite: 320 and consent of instructor.

427-5 Plant Biochemistry. Exploration of fundamental biochemical pathways in plants with an emphasis upon carbon and nitrogen metabolism. Lab fee: \$15. Prerequisite: 320 or consent of instructor.

430-3 Economic Botany. Classification, evolution, domestication, and botanical characteristics of plants useful to people. Every year. Prerequisite: either Biology 200b or Plant Biology 200.

433-4 Introduction to Agricultural Biotechnology. (See Plant and Soil Science 433). Prerequisite: senior standing or consent of instructor.

435-3 Plant-Insect Interactions. (Same as Zoology 435) Plants and insects have played major roles influencing each other's evolutionary diversification. This course will be evolutionary and ecological examination of the interactions between plants and insects. Topics will include herbivory, pollination relationships, ant-plant mutualisms, host plant choice, specialization vs. generalized relationship, seed and fruit dispersal, coevolution/conspeciation, and chemical, and chemical ecology. Prerequisite: Biology 200a,b or equivalent, Biology 307 or equivalent.

439-2 Natural Areas and Rare and Endangered Species. Evaluation of the natural area preservation concept with emphasis on how to detect natural areas and methods to preserve them. Emphasis on the rare and endangered species program, its significance, and its methodology. Prerequisite: 304, Biology 307.

440-3 Grassland Ecology. A study of grassland structure and function in relation to various biotic and abiotic factors. Lab fee: \$15. Prerequisite: 304 and Biology 307 or equivalent.

443-3 Restoration Ecology. Ecological restoration tests current understanding of ecosystem assembly and function. This course applies ecological theory to restoration, with an emphasis on factors influencing plant community assembly and evaluating restoration success. Two lectures a week and one four hour lab alternate weeks. Lab fee: \$15. Prerequisite: Biology 307 or equivalent.

444-4 Quantitative Plant Ecology. Includes concepts and methods pertaining to the analysis of ecological data. Approaches will include a variety of methods for analyzing multivariate ecology, diversity, pattern, and

spatial data. Laboratory will include the computer application of these concepts and methods to field situations. Lab fee: \$15. Prerequisite: 360, Biology 307 or consent of instructor.

445-5 Wetland Plant Ecology. Provides students with experience in wetland plant ecology with an emphasis in wetland functioning, field sampling and identification of common wetland plants. Fee: \$20 will be assessed. Lab fee: \$15. Prerequisite: 200, 304, Biology 200b, Biology 307 or consent of instructor.

447-2 to 6 Field Studies in Latin America. Two to six weeks of intensive field work to acquaint students with the flora and vegetation in various environments of Latin America and with ecological and taxonomic field techniques. Cost varies with type of study and location. Transportation cost: \$80. Prerequisite: advanced standing in one of the biological sciences and consent of instructor.

449-3 Plant Systematics and Evolution. Plant systematics and evolution using traditional and molecular characters. Includes classification methods, phenetics, cladistics, maximum likelihood, and plant molecular evolution. Prerequisite: 304 (or equivalent) or consent of instructor.

450-2 Plant Geography. Plant distributions are examined from both ecological and historical perspectives. Ecological topics include analysis of limiting factors, occurrence of present biomes, and examination of climate/plant interactions. Historical topics include phylogenetic analysis, evolutionary biogeography, and paleo-floras. Two lectures per week.

451-3 Flora of Southern Illinois. Exposure to the major upland and lowland communities of southern Illinois with an emphasis on the identification, distribution and ecology of the natural and introduced floristic components. This is a field-based course wherein the students travel to local areas for plant identification. Each week, 4-8 hours per weekly session is spent in field work and travel to specific field sites is required via a university vehicle. Lab fee: \$15. Prerequisite: 304 or consent of instructor.

452-4 Plant Population Ecology. The principles and research techniques of plant population ecology including the spatial, age, size and genetic structures of plant populations. The origin of these different kinds of population structure, their influences upon each other and their temporal dynamics. Lab fee: \$15. Prerequisite: Biology 307 or consent of instructor.

456-2 Advanced Plant Pathology. A study of the changes occurring in host and pathogen at the host-parasite interface before, during, and after penetration. Control measures will be discussed and emphasis will be on midwest field crops. Two lectures per week. Prerequisite: 356 or consent of instructor.

475-3 Advanced Cell Biology. (Same as Zoology 475.) Cell structure at molecular and cytological levels. Includes discussions of research methods, plasma membrane, cell exterior and recognition, the endomembrane system and related organelles, self-replicating organelles, the cytoskeleton, nuclear structure and function in cell replication, cell differentiation and response, and eukaryotic cell evolution. Prerequisite: Biology 306 or equivalent.

476-2 Advanced Cell Biology Laboratory. (Same as Zoology 476.) Laboratory course to accompany Plant Biology 475. Light and electron microscopy, cell culturing, biochemical methods, and experimental protocols are used to study the structure of cell membranes, intracellular organelles, including the Golgi apparatus, ER, mitochondria, plastids, lysosomes, the cytoskeleton, and nucleus. Prerequisite: 475 or concurrent enrollment.

480-1 Senior Seminar. Reading, writings, discussions and presentations of current research topics in plant biology. Not for graduate credit. Prerequisite: senior standing or consent of instructor.

492-2 to 6 Honors in Plant Biology. Individual research problems available to qualified juniors and seniors. Prerequisite: consent of department chair.

493-1 to 4 Research Topics in Plant Biology. Individual laboratory or field work under supervised direction: (a) Ecology, (b) Systematics, or (c) Physiology/Molecular biology. Prerequisite: consent of departmental chair.

Plant Biology Faculty

Anterola, Aldwin M., Assistant Professor, Ph.D., Washington State University.

Ashby, William C., Professor, *Emeritus*, Ph.D., University of Chicago, 1950.

Baer, Sara G., Assistant Professor, Ph.D., Kansas State University.

Battaglia, Loretta L., Assistant Professor, Ph.D., University of Georgia, 1998.

Bozzola, John J., Professor, Ph.D., Southern Illinois University, 1975.

Crandall-Stotler, Barbara C., Professor, *Emerita*, Ph.D., University of Cincinnati, 1968.

Ebbs, Stephen D., Associate Professor, Ph.D., Cornell University, 1997.

Geisler, Matthew J. B., Assistant Professor, Ph.D., The Ohio State University, 1999.

Gibson, David J., Professor, Ph.D., University of Wales - Bangor, 1984.

Matten, Lawrence C., Professor, *Emeritus*, Ph.D., Cornell University, 1965

Mohlenbrock, Robert H., Distinguished Professor, *Emeritus*, Ph.D., Washington University, 1957.

Nickrent, Daniel L., Professor, Ph.D., Miami University, Ohio, 1984.

Pappelis, Aristotel J., Professor, *Emeritus*, Ph.D., Iowa State University, 1957.

Renzaglia, Karen S., Assistant Professor, Ph.D., SIUC, 1981.

Richardson, John A., Associate Professor, *Emeritus*, M.F.A., Ohio University, 1969.

Robertson, Philip A., Professor, *Emeritus*, Ph.D., Colorado State University, 1968.

Sipes, Sedonia D., Assistant Professor, Ph.D., Utah State University, 2001.

Stotler, Raymond E., Professor, *Emeritus*, Ph.D., University of Cincinnati, 1968.

Sundberg, Walter J., Professor, *Emeritus*, Ph.D., University of California, 1971.

Tindall, Donald R., Professor, *Emeritus*, Ph.D., University of Louisville, 1966.

Ugent, Donald, Professor, *Emeritus*, Ph.D., University of Wisconsin, 1966.

Wood, Andrew J., Professor, Ph.D., Purdue University, 1994.

Vitt, Dale H., Professor and *Chair*, Ph.D., University of Michigan, 1970.

Yopp, John H., Professor, *Emeritus*, Ph.D., University of Louisville, 1969.

Policy Analysis

(SEE AGRIBUSINESS ECONOMICS)

Political Science (Department, Major, Courses, Faculty)

Political Science is the study of issues that most immediately and profoundly affect our lives. In the global, national and local political arenas, decisions are made every day that influence the way we live. The political science major will prepare you to address these issues intelligently. You will gain knowledge and skills to make a contribution in today's dynamic economic and political world. Courses in political science teach you skills in writing, analysis and communication and prepare you for work in all sectors of our society: business, education, government and industry.

Students planning to major in political science should consult with the political science academic advisor as early as possible to plan their program of study. As a political science major you will be able to choose from a curriculum that combines structure with flexibility. The department offers three specializations: International Affairs, Pre-Law, and Public Service, as well as several programs of study including Political Elections and Campaigns and Political Reporting and Post-Secondary Teaching. Within each, students choose from the wide range of courses that prepare them best for their future plans and careers. Students are encouraged to gain practical experience by enrolling in internships and study abroad programs. Upon obtaining senior status, students with a 3.50 or higher gpa in political science and a 3.25 overall, may enter the political science honors program. Students must consult with the political science academic advisor before enrolling in departmental courses each semester.

Students majoring in political science must complete core and elective requirements listed below for a minimum of 33 hours of which at least 15 must be earned at Southern Illinois University Carbondale. A minimum of three of these courses must be taken at the 400 level. A maximum of nine hours of POLS 390 and 395 and three hours of Individualized Learning Program (ILP) may be counted toward the minimum of 33 hours. Students may not register for ILP courses in political science while enrolled in classes on campus. Majors may take a 400-level political science ILP course for departmental credit only under special circumstances and with the permission of the Director of Undergraduate Studies. Majors must complete Political Science 200 with a grade of C or higher. This course fulfills the College of Liberal Arts Writing-Across-the-Curriculum (WAC) requirement. One paper from a Political Science 400-level course in which the student earned a C or higher must be submitted to the departmental academic advisor by April 15 or November 15 of the student's graduating semester. Students must complete the departmental exit survey as a final graduation requirement for the major in political science.

Bachelor of Arts Degree in Political Science, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4)	11
<i>Requirements for Major in Political Science</i>	33
Core Courses: POLS 114, 200 and 300 or 330.....	9
Political Science Electives (choose at least one from five of the following groups):	24
POLS 207, 300, 304a,b, 305, 306, 403, 405, 408	

POLS 213, 214, 314i, 317, 318, 319, 321, 322, 324, 325, 413, 414,
 415, 418, 419, 420
 POLS 340, 443, 444, 445, 446
 POLS 130, 330, 332, 334, 433a, 433b, 435, 436, 437, 475
 POLS 250, 352i, 458, 459, 461, 466, 468
 POLS 170, 278, 372i, 373, 375, 477, 480

<i>Minor</i>	15-18
<i>Electives</i>	<u>17-20</u>
<i>Total</i>	120

POLITICAL SCIENCE MAJOR—INTERNATIONAL AFFAIRS SPECIALIZATION

Political science majors preparing for careers in international affairs must meet the basic requirements for the political science major include core courses, a minimum of 33 credit hours in political science, three 400-level courses, international affairs elective requirements and completion of an existing minor or interdisciplinary program of study. In fulfilling these requirements, majors preparing for international affairs will have the opportunity to study international relations, comparative politics, international political economy and the politics of specific countries and regions. (The departmental advisor approves Minors and interdisciplinary study).

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Requirement</i> (See Chapter 4)	11
<i>Requirements for Major in Political Science</i>	48-51
Core Requirements POLS 114, 200, and 300 or 330	9
International Affairs Course Sequence POLS 170, 250, 372i, 375, 480	15
Political Science Electives (choose at least 1 from each group):	12
POLS 304a,b, 305, 306, 405, 437	
POLS 213, 314i, 319, 321, 322, 324, 420	
POLS 340, 413, 436, 443, 444	
POLS 330, 332i, 334, 433a, 433b, 435	
Minor (or interdisciplinary study)	15-18
<i>Electives</i>	<u>17-20</u>
<i>Total</i>	120

POLITICAL SCIENCE MAJOR—PRE-LAW SPECIALIZATION

Political science majors preparing for law school must meet the basic requirements for the political science major including core courses, a minimum of 33 credit hours in political science, three 400 level courses, pre-law elective requirements, and completion of an existing minor, internship, or interdisciplinary program of study. In fulfilling these requirements political science majors preparing for law school will have the opportunity to take courses in subjects like administrative law, civil liberties, civil rights, constitutional law, court management, democratic theory, judicial process, legal process, policy analysis and the theory of law. The Pre-law advisor approves minors, internships, and interdisciplinary study.

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Requirements</i> (See Chapter 4)	11
<i>Requirements for Major in Political Science</i>	45-51
Core Requirements POLS 114, 200, and 300 or 330	9
Public Law Course Sequence POLS 330, 334, 433a, 433b	12
Political Science Electives (choose at least 1 from each group):	12
POLS 304a,b, 305, 306, 403, 405, 437,	
POLS 213, 314i, 319, 321, 322, 324, 420	
POLS 340, 413, 436, 443, 444	
POLS 170, 250, 278, 352i, 372i, 375, 477, 480	
Minor, Internship, or Interdisciplinary Study	12-18

Electives 17-20
Total 120

POLITICAL SCIENCE MAJOR—PUBLIC SERVICE SPECIALIZATION

Political science majors preparing for public service careers must meet the basic requirements for the political science major including core courses, a minimum of 33 credit hours in political science, three 400-level courses, public service elective requirements and completion of an existing minor, internship, or interdisciplinary program of study. In fulfilling these requirements, majors preparing for public service have the opportunity to study subjects like administrative law, intergovernmental relations, organizational politics, public policy analysis and public financial administration. (The departmental advisor approves Minors, internships, and interdisciplinary study).

University Core Curriculum Requirements 41
College of Liberal Arts Requirements (See Chapter 4) 11
Requirements for Major in Political Science 48-51
 Core Requirements POLS 114, 200, and 300 or 330 9
 Public Service Course Sequence POLS 340 and three of the following:
 413, 415, 443 and 444 12
 Political Science Electives (choose at least one from each group): 12
 POLS 300 304a,b, 305, 306, 405, 437
 POLS 213, 314i, 319, 321, 322, 324, 420, 444
 POLS 330, 332i, 334, 433a, 433b, 435, 436
 POLS 170, 250, 278, 352i, 372i, 375, 477, 480
 Minor, Internship, (or interdisciplinary study) 12-18
Electives 17-20
Total 120

Political Science Minor

A minor in political science consists of fifteen hours to be approved by the department adviser. At least nine of the required fifteen credit hours must be earned at Southern Illinois University Carbondale.

Individualized Learning Program (ILP)

Students registered on-campus at the University will not receive credit toward their major requirements for Political Science courses completed in ILP. Off-campus students not registered for courses on campus may enroll in a maximum of one Political Science course offered in ILP. Political Science majors may not take 400 level ILP courses for major credit.

Research and Teaching

The faculty in the department come from major academic institutions from around the country. Faculty teaching and research have received national and university wide recognition. Full-time faculty teaches virtually all political science courses. The department emphasizes small sections and a close student/faculty relationship.

Advisement

Students in political science have access to a special academic adviser in the department for personalized advisement. They also have access to the advisement services in the College of Liberal Arts. Each student consults with the departmental academic adviser and may also see a political science professor for more specialized counseling. Help is offered in course selection and registration, in long-range planning, and career information.

Awards

The department administers several endowed annual awards. Students may also qualify for membership in the national political science honor society. See the departmental Web page: <<http://www.siu.edu/departments/cola/polysci>> and departmental academic adviser for additional information on eligibility requirements.

Honors Program

Students interested in the Political Science honors program should discuss this option with the departmental academic advisor at the beginning of the junior year. Opportunities available for this program are described in detail in the Political Science Handbook available from the departmental academic advisor.

Courses (POLS)

114-3 Introduction to American Government and Politics. (University Core Curriculum) [IAI Course: S5 900] Examines the structure of American national government, the cultural context, and the operation of our political system. Focuses on Constitutional foundations of American government, how differences in race, gender and culture affect the political system, and the American attempt to deal with equality, liberty and order, conflict and cooperation.

130-3 Law in American Society. This is an introductory course recommended for students who want to consider possible careers in law. The following topics will be covered: the relation between law, justice, morality and religion; types and sources of law and legal rules; origin and development of common law; the role of lawyers, judges and juries; legal education in the United States. These topics will be explored through lectures, discussion groups and occasional guest speakers.

170-3 Global Politics. [IAI Course: S5 904N] Examines processes of integration and disintegration that challenge the centrality of the state in the global political system. Focus on how changes in economy, technology, ecology, demography, climate, norms and culture bear on prospects for world order.

200-3 Introduction to the Discipline: Scope. [IAI Course: S5 903] Examination of the philosophy, theories, approaches and relevant generalizations of the study of politics and of the scope and subfields of political science. Not open to seniors without instructor's consent. Satisfies the CoLA Writing-Across-the-Curriculum requirement with a grade of C or better.

207-3 Contemporary Political Ideologies. [IAI Course: S5 905] A survey of recent political ideologies: Nationalism, Socialism, Communism, Liberal Democracy, Conservatism, Christian Socialism, Fascism, Contemporary Liberation Movements.

213-3 State and Local Government. [IAI Course: S5 902] Structure, functions, and decision-making processes of subnational governments in the United States.

214-3 Illinois Government. The politics, structure, and function of state and local governments in Illinois with stress upon the historical development of the political culture, current issues and events in the light of the historical background, and the interrelationship of politics, structure, and policy. Prerequisite: 213 or sophomore standing.

215-3 Politics of Diversity in the United States. This course analyzes identity politics in the United States. Students will study American ethnic, racial, religious, cultural and gender relations and the policies available for their improvement. Topics include affirmative action, immigration policy, multiculturalism, assimilation, feminist politics, and church-state relations.

250-3 Introduction to Comparative Politics. An introduction to the range of developed and developing states with special attention to the importance of geographical, racial, ideological, ethnic and socioeconomic explanations of political institutions, processes and behavior in these states.

270-3 Introduction to International Relations. This course introduces students to the core concepts, issues and theories in the study of international relations. Specific topics include the debate between the realist and liberal paradigms, sources of inter-state conflict and cooperation, international political economy, the United Nations, politics of economic development, and human rights.

278-3 American Foreign Policy. (University Core Curriculum) This course surveys the conduct, goals and evolution of American foreign policy since World War II. It analyzes such issues as the role of institutions, culture and individuals in the formulation of American foreign policy, the interaction between domestic and foreign politics, and the debate over American grand strategy.

300-3 Introduction to the Discipline: Methods. An examination of the research methods and data analysis techniques used by political scientists in their analysis of political questions and problems. Prerequisite: 114, 200 recommended. Satisfies the CoLA Writing-Across-the-Curriculum requirement with grade of C or better.

304-6 (3,3) Political Thought I: Classical Political Theory. (a) The initial course in this sequence is a survey of the works of important political thinkers in the ancient world including Plato, Aristotle, and Cicero. (b) The second course in this sequence is a survey of the works of important political thinkers in the period extending from the 4th Century through the 15th Century. Included are the works of important political thinkers in the medieval world including Augustine, Maimonides, Averroes, and Thomas Aquinas.

305-3 Political Thought II: Modern Political Theory. This course is a survey of the works of important political thinkers in the period extending from the beginning of the 16th Century (the time of Machiavelli) to

the end of the 18th Century (the time of Kant). Included in this survey are the works of such thinkers as Machiavelli, Hobbes, Locke, Rousseau, Hume, Kant and Burke.

306-3 Political Thought III: Contemporary Political Theory. This course is a survey of the works of important political thinkers in the 19th and 20th Centuries. Included in this survey are the works of such thinkers as Hegel, Marx, Mill, Comte, Nietzsche, Strauss and Voegelin.

314I-3 American Politics and the Mass Media. (Same as Journalism 314i) Analysis of the role of the mass media in American politics. Emphasis will be on the way in which the media covers political actors and institutions, the effects of media on political attitudes and behavior, and the expanding role of new media, such as the Internet, in politics.

317-3 Public Opinion and Electoral Behavior. The nature and function of public opinion as it is related to electoral behavior. Additional sociological and psychological bases of voting behavior will be studied. Prerequisite: None; 200 recommended.

318-3 Political Campaigns and Elections. (Same as Speech Communication 358.) Analysis of modern political campaigns and the role they play in a democracy. Emphasis will be on recent developments in the planning and execution of campaigns by mass media and communication specialists and the role of the political parties and the public opinion polls in this process. Prerequisite: 114.

319-3 Political Parties. Nature, structure, and functions of political parties, with particular attention to the roles and activities of political parties in the United States. Attention also given to voting behavior and elections. Prerequisite: 114.

321-3 The Legislative Process. A comparative analysis of legislatures and legislative behavior. Emphasis is on the United States Congress. Prerequisite: 114.

322-3 American Chief Executive. The origin and background of the presidency and the governorship, qualifications, nomination and election, succession and removal, the organization of the executive branch, and the powers and functions of the president and governor. Prerequisite: 114.

324-3 Politics and Public Policy. The public policy-making process in the United States evaluated and a wide range of public policy programs analyzed. Prerequisite: 114.

325-3 Politics and Environmental Policy. An analysis of political aspects of the environment. Topics include conceptions of the environment in Western political thought; identification of environmental problems at the local, state, national and global levels; analysis of the various organized interests involved in formulating environmental policy; analysis of the response of local, state and national governments, including the response of the international community, to environmental problems and the activities of organized interests; and investigation of the various local, state, national and international policies that relate to the environment. Prerequisite: 114.

330-3 Introduction to the Legal Process. Designed to provide a basic background in the United States legal process for students who want only an overview of the process or who plan to take an extensive number of additional courses in the judicial area. The course will survey the history of common law, legal reasoning, basic terminology, conventional legal research, the legal profession, and provide an introduction to civil and criminal processes. Satisfies the CoLA Writing-Across-the-Curriculum requirement with a grade of C or better. Prerequisite: 114.

332I-3 Introduction to Civil Liberties and Civil Rights. (University Core Curriculum)(Same as Black American Studies 332i.) This course deals with civil liberties and civil rights in the United States and how the United States Supreme Court decides which rights and liberties get which protections, at which times. Specifically, our focus will be on the First Amendment, the Right to Privacy, Discrimination, and Voting Rights. Special emphasis will be placed on how the Supreme Court defines, establishes and protects these liberties through its interpretation of the Constitution.

334-3 Criminal Justice in Society and Court Management. Designed to provide the student with an in-depth look at the organization and management of federal, state, and local criminal courts. Focuses on the criminal process and the rights of defendants as they are processed by the system. Prerequisite: 114 recommended.

340-3 Introduction to Public Administration. An introduction to the study of public bureaucracy. Theoretical, political, and practical issues of organization, staffing, financing, and other matters are surveyed. United States administration and organizational behavior are stressed. Prerequisite: 114.

352I-3 Ethnicity, Nationalism and Culture. (University Core Curriculum) This course examines the causes, consequences and management of ethnic conflict and nationalism. Theoretical analysis will be combined with empirical case studies of ethnic and cultural competition, conflict and cooperation both within and between countries. Contributions from various scholarly disciplines will be incorporated into the examination of these issues. Additionally, moral dilemmas in the sphere of ethnicity and nationalism will be discussed.

372I-3 International Political Economy. (University Core Curriculum) Examines the interaction of politics and economics and of states and markets at the international level. Special attention to inequalities of wealth and power and to the politics of international trade, finance, investment, production, energy, transportation, information, technology and development.

373-3 International and Transnational Organizations. The growth and role of international organizations, with special attention to the political effects of military, economic and ecological interdependence. The United Nations, regional organizations, and non-governmental organizations. The effects of these organizations on international peace and justice. Prerequisite: 170 recommended.

375-3 War and Force in World Politics. An examination of the use of military power and force in modern world politics. Theoretical and empirical analysis of the causes and conduct of war, and investigation of the ways states, ethnic groups, and other actors develop, manage, and employ military power to further their interests. Topics include nuclear deterrence, arms control, weapons proliferation and terrorism.

390-1 to 3 Readings in Political Science. Specialized and advanced readings in areas not covered in other political science courses. Student must choose a faculty member to direct reading. Restricted Class Card, necessary for registration, must be signed by professor supervising readings and the student's political science advisor who files proper form with the director of undergraduate studies in the department. Fifteen hundred pages of reading per credit hour, or equivalent, is recommended. Students will be expected to have a 3.0 Political Science grade point average, a minimum of 21 hours already earned in the major or completed the introductory course and six additional hours in the subfield of the proposal readings. Prerequisite: authorization card signed by instructor and director of undergraduate studies prior to registration.

395-1 to 12 Internship in Public Affairs. Supervised field work in the office of a governmental agency, political party, interest group, legal agency, or other public affairs-oriented organization. A faculty-supervised paper is required in which the student relates the academic and internship experiences. Students must choose a faculty member to direct internship and obtain consent prior to registration. Name of faculty member must be filed with undergraduate adviser of the department at registration. Political Science 395 is open only to students who are confirmed Political Science majors or minors. Students must have taken at least two courses in the department with a minimum grade point average of 2.5 in these courses. No more than six hours of POLS 395 may be counted toward a departmental major. A written description identifying the specific organization, the projected tasks, and responsibilities of the intern should be prepared prior to meeting with the faculty sponsor. Prerequisite: authorization card signed by instructor and director of undergraduate studies prior to registration.

403-3 Philosophy of Politics. (See Philosophy 441.)

405-3 Democratic Theory. An examination of various species and aspects of democratic thought, including the liberal tradition and its impact upon the United States. Prerequisite: 114 or consent of instructor.

408-3 Formal Political Theory. This course is an introductory survey of formal modeling techniques that have been important in Political Science during the latter half of the 20th Century. Included in this survey are such topics and approaches as Game Theory, Social and Public Choice Theory, Voting Theory, Spatial Modeling, Prisoners' Dilemma, Impossibility Theorems, Vote Trading, and Public Goods.

413-3 Contemporary Intergovernmental Relations. An examination of relationships among national, state, and local governments in the American federal system, with emphasis on recent literature and contemporary issues. Special attention is given to fiscal relations, and specific intergovernmental programs in areas such as housing and environmental quality are examined. Prerequisite: 114.

414-3 Political Systems of the American States. The state level of government viewed with emphasis upon recent developments and current research. Prerequisite: 114.

415-3 Urban Politics. An examination of the environment, institutions, processes, and functions of government in an urban society with particular emphasis on current problems of social control and the provision of services in the cities of the U.S. Prerequisite: 114.

416-3 Senior Seminar in Politics. Seminar for advanced undergraduate Political Science students to examine in depth a wide variety of topics; to be taught by different instructors. Available for use as the honors seminar. Graduate students not admitted. Not for graduate credit. Prerequisite: restricted to political science majors and departmental approval required.

418-3 Political Communication. (See Speech Communication 451.) A critical review of theory and research, which relate to the influence of communication variables on political values, attitudes, and behavior. Prerequisite: 358 or consent of instructor.

419-3 Political Sociology. (Same as Sociology 475.) An examination of the social bases of power and politics, including attention to global and societal political relations, as well as individual-level political beliefs and commitments; primary focus on American politics.

420-3 Interest Group Politics. An examination of the structure, mobilization and impact of interest groups on American political life. The course objectives are to study various normative critiques of American pluralism and examine the political influence of contemporary interest groups, such as labor, racial and women's organizations. Prerequisite: 114.

433-6 (3,3) Constitutional Law. (a) This, the initial course in a two-course sequence, is concerned with the basic structure and power relationships in the American constitutional system. Topics include judicial review, judicial restraint, separation of powers, the federal system, national powers, state powers, the contract clause, and substantive due process. Prerequisite: 114. Political Science 330 recommended. (b) This, the second course in the constitutional law sequence concentrates on those provisions of the U.S. Constitution which protect individual rights and liberties against government encroachment. Prerequisite: 114, 330 recommended.

435-3 Judicial Process and Behavior. An examination of the process by which judges in both trial and appellate courts at federal and state levels are selected and of the ways in which they make decisions. Attention to the structure of the courts. Study of the communication and impact of judicial decisions. The course will provide some insight into the methods used to study judicial behavior.

436-3 Administrative Law. The procedural law of public agencies, particularly the regulatory commissions but also executive branch agencies exercising regulatory functions. The exercise of discretion and its control through internal mechanisms and judicial review. Prerequisite: 340 or 114 recommended.

437-3 Jurisprudence (Theories of Law). Major schools in legal thinking. Positive law and natural law. Idea of justice and concept of natural rights.

443-3 Fiscal Aspects of Public Administration. An examination of governmental budgeting and related financial institutions and processes. All levels of government are considered and attention is given to both revenues and expenditures. Topics include budget preparation, taxation, financial management and the respective fiscal roles and practices of the chief executive, legislature and administrative agencies. Not for graduate credit. Prerequisite: 114; 340 recommended.

444-3 Policy Analysis. An examination of basic concepts in the policy sciences, approaches to policy analysis, applications to selected areas of policy, and instruments of policy development.

445-4 Administration of Environmental Quality and Natural Resources. (Same as Geography 426.) An examination of institutional arrangement and administrative practices in the protection and use of land, water, air, and mineral resources. The course includes analysis of responsibility and decision-making at all levels of government (federal, state, and local) as well as corporate, interest group, and individual responses to public programs. Particular attention will be given to administration of federal environmental quality legislation including the National Environmental Policy Act, the Clean Air Act, the Water Pollution Control Act, and the Surface Mining Reclamation Act.

446-3 Museum Administration. A comprehensive introduction to museum administration and management, including fiscal and budget oversight; an understanding of museum ethics; acquisition, conservation, and exhibition planning; personnel matters; and museum research. Museum practicum and research stressed.

456-3 Gender and Global Politics. An advanced course examining gender systems and women's situations across cultures and countries. This course also studies the impact globalization has had on gender issues by looking at women's activism at international and transnational levels. Topics covered include women's political representation, gender and culture, women's social movements, gender and development, and gendered policy issues.

458-3 Contemporary Europe. Comparative study of contemporary political systems and policy issues. Emphasis on selected countries and common problems facing governments. Topics covered include the European community, security institutions, economic, social and other public policies, and study of various governing processes.

459-3 Government and Politics of Russia. Transitions from communism in the former Soviet Union. Prerequisite: 250 recommended.

461-3 Governments and Politics of Southeast Asia. Politics and governments of Burma, Thailand, Malaysia, Vietnam, Cambodia, Laos, Singapore, Indonesia, and the Philippines. Prerequisite: 250 recommended.

466-3 Government and Politics of Latin America. An in-depth analysis of specific problem areas in Latin American political processes as well as comparative study of selected Latin American nation-states. Prerequisite: 250 recommended.

467-3 Government and Politics of the Middle East and North Africa. This course is designed to examine the regional politics and security of the Middle East and North Africa in a historical and comparative context. This course discusses the historical evolution of the modern states in the region, the dynamics of inter-Arab and Arab-Israeli politics and security, the role of ethnicity and religion in domestic and regional politics, and great powers' penetration of the region.

468-3 Comparative Civil-Military Politics. A comparative study of the growth of the relationship of the armed forces with the civilian sector of the body politic, the selection, training, and professionalism of the officer corps, the control of the armed forces by the executive and legislature, the growth of strategic doctrine, insurgency and counter-insurgency warfare, and the analysis of the role of the armed forces as a governing group in a large number of non-western states. Prerequisite: 250 recommended.

475-6 (3,3) International Law. (a) Rules and practices governing the nations in their relations in peace and war. Prerequisite: 270 recommended. (b) Investigation of special problems in international law. Prerequisite: 270 recommended.

476-3 Religion and Politics. (Same as Sociology 476) Examines the connection between religious beliefs and institutions and political beliefs and institutions. Comparative studies will focus on religious political movements in the United States and throughout the world.

477-3 The Making of American Foreign Policy. An advanced course dealing with the formulation and administration of American foreign policy. Prerequisite: 278 for undergraduates.

480-3 International Politics. Definition and analysis of the concepts of spheres of hegemony, alliances, regionalism, integration, interdependence, and an evaluation of their application to contemporary international politics. The course will stress the need for the continuing evaluation of the vague role of national power and influence within the framework of a changing world environment.

494-1 to 3, 1 to 3 Honors Research. (a) Directed research for senior honors students. Political science honors students may register for these credits if they have met all the prerequisites described in the political science Handbook. A three-person faculty committee will administer an oral examination upon completion of senior thesis. Not for graduate credit. (b) Available to students who have completed all prerequisites of the University Honors Program and receive approval of their project from a Political Science instructor. Not for graduate credit.

Political Science Faculty

Arfi, Badredine, Assistant Professor, Ph.D., University of Illinois, 1996.

Baker, John H., Associate Professor, *Emeritus*, Ph.D., Princeton University, 1961.

Barabas, Jason, Assistant Professor, Ph.D., Northwestern University, 2000.

Bhattacharyya, Jnanabrota, Associate Professor, *Emeritus*, Ph.D., University of Delhi, 1969.

Brown, Barbara L., Lecturer, Ph.D., Southern Illinois University, 1985.

Chou, Ikua, Professor, *Emeritus*, Ph.D., Fletcher School of Law and Diplomacy, 1949.

Clinton, Robert L., Professor and *Chair*, Ph.D., University of Texas at Austin, 1985.

Comparato, Scott A., Assistant Professor, Ph.D., Washington University, 2000.

Dale, Richard, Associate Professor, *Emeritus*, Ph.D., Princeton University, 1962.

Desai, Uday, Professor, Ph.D., University of Pittsburgh, 1973.

Ervin, Osbin L., Associate Professor, *Emeritus*, Ph.D., University of Tennessee, 1974.

Foster, John L., Associate Professor, Ph.D., University of Minnesota, 1971.

Garner, William R., Associate Professor, *Emeritus*, Ph.D., Tulane University, 1963.

Grant, J. Tobin, Assistant Professor, Ph.D., The Ohio State University, 2001.

Hamman, John A., Associate Professor, Ph.D., University of Illinois, 1988.

Jackson, John S., III, Professor, *Emeritus*, Ph.D., Vanderbilt University, 1971.

Jerit, Jennifer, Assistant Professor, Ph.D., University of Illinois, 2002.

Kamarasy, Egon K., Assistant Professor, *Emeritus*, Doctor Politics, Budapest University, Hungary, 1942.

Kenney, David, Professor, *Emeritus*, Ph.D., University of Illinois, 1952.

Klingberg, Frank L., Professor, *Emeritus*, Ph.D., University of Chicago, 1938.

Landecker, Manfred, Associate Professor, *Emeritus*, Ph.D., Johns Hopkins University, 1965.

Mason, Ronald M., Associate Professor, *Emeritus*, Ph.D., University of Iowa, 1976.

McClurg, Scott, Assistant Professor, Ph.D., Washington University, 2000.

Melone, Albert, Professor, Ph.D., University of Iowa, 1972.

Miller, Roy E., Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1971.

Nelson, Kimberly L., Assistant Professor, Ph.D., North Carolina State University, 2004.

Schatz, Edward, Assistant Professor, Ph.D., University of Wisconsin-Madison, 2000.

Schubert, Glendon, Research Professor, *Emeritus*, Ph.D., Syracuse University, 1948.

Shulman, Stephen, Associate Professor and Director of Undergraduate Studies, Professor, Ph.D., University of Michigan, 1996.

Snively, Keith, Professor and Director of MPA Program, Ph.D., University of California at Davis, 1984.

Somit, Albert, Distinguished Service Professor, *Emeritus*, Ph.D., University of Chicago, 1947.

Turley, William S., Professor and Director of Graduate Studies, Ph.D., University of Washington, 1972.

Pre-Physician Assistant (Preprofessional Program)

Pre-Physician Assistant Suggested Curricular Guide⁸

FIRST YEAR	FALL	SPRING
CHEM 200, 201 ²	-	4
ENGL 101, 102	3	3
MATH 108, ZOOL 118 ³	3	4
PHSL 201 ⁴ , PSYC 102	3	3
Select ^{1,5,6}	6	3
Total	15	17
THIRD YEAR	FALL	SPRING
CHEM 350	-	3-4
Select ¹	3	3
Major Courses ⁷	10	7-8
Total	13	14

SECOND YEAR	FALL	SPRING
CHEM 210, 211, AHC 105	4	2
CHEM 340, 341	-	5
MICR 201 or 301, PHSL 301 ..	4	4
SPCM 101, SOC 108	3	3
Select ¹	6	3
Total	17	17
FOURTH YEAR	FALL	SPRING
Major Courses	14	13
Total	14	13

¹ See "University Core Curriculum"

² Chemistry 140a,b is acceptable instead of Chemistry 200, 201, 210, 211 for the Physician Assistant program at Southern Illinois University Carbondale

³ Fulfills a University Core science requirement

⁴ Fulfills a University Core health requirement

⁵ Saint Louis University requires a course in history

⁶ Midwestern University requires 22 hours of general education electives

⁷ Students who decide to remain at SIUC for a Bachelor's degree in the College of Science must consult an academic advisor and plan a curriculum leading to a degree in an approved program. The pre-physician assistant program does not guarantee admission into a professional school

⁸ Students wishing to apply to the Physician Assistant Program at SIUC, should contact the academic advisor for the Physician Assistant Program in the College of Applied Sciences and Arts.

Professional Education Experiences

(Teacher Education Program)

Student Teaching

Student teaching constitutes a total professional commitment on the part of the student and is a full semester of experience in the field carrying 12 hours of credit. Enrolling in coursework during student teaching is strongly discouraged. Special permission must be obtained from the assistant director of Professional

Education Experiences before any additional coursework can be taken during student teaching.

The student teacher must follow the same daily schedule as the cooperating teacher with whom the student is placed. This means that the student teacher remains in the school for the entire day, as well as participating in whatever extracurricular activities might be the responsibility of the cooperating teacher.

Students majoring in elementary education will be assigned to work with a cooperating teacher in one of the elementary grades, one through six, in an affiliated school. Students majoring in early childhood will be assigned to work with a cooperating teacher in a preschool/kindergarten and/or primary grade, one through three, in an affiliated school. Students are expected to teach all subject areas taught within the specific major.

The student who majors in a secondary school subject field which has an approved program in the teacher education program will be assigned to work with a cooperating teacher in a secondary school, grades seven through twelve, whose teaching assignment is consistent with the student's teaching major.

Special education majors will be assigned to work with a cooperating teacher in a cross-categorical area in order to receive LBS I certification. Special education majors will be assigned at both the elementary and secondary levels in order to meet certification requirements. Similar grade level assignments will be made for art, music, and physical education majors. Students majoring in communication disorders and sciences will be assigned to a cooperating teacher who is a speech clinician in an affiliated school.

Students wishing to enroll in the professional semester during the fall or spring semester of the academic year must file an application with the College of Education and Human Services Student Services, Wham Building, Room 135, at least one semester in advance of the semester during which they wish an assignment. Student teaching credit during the summer session is restricted to those individuals who hold a provisional teaching certificate or who are enrolled in the Early Childhood Preschool /Primary Specialization. Participation in this program also is dependent upon the availability of suitable placements in the summer school programs of participating public schools.

Applications for both regular academic year and special summer participation are available in the College of Education and Human Services Student Services, Wham Building, Room 135.

The student must register for the professional semester following normal registration procedures. Registration will include the following course: Education 401, 12 hours. Students will register for the section of this course designated for their majors. Registration during the summer session is by restricted class card for Education 402, 5-8 hours.

PLACEMENT OF STUDENT TEACHERS

Student teaching under the supervision of Southern Illinois University Carbondale faculty is conducted in professional education centers with affiliated schools located in southern Illinois as well as specific locations in Belleville and suburban Chicago. A current listing of specific schools to which student teachers may be assigned is available in the College of Education and Human Services Student Services. Students are not generally assigned to their hometown.

In so far as numerical limits will permit, students will be assigned to the location of their choice. However, if the limits have been met, students are advised that they may be assigned to any of the centers, which can suitably accommodate them.

Students are advised to make no binding housing commitments during the professional semester until they have received verification of their student teaching assignments. Such housing commitments will not be considered when students

are assigned. SIUC is not responsible for students' transportation to their student teaching site.

PROFESSIONAL SEMESTER (STUDENT TEACHING) PREREQUISITES

1. Students must have achieved formal acceptance into the teacher education program and must present their records of acceptance when applying for the professional semester.

2. The student is responsible for having all transcripts of credit earned at colleges or universities other than Southern Illinois University Carbondale on file with the coordinator in the College of Education and Human Services Student Services. These must be on file by the tenth day of the semester for which the student is applying.

3. Prior to the professional semester, the student must have completed a minimum of 20 semester hours in the subject area to be taught. The course work involved must meet the approval of the department chair of that major department. (Course work and performance required may be obtained from the department concerned.) An up-to-date list of approved majors in the teacher education program may be found in the booklet, *The Teacher Education Program*, or requested from the College of Education and Human Services Student Services.

4. The student must have completed all pre-student teaching field experiences.

5. The student must have completed 75 semester hours of credit with a minimum cumulative average of 2.75 in the major before beginning work in student teaching.

6. Each of those courses, which are a part of the professional education sequence prior to the professional semester, must have been completed with a grade of C or better. (See Teacher Education Program.)

7. The student must have completed the special methods class required for the major prior to the professional semester.

8. The student must pass their respective Illinois content test before being permitted to student teach.

9. Every student teacher must have a health clearance from the University Student Health Program. The health clearance consists of a tuberculin test. If it is not convenient to come to the health service in Carbondale, students may have a tuberculin test by their own medical doctors. A record of the health clearance must be on file in the College of Education and Human Services Student Services by the tenth day of the semester immediately preceding the student's professional semester.

10. The student must have established at least one semester of residence at Southern Illinois University Carbondale earning a minimum of 12 semester hours of credit, prior to any professional semester assignment.

Field Experiences Other Than the Professional Semester

Other field experiences for students in the teacher education program are provided in Education 310 and Education 316. Applications for these courses are available in the College of Education and Human Services Student Services.

Student Services Faculty

Aud, Susan, Clinical Instructor, Ph.D., Southern Illinois University 1994.

Burris, Deborah, Clinical Instructor, Ph.D., Southern Illinois University, 1988.

Buser, Margaret, Assistant Professor, *Emerita*, M.S. Ed., Indiana University, 1966.

Cox, Jackie, Clinical Instructor, Ph.D., Southern Illinois University, 2000.

Gilley, George, Clinical Instructor, Ph.D., The Ohio State University, 1978.

Johnson-Jones, Debra, Clinical Instructor, M.S., Southern Illinois University, 1979.

Messersmith, Gary, Clinical Instructor, M.S., Southern Illinois University, 1973.

Moore, Eryn E., Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1976.

Napier, Arvin, Clinical Instructor, Ph.D., Southern Illinois University, 1997.

Norris, William R., Associate Professor, *Emeritus*, Ed.D., Indiana University, 1973.

Overturf, Dennis, Clinical Instructor, Ph.D., Southern Illinois University, 2001.

Turner, Doris Sewell, Lecturer, Emerita, M.S. Ed., Southern Illinois University, 1949.

Wetzel, Ann, Clinical Instructor, M.S., Eastern Illinois University, 1984.

Willhite, K. T., Clinical Instructor, Ph.D., Kansas State University, 1995.

Psychology (Department, Major, Minor, Courses, Faculty)

The undergraduate program in psychology provides a broad general education in the tradition of the liberal arts. This tradition focuses on the development of wide-ranging interests in the arts, humanities, and social sciences, and on the development of critical and analytical thinking. A student who has earned a degree in one of the liberal arts, such as psychology, should be prepared to pursue lifelong learning and personal enrichment, as well as enter the work force or pursue advanced studies.

Graduates of the psychology program who have entered the work force immediately have found employment in a wide variety of settings, ranging from sales and personnel work in the business sector, to positions with the human service agencies of local, state, and federal governments. Graduates who have gone on to advanced study have successfully prepared themselves for professional careers in such fields as business, law, medicine, and psychology.

Students planning to apply to medical schools or law after completing a major in psychology should plan their programs of study in close consultation with the pre-medical or pre-law advisers on campus. Students planning to apply for admission to graduate study in psychology should plan their undergraduate program of study very carefully in consultation with advisers in the Department of Psychology. At least two years, and as many as six years, of graduate study are required for qualification as a professional psychologist.

Students who enter the University with a major in psychology should meet with the director of undergraduate studies in the Department of Psychology as soon as possible after arrival at the University in order to discuss their interests and plans of study. Students already at the University who wish to change to a major in psychology should contact the office of the director of undergraduate studies in the Department of Psychology in order to initiate the request for a change of major.

Bachelor of Arts Degree in Psychology, College of Liberal Arts

University Core Curriculum Requirements	41
College of Liberal Arts Academic Requirements (See Chapter 4)	14
Requirements for Major in Psychology	37-40
Psychology 102 (must be passed with a grade of C or better)	(3)
Mathematics 108, 111, 113 or 139 (choose one)	(3)+ 0-2
Psychology 211, 311 (must be passed with a grade of C or better, completion of 211 before senior year recommended)	8
Psychology Electives	29-30
Ten courses from the list below. At least six must be from Groups A, B, and C, with at least one course from each of these three groups. A minimum of three courses must be chosen at the 400-level from among the total offerings in the A, B, and C Groups.	
Group A: 233, 301, 303, 304, 305, 307, 331, 333, 334, 431, 432, 440, 451, 461, 464, 470	
Group B: 302, 308, 309, 310, 312, 407, 409, 415, 416, 419, 445, 471	
Group C: 223, 322, 323, 340, 411, 413, 420, 421, 441, 465	
Group D: 222, 314, 389, 391, 392, 393, 394, 489, 499, Educational Psychology 402, Mathematics 282	
Of all credits that a student completes for Psychology 391, 392, 393, and 394, a maximum of three hours from any or all of these courses may count towards the major.	

<i>Electives</i>	25-34
<i>Total</i>	120

¹Courses in parenthesis will also count towards the 41 hours of University Core Curriculum requirements.

Psychology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
Core Curriculum	15	12	Core Curriculum.....	6	5
PSYC 102.....	-	3 ¹	MATH 108 or 139, PSYC 211 ..	3	4
			PSYC Electives	3	3
			Elective.....	3	3
<i>Total</i>	15	15	<i>Total</i>	15	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
PSYC 311.....	4	-	PSYC 400-Level.....	6	3
PSYC Electives.....	6	3	PSYC Electives	3	3
Electives.....	5	12	Electives.....	6	9
<i>Total</i>	15	15	<i>Total</i>	15	15

¹ Satisfies Core Curriculum Social Science requirement.

Psychology Minor

A minor in psychology requires the successful completion of at least 15 semester hours (5 courses) in courses offered by the Department of Psychology and acceptable to the department for fulfillment of major requirements. Psychology 393 may not be included. A maximum of three hours from any or all Psychology 391, 392 and 394 may count towards the minor. Courses in other departments, such as the Department of Educational Psychology, do not fulfill minor requirements. An average gpa of at least 2.0 in psychology courses must be successfully completed. Students completing a minor in psychology for purposes of qualifying to teach psychology in the State of Illinois must complete a minimum of 20 semester hours in psychology.

A student wishing to complete a minor in psychology must apply to the Department of Psychology for approval of the program of study for the minor. Without this approval the minor will not be officially listed on the student's transcript at the time of graduation. Application forms are available in the office of the director of undergraduate studies in psychology.

Courses taken at other institutions may count towards the minor only if those courses are acceptable for transfer credit in psychology. If credit is not accepted for transfer, a revised application for the minor must be approved.

Transfer Credit

Credit for a course in psychology successfully completed at another accredited institution will be transferred to meet major or minor requirements in psychology at SIUC, subject to the following conditions:

1. The course number must bear a departmental prefix clearly indicating the course is a psychology course. Examples are *PSYCH* and *PSYC*.
2. The course must have covered substantially the same content material as a course currently offered at SIUC to meet major requirements.
3. Credit for a course completed at a community or junior college is not transferable if the corresponding course at SIUC is offered at the 400-level.
4. A grade point average of 2.0 or higher must have been earned in the course.
5. No more than five transfer courses can count for the major, and no more than two transfer courses can count toward a minor.
6. All transfers of credit to meet major or minor requirements in psychology must be explicitly approved by the department of psychology.

Courses from other institutions that do not meet these conditions may still be acceptable for elective credit to meet general university requirements. Students should consult their departmental or college adviser about such courses.

Senior Honors Program

A small number of students are selected each year for the honors program. Selection criteria are promising academic performance (3.0 overall grade point average and 3.25 psychology grade point average minimum), expressed interest, recommendation by departmental adviser, and capacity of program to take new students. Emphasis is on small seminar and individual research work by the student.

Courses (PSYC)

102-3 Introduction to Psychology. (University Core Curriculum) [IAI Course: S6 900] An examination of the variables related to the origins and modifications of human behavior using the viewpoints and techniques of contemporary psychology. Purchase of syllabus from local vendor required.

211-4 Research Methods and Statistics. An introduction to the use of scientific methods in the study of behavior. Considerations of experimental design and methodology are integrated with the treatment of data analysis, interpretation of results and writing of a research report. Students will write a research proposal, conduct an experiment, and write a report of the experiment. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Lecture and laboratory. Prerequisite: 102.

222-3 Effects of Recreational Drugs on Mind and Body. Describes the physiological and psychological effects of substances used as recreational drugs for their psychoactive effects. Drugs discussed will include alcohol, amphetamines, cocaine and other stimulants, the barbiturates, methaqualone, the psychedelics, marijuana, tranquilizers, and the opiates. The purpose of the course is to provide the student with facts concerning the effects of these drugs and the potential for their abuse and physiological and psychological dependence.

223-3 Diversity in the Workplace. (University Core Curriculum) Examination of factors affecting the full utilization of women, racial/ethnic minorities, older workers, disabled workers and workers with nontraditional sexual orientations in the workplace. Individual processes, such as group identities, stereotyping, prejudice; group processes such as intergroup conflict; and organizational processes such as structural barriers and informal integration will be studied. The class utilizes a lecture and small discussion-section format with in-class, team, and individual exercises and projects.

233-3 Psychology of Gender in Diverse Context. (University Core Curriculum) The course will examine how gender affects all aspects of our lives at the individual, societal and cultural levels. It will cover psychological theories and topics related to gender, and will examine issues of diversity, such as race/ethnicity, class, sexuality, disability and age as they interact with gender.

301-3 Child Psychology. The biological and psychological development of the child from birth through puberty, and relevant research methods and results. Prerequisite: 102.

302-3 Introduction to Neuroscience. A survey of the role of biological processes in the behavior of humans and other species. Topics include structure and function of the nervous system, behavioral endocrinology, psychopharmacology, sensorimotor functions, sleep and waking, motivation and emotion, reinforcement, psychopathology, and learning and memory.

303-3 Adolescence and Young Adulthood. Examines interrelated psychological, biological and social aspects of development during adolescence and young adulthood based on a life-span perspective of development. Prerequisite: 102.

304-3 Adulthood and Aging. Examines the interrelated psychological, biological, and social aspects of development during middle and later adulthood based on a life-span perspective of development. Neuropsychological changes associated with normal and pathological aging will be considered. Prerequisite: 102.

305-3 Psychology of Personality. The inferred patterns underlying an individual's unique reactions to the environment. Investigates the motivation, development, and methods of changing these patterns, and how personality processes are studied. Prerequisite: 102.

306-3 Positive Psychology and Human Strengths. An introduction to a contemporary movement seeking to understand the nature of human strengths, characteristics, resources, and aspirations. Surveys this emerging discipline, emphasizing theory and practical applications promoting human potential. Topics include happiness, creativity, confidence, wisdom, and intelligence among other aspects of optimal human functioning. Prerequisite: 102.

307-3 Social Psychology. Surveys contemporary issues such as love and friendship, shyness and loneliness, sexual attitudes and behavior, management of impressions made on others, attitude change and persuasion, leadership, group processes, aggression, and helping behavior. Prerequisite: 102.

308-3 Psychology of Motivation. Examines variables affecting motivation in animals and humans. Topics include motivation based on cultural processes as well as those based on biological needs. Prerequisite: 102.

309-3 Psychology of Learning. Principles and laws of learning as derived from the classical and instrumental learning literature — acquisition, extinction, punishment, persistence, generalization, discrimination, motivation, drives, and incentives. Prerequisite: 102.

310-3 Cognitive Psychology. A survey of theory and research on attention, memory, language behavior, and problem solving. The principal orientation will be the information processing approach to the study of behavior. Prerequisite: 102.

311-4 Field Research Methods in Psychology. An introduction to field and other quasi-experimental methods appropriate for use in settings in which the researcher can exercise minimal control and manipula-

tion. Included are designs and analytical methods for exploring cause-effect relationships in naturalistic settings. Lecture and laboratory. Prerequisite: 211 or consent of instructor.

312-3 Sensation and Perception. Surveys the structure and function of the sensory organs as well as the perceptual experiences associated with these systems (e.g., color perception, speech perception). Examines physical, neural, and chemical mechanisms responsible for sensory and perceptual experience. Prerequisite: 102.

314-3 The Brain and Emotion. Great advances have been made in understanding how the brain works in areas such as visual processing and memory. Recently, brain researches have begun to turn their attention towards understanding emotions, given the importance of emotions to human functioning. This course examines the relationship between the brain and emotions. Prerequisite: 102.

322-3 Personnel Psychology. (Same as Management 385) Examines the methods of psychology used in the selection, placement, and evaluation of employees. Government regulations requiring equal opportunity, psychological measurement concepts, and employee performance evaluation in the work environment are covered. Prerequisite: 102.

323-3 Psychology of Employee Relations. Applied human relations at work focusing on interpersonal and small-group behavior. Covers effective communication, employee morale, motivation, behavior modification, leadership and group dynamics, human relations and the law, and stress and coping. Prerequisite: 102.

331-3 Abnormal Psychology. An introduction to the major forms of psychopathology (e.g., depression, schizophrenia, anxiety disorders). Topics include the symptomatology of different mental disorders, their etiology from psychological, biological, and sociocultural perspectives, and issues pertaining to diagnosis and treatment. Prerequisite: 102.

333-3 Psychology of Women. (Same as Women's Studies 341.) An examination of empirical evidence on the biological, psychological, and social functioning of women, describing women's roles, the genetic versus social determinants of women's behavior, and the implications for women's potential. Prerequisite: 102 or consent of instructor.

334-4 Psychology of African American Experience. (Same as Black American Studies 334.) Course examines psychological characteristics of people of African descent, using an Africentric conceptual model. Theoretical models will be critiqued and empirical data will be examined. Selected issues include: critiques of research methodologies involving African descended population; African American identities and personality development, psychopathology, and cognitive development issues (i.e., language). Prerequisite: consent of instructor.

340-3 Introduction to Clinical and Counseling Psychology. Provides an in-depth understanding of the nature of two major specialties in the field of psychology: clinical and counseling psychology. Students will examine the historical origins of the two areas, study their major theoretical definitions, compare and contrast the areas, and sample empirical and practitioner activities unique to them. Prerequisite: 102.

389-1 to 9 Seminar: Selected Topics. Varied content. Offered as need exists and as faculty interests and time permit. May be repeated as topics vary. Prerequisite: consent of instructor.

391-1 to 9 Individual Project. Individual study, research or experience under the supervision of a member of the Department of Psychology faculty. Of all credits that a student completes for PSYC 391, 392, 393, and 394, a maximum of three hours from any or all of these courses may count towards the major. Mandatory Pass/Fail. Prerequisite: consent of instructor.

392-1 to 9 Individual Project. Individual study, research or experience under the supervision of a member of the Department of Psychology faculty. For use in those cases where the faculty member deems a graded course to be appropriate. Of all credits that a student completes for PSYC 391, 392, 393, and 394, a maximum of three hours from any or all of these courses may count towards the major. Prerequisite: consent of instructor.

393-1 to 9 Preprofessional Practicum. Directed experience in human services or other activities relevant to psychology at a public or private institution, agency, or organization. The experience is on a volunteer basis. Enrollment must be approved in advance by the director of undergraduate field placements for the Department of Psychology. Mandatory Pass/Fail. Prerequisite: consent of instructor.

394-1 to 9 Undergraduate Practicum in the College Teaching of Psychology. Supervised practicum in the college teaching of psychology for selected senior psychology majors. Of all credits that a student completes for Psychology 391, 392, 393, and 394, a maximum of three hours from any or all of these courses may count towards the major. Prerequisite: senior psychology major and permission of instructor.

407-3 Theoretical Issues in Learning. An introduction to the major theoretical issues in learning and their importance. A brief review of the history of such problems will be followed by a summary of the current research concerning these issues. Traditional figures in learning theory will be considered within the context of their positions on specific questions. Prerequisite: 211 and 309 or equivalent or graduate status.

409-3 History and Systems of Psychology. A review of the conceptual and empirical antecedents of modern psychology. Prerequisite: 211 and senior status, or graduate status.

411-3 Applied Learning. An in-depth coverage of practical problems concerned with training to which the principles of learning derived from pure laboratory investigations can be applied. Prerequisite: 211 and 309, or graduate status.

413-3 Individual Differences. Reviews the reliable and theoretically significant individual and group differences that have been revealed by research in the behavioral sciences. Examines differences in general intelligence, specific verbal and spatial abilities, stylistic and personality characteristics, as well as such group differences as sex, race, and socioeconomic status. Prerequisite: 211 and 305 or graduate status.

415-4 Psychopharmacology. A survey of the effects of drugs on the normal and abnormal behavior of humans and animals. A primary focus is upon understanding drug influences on behavior in relation to actions on the nervous and endocrine systems. Prerequisite: 211 and 302, or graduate status.

416-3 Recovery of Function Following Brain Damage. A survey of experimental animal and human clinical research as they relate to behavioral recovery following damage in the central nervous system. Recent theories and literature are stressed. Prerequisite: 211 and 302 or consent of instructor, or graduate status.

419-3 Behavioral Genetics. Provides an overview of the experimental and quantitative methods used in studying behavioral differences associated with genetic variables. Elementary aspects of genetics will be included in the course, which will examine several aspects of both human and nonhuman behavior. Prerequisite: 211 or consent of instructor, or graduate status.

420-3 Industrial/Organizational Psychology. Topics in industrial and organizational psychology; applications of psychology to human resource management, such as job analysis performance appraisal systems, personnel selection and training. Prerequisite: 211.

421-3 Psychological Tests and Measurements. Introduction to test theory and test development. Detailed coverage of selected tests from such areas as intelligence, aptitude and personality. Prerequisite: 211 or graduate status.

431-3 Advanced Psychopathology. An advanced presentation of theoretical and empirical issues in contemporary psychopathology research. Explores the role empirical research plays in understanding the features of major psychological disorders and their treatment. Provides a broad understanding of the many factors that contribute to the development and maintenance of abnormal behaviors. Prerequisite: 211, 331 or consent of instructor or graduate status.

432-3 Psychopathology of Childhood. An extensive review and systematic evaluation of theories and research pertaining to the behavior disorders of childhood. Emphasis will be upon empirical data and the implications of these data for the classification and treatment of these disorders. Prerequisite: 211, 301, 311 or graduate status.

440-3 Advanced Personality. Advanced presentation of theoretical and research issues related to current issues in personality psychology. The overarching focus of the course is presentation and discussion of a scientific approach to understanding what personality is, how it can be measured, how it develops and how it relates to various aspects of individual functioning. Prerequisite: 211 or consent of instructor.

441-3 Helping Skills in Clinical and Counseling Psychology. Provides systematic training in helping skills for students considering clinical or counseling psychology as a career. Students learn to identify and demonstrate such skills as paraphrasing, reflection of feeling, interpretation, and confrontation, and will use them in practice situations. Prerequisite: 211 and 340 and senior standing in psychology major.

445-3 Psycholinguistics. (Same as Linguistics 445.) A broad spectrum introduction to psycholinguistics. Topics to be covered include general methodology for the study of psycholinguistics, the nature of language, theories of human communication, language comprehension and production, first and second language acquisition, meaning and thought, natural animal communication systems and language of the brain. Prerequisite: 211.

451-3 Advanced Child Psychology. An assessment of concepts, methods, and research techniques within selected topic areas of developmental psychology. This course satisfies the CoLA Writing-Across-the-Curriculum requirement. Prerequisite: 211 and 301, consent of instructor or graduate status.

461-3 Advanced Social Psychology. Critical examination of contemporary theories and research in social psychology. Practice in application of scientific findings to real-life problems of individuals and groups. Issues treated in depth are chosen for relevance to student's personal needs and career interests. Prerequisite: 211 and 307 or graduate status.

464-3 Social Factors in Personality and Behavior. (Same as Sociology 426.) Advanced study of social psychology from both sociological and psychological perspectives. Analyzes the reciprocal influence of groups and individuals, including the development of self, social interaction, gender and ethnic relations, impression management, interpersonal attraction, and social influence. Prerequisite: 211 and 307.

465-3 Applied Social Science Research Methods. This course will introduce students to a variety of research methods and techniques that are used by social scientists in applied contexts. Students will learn the fundamentals of data collection in a variety of contexts, such as from archival data sources, survey research, interviews and focus groups. Students will also learn how to use spreadsheets and statistical software (SPSS) to analyze data, and they will gain experience with report writing. Students will have opportunities to practice and demonstrate these skills through classroom exercises and projects. Prerequisite: 211 and senior standing in psychology major or graduate status or consent of instructor.

470-3 Psychology of Race and Racism. (Same as Black American Studies 472) This course reviews the history and evolution of the construct of race as a psychological phenomenon. While the course will be largely psychological in nature, the pervasiveness of race in practically every sphere of life necessitates a multidisciplinary approach. The course will emphasize a theoretical and conceptual approach toward understanding the psychology of racialized thinking. Prerequisite: 211.

471-3 Judgment and Decision Making. A survey of the academic field of judgment and decision making, its major methods, theories, results, and controversies. We will examine the generality of experimental results across various domains including gambling, clinical prediction, perception of randomness, and medical decision making. Prerequisite: 211 or graduate status.

489-1 to 12 Seminar: Selected Topics. Varied content. Offered as need exists and as faculty interests and time permit. Prerequisite: 211 and consent of instructor.

499-6 (3,3) Senior Honors in Psychology. Intensive study in selective areas for students qualified for honors work in psychology. A research paper or equivalent will be required. Not for graduate credit. Prerequisite: 211 and consent of instructor.

- Cashel, Mary Louise**, Associate Professor, Ph.D., University of North Texas, 1997.
- Chwalisz, Kathleen D.**, Associate Professor, Ph.D., University of Iowa, 1992.
- Clark, Margaret H.**, Assistant Professor, Ph.D., The University of Memphis, 2004.
- DiLalla, David Louis**, Associate Professor, Ph.D., University of Virginia, 1989.
- DiLalla, Lisabeth F.**, Associate Professor, Ph.D., University of Virginia, 1987.
- Dillon, Ronna**, Professor, Ph.D., University of California, Riverside, 1978.
- Dollinger, Stephanie M. Clancy**, Associate Professor, Ph.D., Syracuse University, 1989.
- Dollinger, Stephen J.**, Professor, Ph.D., University of Missouri-Columbia, 1977.
- Epsy, Kimberly**, Associate Professor, Ph.D., University of Houston, 1994.
- Fischer, Ann R.**, Assistant Professor, Ph.D., University of Missouri, Columbia, 1995.
- Gannon, Linda**, Professor, Ph.D., University of Wisconsin, 1975.
- Gilbert, Brenda O.**, Associate Professor, Ph.D., University of Florida, 1985.
- Gilbert, David G.**, Professor, Ph.D., Florida State University, 1978.
- Gore, Paul A.**, Adjunct Associate Professor, Ph.D., Loyola University of Chicago, 1996.
- Guthrie, Robert V.**, Professor, *Emeritus*, Ph.D., U.S. International University, 1970.
- Habib, Reza**, Assistant Professor Ph.D., University of Toronto, 2000.
- Hoane, Michael R.**, Assistant Professor, Ph.D., Texas Christian University, 1996.
- Jacobs, Eric**, Associate Professor, Ph.D., University of Florida, 1997.
- Jensen, Robert A.**, Professor, *Emeritus*, Ph.D., Northern Illinois University, 1976.
- Kibby, Michelle Y.**, Assistant Professor, Ph.D., The University of Memphis, 1998.
- Komarraju, Meera**, Lecturer, Ph.D., University of Cincinnati, 1987; Ph.D., Osmania University, 1983.
- Korchmaros, Josephine D.**, Assistant Professor, Ph.D., University of Connecticut, 2003.
- McHose, James H.**, Professor, *Emeritus*, Ph.D., University of Iowa, 1961.
- McKillip, John A.**, Professor, *Emeritus*, Ph.D., Loyola University of Chicago, 1974.
- Meltzer, Donald**, Professor, *Emeritus*, Ph.D., University of Pittsburgh, 1963.
- Obasi, Ezemenari M.**, Assistant Professor, Ph.D., The Ohio State University, 2005.
- O'Donnell, James P.**, Associate Professor, *Emeritus*, Ph.D., University of Pittsburgh, 1965.
- Pitz, Gordon F.**, Professor, *Emeritus*, Ph.D., Carnegie-Mellon University, 1963.
- Radtke, Robert C.**, Associate Professor, *Emeritus*, Ph.D., State University of Iowa, 1963.
- Ramanaiah, Nerella**, Professor, Ph.D., *Emeritus*, University of Oregon, 1971.
- Rodriguez II, Benjamin F.**, Assistant Professor, Ph.D., The Catholic University of America, 2001.
- Reinke, Karen S.**, Assistant Professor, Ph.D., University of Arizona, 1998.
- Rottinghaus, Patrick J.**, Assistant Professor, Ph.D., Iowa State University, 2004.
- Sagrestano, Lynda M.**, Associate Professor, Ph.D., University of California at Berkeley, 1993.
- Schill, Thomas R.**, Professor, *Emeritus*, Ph.D., Oklahoma State University, 1963.
- Schlesinger, Matthew J.**, Associate Professor, Ph.D., University of California at Berkeley, 1995.
- Schmeck, Ronald R.**, Professor, Ph.D., *Emeritus*, Ohio University, 1969.
- Smith, Douglas C.**, Professor, Ph.D., Kansas State University, 1977.
- Snyder, John F.**, Associate Professor, Ph.D., Loyola University, 1965.
- Stockdale, Margaret S.**, Professor, Ph.D., Kansas State University, 1990.
- Swanson, Jane L.**, Professor and Chair, Ph.D., University of Minnesota, 1986.
- Teng, Ellen J.**, Assistant Professor, Ph.D., University of Wisconsin-Milwaukee, 2003.
- Vaux, Alan C.**, Professor, Ph.D., Trinity College, Ireland, 1979; Ph.D., University of California at Irvine, 1981.
- Wang, Yu-Wei**, Assistant Professor, Ph.D., University of Missouri-Columbia, 2004.
- Weston, Rebecca J.**, Assistant Professor, Ph.D., University of North Texas, 2001.
- Yanico, Barbara**, Associate Professor, *Emerita*, Ph.D., Ohio State University, 1977.
- Young, Michael E.**, Associate Professor, Ph.D., University of Minnesota, 1995.

Radio-Television (Department, Major, Courses, Faculty)

The Department of Radio-Television prepares students for positions in broadcasting and telecommunications by combining practical and theoretical courses in broadcasting with a broad liberal arts background.

To be admitted to Department of Radio-Television, incoming freshmen must achieve a composite ACT score of 24 or be in top 25% of their graduating class.

Transfer students seeking admission from another institution or from another program at SIUC must have a 2.5 grade point average or above. Transfer students with fewer than 26 semester hours must have a 2.5 grade point average as well as meeting admission requirements of entering freshman.

Mass Communication and Media Arts 201 must be completed and English requirements described below must be met before students may advance into other radio-television courses, with the exception of 300.

All radio-television students are required to maintain an overall 2.0 grade point average in the major. If a radio-television student does not achieve a 2.0 grade point average in the major in any one semester, that student is subject to departmental warning. Students who are on departmental warning and do not earn an overall 2.0 grade point average in radio-television courses in a subsequent semester will be placed in a status of departmental dismissal. A student who has been placed on collegiate dismissal will be transferred to Pre-Major Advisement or may seek transfer to another University program if the student has an overall SIUC grade point average of 2.0. A dismissed student may appeal to the Undergraduate Committee for reinstatement into the program.

Enrollment in Radio/Television courses may be canceled for students who do not attend the initial class session of the semester. Fees will be assessed for supplies and materials in some courses. Students should inquire about amounts before registering.

Each student enrolled in the radio-television program must declare a specialization in one of the four areas described below before progressing to any radio-television course beyond Radio-Television 200 and 300¹.

- 1. English 101, 102 with a grade of B and, if the student receives less than a B in either English 101 or 102, English 290 with a grade of C;
- 2. A grade of C or better in RT 200 and 300 before taking any other Radio-Television courses. These courses may not be repeated more than once.

Transfer students must complete a minimum of 21 hours in radio-television courses at the University to earn a degree.

Bachelor of Arts Degree in Radio-Television, College of Mass Communication and Media Arts

<i>University Core Curriculum Requirements</i>	41
<i>Mass Communication and Media Arts Core</i>	6
<i>Mass Communication and Media Arts 201 and 202</i>	
<i>Language Requirement</i>	6-8
Foreign language or approved substitute.	
<i>Requirements for Major in Radio-Television</i>	33-42
Radio and Television 200, 300, 308 and 393	12
Specialization Requirements ¹	12-15
Electronic Media Marketing and Management: 305, two approved	
300-level and one approved 400-level	
News: 310, 311, 370, 470	
Production: (Television/Video) 365, 383, approved 400-level	
(Radio/Audio) 363, 383, 463	
Radio-Television Electives	9-12
<i>Minor in Related Area</i>	15
<i>General Electives</i>	<u>8-19</u>
<i>Total</i>	120

¹A Radio-Television student has the option to create his/her own directed specialization with the guidance of a faculty member and the approval of the Undergraduate Curriculum Committee before taking any Radio-Television classes beyond Radio-Television 200 and 300.

Radio and Television Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
MCMA 201, RT 200	3	3	RT 300, RT Course	3	3
ENGL 101, 102	3	3	General Elective	3	3
SPCM 101, MATH 113.....	3	3	Computer/Foreign Language...	3	3
Science	3	3	Humanities, Minor	3	3
Fine Arts, Humanities	3	3	Social Science.....	3	3
<i>Total</i>	15	15	<i>Total</i>	15	15

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
RT 308.....	3	-	RT Course, RT 393	6	3
RT Course.....	3	6	RT Specialization 400 Level	-	3
Minor.....	3	3	Minor.....	3	3
Integrative Studies	3	3	General Elective	6	4
General Elective.....	3	3	Health Education	-	2
<i>Total</i>	15	15	<i>Total</i>	15	15

Courses (RT)

200-3 Understanding Electronic Media. Basic overview of electronic media, history, current issues and future trends, programming content, technological and regulatory matters, media ethics, social effects and business practices. Critical viewing or listening and analysis of aesthetic techniques, formats, genres and content.

274-3 Entertainment Arts Business. Commercial and business aspects of music, video, film and the broadcast industries. Presentations by leading industry executives and professionals. Students travel several times to Nashville, TN, for site-visits to studios, sound stages, performance rights societies publishing and recording companies. Grades based on written assignments and tests. Restricted to Radio/Television majors. Lab fee: \$175. Prerequisite: C or better in 200 and 300.

300-3 Writing, Performance and Production. Introduction to the functions, theories, materials and techniques of writing, performing and production for radio and television. Students write, perform and produce in radio and television studio laboratories. Lab fee: \$60. Prerequisite: radio/TV major.

305-3 Audience Research and Ratings Analysis. Introduction to methods of audience and program research and ratings analysis. Lab fee: \$45. Prerequisite: C or better in 200 or consent of instructor.

308-3 Radio-Television Policies, Laws, and Regulations. Development of American radio and television policies from their constitutional base through federal law, regulatory agencies and the judicial system. Rights and responsibilities of radio and television organizations and of the public. Required for majors. Prerequisite: C or better in 200 and 300.

310-3 Radio-Television News Writing. Designed to cover selecting, writing and editing news material for presentation on radio and television information programs. Lab hours required. Lab fee: \$45. Prerequisite: C or better in 200 and 300 or consent of the department.

311-3 Audio Journalism for Electronic Media. The techniques of gathering, producing and presenting news for radio and other aural media. Skills in research, interviewing, news judgment, ethics, and audio recording are explored. New distribution channels are examined. Lab hours required. Lab fee: \$45. Prerequisite: 310 or consent of instructor.

325-3 Contemporary Media Delivery. Advanced study of historical, economics and social dimensions of media transmission technologies in the USA and elsewhere: broadcasting, cable, satellites, wireless and streaming. Comparative regulation policies, ownership patterns and management strategies. Prerequisite: C or better in 200 and 300, or consent of instructor.

340-3 Television Studies. Discussion of research and debates concerning television institutions, genres, formats, texts and audiences. Analysis and evaluation of technique, content, and aesthetic effects of television. Prerequisite: C or better in 200 and 300.

351-3 Broadcast Programming. The study of the social and economic purposes and methods of obtaining, developing, launching, scheduling, and evaluating programming content for public and commercial electronic media. Lab fee: \$45. Prerequisite: C or better in 200 and 305.

357-3 Electronic Media Promotion. The study of the principles and practices of marketing products and services of the electronic media to both consumers and advertisers. Includes analysis and evaluation of the planning, creative, and placement components of promotional activities. Prerequisite: C or better in 200 and 305.

360-3 Electronic Media Performance. The development of disciplines controlling vocal and visual mechanics and interpretative performances for announcers, newscasters, interviewers and narrators of various radio and television situations. Laboratory hours required. Lab fee: \$45. Prerequisite: 310 or 383 or concurrent enrollment or consent of instructor, Theatre 203 recommended.

362I-3 Sound Art and Practice. (University Core Curriculum)(Same as Music 362i) Create a unified view of how sound impacts media, society, and to some extent, the individual in a variety of applications and careers. This course will provide students with a philosophical understanding of the concepts and practices used in sound art and practice today and historically; and more importantly, in a variety of careers and in society in general. This course will introduce students to audio technology and terminology as well as expose them to the many applications of sound, as art and function, in media society, regardless of their desire to pursue sound as a career.

363-3 Radio and Audio Production. Planning and producing for radio. Study of different formats (documentary, drama, commercials, promotional announcements); Short form production in labs. Introduction to multitrack recording and editing. Examination of audio production techniques in related fields. Lab fee: \$55. Prerequisite: C or better in 200 and 300, 310 or 383 or concurrent enrollment.

365-3 Producing for Television. Planning and producing for the special requirements of the medium. Research, planning and budgeting for individual and series productions. Laboratory exercises. Final projects carry over to 369. Laboratory hours required. Lab fee: \$55. Prerequisite: C or better in 200 and 300, 310 or 383 or concurrent enrollment.

366-3 Lighting for Television. Students will explore the role of light and lightning in the television production. The course covers both location and studio lighting. Practical exercises are used extensively. Lab fee: \$55. Prerequisite: 365 or concurrent enrollment.

- 367-3 Electronic Newsgathering.** Visual storytelling using both Electronic Newsgathering and Electronic Field Production. Classroom instruction will be combined with practical experience provided through various production opportunities available at SIUC. Lab fee: \$50. Prerequisite: *C* or better in 200 and 300.
- 369-3 Directing for Television.** The applied study of directing theory and visual storytelling to the various genres associated with television. Lab exercises cover both multi-camera and single camera formats. Lab hours required. Lab fee: \$55. Prerequisite: *C* or better in 200 and 300, *B* or better in 365.
- 370-3 Television News Reporting.** Reporting, writing, editing and producing television news. Students simulate the disciplines of daily television newsgathering. Lab fee: \$55. Prerequisite: 311 or consent of instructor.
- 375-3 Introduction to Recording Engineering.** (Same as Music 375) Specialized in recording and engineering. Intended to be a general introduction to the world of multi-track recording. 70% of the course involved with basic information about sound, test equipment, microphones, recorders, signal processing equipment, consoles, noise reduction devices and the most recent developments in the perception of sound. 30% consists of actual live recording sessions and mix-down sessions. Students given hands-on experience in recording and mixing and will receive a copy of the master tape. Enrollment limited. Prerequisite: Radio-Television major
- 376-3 Advanced Recording Engineering.** Continues the skills developed in 375. Student familiarized with duties of the professional engineer through practical experience. Prerequisite: 375 or Music 375.
- 377-3 Electronic Media Sales.** Incorporates a marketing-oriented, client-focused, solutions-based approach. Lab fee: \$45. Prerequisite: *C* or better in 200 and 305.
- 380-3 Media Technology.** A survey of the methods used to create and deliver media content. This class will introduce the student to the current technology of media delivery. Topics include the nature of waves (electronic, light and sound), transmission equipment, cameras and video images, sound recording and control, editing and storage technologies and networking. The emphasis is to give the student an understanding of how their equipment works or fails to work. Prerequisite: *C* or better in 200 and 300.
- 383-3 Writing for Radio-Television.** Designed to cover writing radio and television formats as well as announcements, commercial, public service and promotional. Develops an analytical attitude toward broadcast writing, and stresses imagination and creative writing skills. Frequent written assignments in and out of class. Laboratory hours required. Lab fee: \$45. Prerequisite: *C* or better in 200 and 300 or consent of the department.
- 384-3 (1,1,1) Campus Media Practicum.** Practical experience in media operations on the campus. Instructor makes determination on student duties, based on needs of the Broadcast Service or the department and the desires of the student. A minimum of four hours per week. Students obtain an application form from academic adviser. Mandatory Pass/Fail. Prerequisite: consent of instructor.
- 389-2 to 9 Electronic Media Workshop.** Specialized work in various areas electronic media. Topics will vary. Lab fee: \$55. Prerequisite: consent of instructor.
- 391-2 Independent Study.** Area of study to be determined by student in consultation with radio-television faculty. No more than two students may work on the same project. Prerequisite: consent of instructor.
- 393-3 Electronic Media Society.** The interrelation of television with social patterns and economic and political systems. Major theories of broadcasting. Effects of these media on society. Required for the major. Prerequisite: *C* or better in 200 and 300, senior standing or consent of instructor.
- 395-2 to 6 Internship Program.** News, production, performance or marketing/management work experience with a non-university professional organization. The student will undertake a work experience beyond that available at the university. No retroactive credit for previous work experience. The student must submit an application to seek an internship no later than the fourth week of the semester prior to the internship and receive approval from the undergraduate curriculum committee. May be repeated up to six hours. Student may earn no more than nine internship hours from 395 and 396. Prerequisite: junior standing, gpa of 2.50 or better and consent of instructor.
- 396-6 Hollywood Studies/Internship.** Supervised work and study experience in Los Angeles, California, in areas of production, program development, casting, distribution, etc. Students work closely with Hollywood professionals and attend seminars on various facets of the industry. Summer session only; fees include prearranged housing. Students may earn no more than nine internship hours from 395 and 396. Prerequisite: junior standing, gpa of 2.50 or better, faculty coordinator approval.
- 405-3 Applied Audience and Marketing Research Methods.** A problem-solving approach to designing, executing and analyzing media research. Available to both undergraduate and graduate students. Prerequisite: undergraduate, a *B* or better in 305.
- 430-3 News and Public Affairs Programming.** Examination of history and scope of news and public affairs programming. Effects of public affairs on programs and audiences. Responsibility of radio and television stations in news and public affairs and community relations. Ethical issues in news and public affairs and the impact of new media on journalism will be explored. Prerequisite: senior standing and *C* or better in 200.
- 450-3 Television Documentary Production and Critique.** An overview of the development of various types, styles and schools of major documentary production including analysis of American and International documentaries. Students will also research, write and produce several short form documentaries. Lab fee: \$55. Prerequisite: 365 or consent of instructor. 465 recommended.
- 457-3 Sports Marketing and Media Relations.** History and development of the business of sports entertainment and marketing in electronic media. Examination and analysis of sports programming, performance, and production, with emphasis of franchising, broadcasting, and media relations. Lab fee: \$45.

- 461-3 Multimedia Production.** Students can learn the fundamental concepts and skills necessary to produce simple interactive multimedia presentations using an assortment of media. Lab fee: \$50. Prerequisite: senior standing and consent of instructor.
- 463-3 Advanced Audio Production.** Advanced theory of sound, patching, multi-channel production. Advanced audio projects. Studio and location sessions. SMPTE and MIDI applications. Interfaces with video and musical instruments. Lab fee: \$55. Prerequisite: C in 363 or consent of instructor.
- 464-3 Audio Documentary and Diversity.** (Same as Women's Studies 464) This course is the creation of short and long form audio documentaries by students, regardless of production background. Introduces students to basic production techniques and diversity considerations during the making of a documentary. This course uses qualitative methods to investigate an issue or document an event, with an emphasis on observation and interview techniques. Topics will explore the role of gender, race, ethnicity and class during the planning, gathering and production stages of the documentary. Open to non-majors. Lab fee: \$55.
- 465-3 Advanced Television Production.** Instruction and practical experience in the development of programming for television. Students will produce individual and/or small group projects for broadcast and follow the projects through from concept to completion. Many of the projects will air on WSIU-TV. Lab fee: \$55. Prerequisite: 365 or consent of instructor.
- 466-3 Video Graphics.** Students design and produce projects using state-of-the-art hardware and software. The emphasis is to give students hands-on experience in developing graphics for video productions. Lab fee: \$50. Prerequisite: consent of instructor.
- 467-3 International Broadcasting.** An examination of broadcasting theory related to rural audiences in the United States and abroad. History of farm broadcasting in the United States and abroad. Communication in development is explored. Research on effects on rural audiences. Open to non-majors with consent of instructor. Prerequisite: C or better in 200 and 300 and senior standing.
- 469-3 Video for Non-majors.** Basic shooting and editing to students interested in using video for purposes other than professional television production, such as education, business, or Web page development. The course surveys video formats and applications. Students produce projects using editing and special effects. Credit not given to Radio-Television majors. Lab fee: \$55. Prerequisite: consent of instructor.
- 470-3 Television News Field Production.** Advanced field reporting for television. Students will work under the supervision of the instructor to develop, investigate and report news stories for television. This process will also study the development and production of the mini-documentary. Class will utilize professional grade video recorders, cameras and editing systems. Lab fee: \$55. Prerequisite: 370 or consent.
- 473-3 Electronic Media Management.** The study of the principles and practices of electronic media management. Examines the breadth of the decision making processes involved in operations, personnel, finance, program content, sales and marketing, and government regulation. Provides students with an understanding of how electronic media firms operate with a complex social, political, and multicultural environment. Not for graduate credit. Lab fee: \$55. Prerequisite: C or better in 200, 305 and senior standing.
- 480-3 The Internet and Mass Communication.** A critical examination of the Internet from a mass communication perspective. Emphasis on theory, media convergence, broadcast entertainment, news, marketing, advertising and public relations opportunities and strategies, including Web site design and basic HTML. Prerequisite: consent of instructor.
- 481-3 Client-Based Video Design.** A preproduction course that includes creative problem solving, project management, working with clients, budgeting, design theory and script writing. Assesses multiple platforms for video creation and delivery to targeted audiences. Prerequisite: 365 or concurrent enrollment or consent of instructor.
- 482-3 Advanced Client-Based Production.** Students work on one or more actual client projects. The class simulates a production house operation. Working in teams, students are responsible for budgeting, working with clients, scripting, shooting, editing, and follow-through on the project. Lab fee: \$45. Prerequisite: 465 or 481.
- 483-3 Advanced Writing for Electronic Media.** Designed to cover writing broadcast manuscripts including documentary, drama, comedy, and children's programming. Lab hours. Lab fee: \$45. Prerequisite: senior standing and 383 or consent of instructor.
- 484-3 Television Drama Workshop.** A hands-on workshop designed to produce a dramatic television program from the script through the actual production process. Topics include casting, budgeting, scheduling, script analysis, location management, production design, staging, lighting, directing and acting for the single camera. Students will be involved in both studio and location production of a dramatic TV program. Lab fee: \$55. Prerequisite: consent of instructor.
- 485-3 Digital Post Production.** Students will examine all aspects of the postproduction process. The course combines editing theory and practice with critiquing professional programs and practical editing exercises. Lab fee: \$55. Prerequisite: 365 or consent of instructor.
- 486-3 Broadcast Advertising Production.** (Same as Journalism 408.) Offered jointly with Advertising/IMC. Projects combine expertise in teams to script, produce, post-produce, edit and present broadcast commercials. Lab fee: \$55. Prerequisite: 365, or 383, or Journalism 303.
- 487-3 3D Animation I: Modeling.** In this course, students will gain a solid foundation in creating 3D computer graphics using industry standard computer software and hardware. Through analysis and practice, students will develop an understanding of the principles of 3D modeling, lighting, texturing and rendering. Conceptual design and professional practices will also be addressed. Skills learned in this course will prepare students for the 3D Animation II class.
- 488-3 3D Animation II: Animal.** This intermediate course builds upon the skills learned in the 3D Animation I course, and will focus on narrative development, motion design and creating visual effects in 3D scenes using industry standard practices. Topics include key frame animation, inverse kinematics, special effects

using dynamics and the application of physics-based properties to 3D geometry. A term project utilizes the creative and technical skills explored in class.

489-2 to 9 Electronic Media Workshop. Advanced work in various areas of electronic media. Lab fee: \$55. Prerequisite: consent of instructor.

491-3 Independent Study. Area of study to be determined by student in consultation with graduate faculty. No more than two students may work on same project. Students must complete an application form which is available from the departmental adviser. Lab fee: \$45. Not for graduate credit. Prerequisite: senior standing and consent.

Radio-Television Faculty

Brooten, Lisa, Assistant Professor, Ph.D., Ohio University, 2003.

Brown, William Edward, Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1974.

Burns, David, Assistant Professor, M.F.A., Parsons School of Design, 2001.

Downing, John D. H., Professor, Ph.D., London School of Economics and Political Science, 1974.

Dybvig, Homer E., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.

Gher, Leo, Associate Professor, *Emeritus*, M.S., Southern Illinois University, 1980.

Hochheimer, John L., Professor and *Chair*, Ph.D., Stamford University, 1986.

Johnson, Phyllis, Associate Professor, Ph.D., Southern Illinois University Carbondale, 2003.

Keller, Kenneth R., Associate Professor, *Emeritus*, M.T.V., University of Illinois, 1966.

Krieder, Wago, Assistant Professor, M.F.A., Rutgers University, 2002.

Lawrence, William Novotny, Assistant Professor, Ph.D., University of Kansas, 2004.

Needham, Jay, Assistant Professor, M.F.A., California Institute of the Arts, 1989.

Pendakur, Manjunath, Professor and *Dean*, Simon Fraser University, Canada, 1980.

Podber, Jacob J., Assistant Professor, Ph.D., Ohio University, 2001.

Romersa, Henry, Lecturer, M.M.Ed., Oberlin College, 1955.

Shipley, Charles W., Professor, *Emeritus*, Ph.D., Florida State University, 1971.

Sitaram, K. S., Professor, *Emeritus*, Ph.D., University of Oregon, 1969.

Starr, Michael F., Associate Professor, *Emeritus*, J.D., Georgetown University, 1965.

Thompson, Janice, Associate Professor, M.G.S., Roosevelt University, 1988.

Torre, Paul J., Assistant Professor, Ph.D., University of Southern California, 2005.

Radiologic Sciences (Major, Courses)

These professionals function as first assistants to the physician in medical practice, utilizing radiant energy, ionizing radiation (X-Ray), other forms of electromagnetic energy, and sound waves for the imaging, diagnosis, and treatment of disease. Each distinct specialty option has its own educational criteria, accreditation and clinical training requirements. The traditional medical specialties of radiography, radiation therapy technology, diagnostic medical ultrasound and magnetic resonance imaging/computed tomography are available at Southern Illinois University Carbondale.

The program prepares technologists for entry-level positions and also prepares the technologist who wishes to gain additional expertise. The radiologic technology curriculum and all program options are designed to meet the guidelines for accreditation and/or recognition by the Joint Review Committee on Education in Radiologic Technology, the American Registry of Radiologic Technologists, the Joint Review Committee on Education in Radiation Therapy Technology, the American Registry of Diagnostic Medical Sonographers and the American Society of Radiologic Technologists. The basic radiography curriculum has been continuously accredited since 1978.

To be considered for enrollment into the Radiologic Sciences program, prospective students must first obtain admission to the University. To be approved for entry into the major and professional sequences, applicants must submit additional application materials. This program admits a limited number of students based on specific selection criteria.

It is recommended that prospective students complete the following courses at SIUC or approved articulated substitutes at another accredited college or university before beginning the professional sequence courses: English 101 and 102, Speech Communication and Media Arts 101, Mathematics 108 or 113, Physiology

201, Zoology 115, Philosophy 104, Psychology 102 and Chemistry 106 or Physics 101. All applicants who apply to the program are evaluated on the number of hours of college credit, college grade point average as calculated by SIUC, college mathematics and science grades, and date of application to the program. Preference will be given to Illinois residents residing in southern and central Illinois; however, all qualified applicants will be considered.

Accreditation guidelines place limits on the enrollment in this program. Students begin the professional sequence each fall only. In addition, approximately twelve graduates from associate degree radiologic technology programs will be accepted for transfer to *each* professional program option for degree completion.

This degree program requires the successful completion of clinical internships. In accordance with Federal and State guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, rubella, tetanus, TB, and Hepatitis B; current CPR card; and proof of completion of HIPPA and blood-borne pathogens training. Affiliation sites will also require students to undergo a criminal background check and drug screening.

Bachelor of Science Degree, College of Applied Sciences and Arts

The Bachelor of Science degree in Radiologic Sciences is a 120-semester hour program consisting of forty-one semester hours of University Core Curriculum requirements, and seventy-nine semester hours of combined radiography and professional option courses.

MEDICAL DIAGNOSTIC SONOGRAPHY (ULTRASOUND) OPTION

This option is designed to prepare qualified medical diagnostic sonographers. The courses and clinical experiences meet accreditation criteria.

Ultrasound, one of the more recently developed specialties in diagnostic radiology, utilizes a high frequency sound wave similar to sonar. The reflected echoes from the body tissues are displayed as two-dimensional images on a video monitor. Some medical problems that are diagnosed with ultrasound include gallstones, tumors, cysts and fetal abnormalities. The technologist who performs the examination is called a sonographer. Sonographers work under the supervision of either a doctor of medicine or osteopathy that is responsible for the use and interpretation of the ultrasound procedure.

While most sonographers work in hospitals, particularly in radiology, cardiology, vascular surgery and obstetrical departments, many will also find employment in outpatient clinics and mobile services. Ultrasound equipment manufacturers also employ sonographers to market their products.

RADIATION THERAPY OPTION

Radiation therapy technologists assist radiation oncologists in all aspects of the administration of radiation therapy treatment; their primary responsibility consists of exposing specific areas of the patient's body to prescribed doses of ionizing radiation. Radiation therapy technologists also provide appropriate patient care; this includes exercising judgment when administering treatment and adhering to the principle of radiation protection for the patient, self and others.

MAGNETIC RESONANCE IMAGING AND COMPUTED TOMOGRAPHY OPTION

This option is designed to prepare technologists in the advanced areas of magnetic resonance imaging (MRI) and computed tomography (CT). The MRI and CT components will emphasize physics, technology, instrumentation and sectional anatomy. Technologists employed in these capacities will be supervised by a board certified radiologist, but will be afforded a greater amount of responsibility and independence in the performance of their duties.

Bachelor of Science Degree in Radiologic Sciences, College of Applied Sciences and Arts

<i>University Core Requirement</i>	41
Suggested Courses: PHSL 201 and 208 or AH 241, CHEM 106 or PHYS 101, PHIL 104, PSYC 102, ZOOL 115, MATH 108 or 113, ENGL 101 and 102, SPCM 101	
<i>Professional Core Requirements</i>	48
Including: RAD 102, 112, 202, 212, 222, 232, 312, 322, 332, 342, 352	
<i>Radiologic Sciences Option (Select One)</i>	31
Ultrasound: RAD 341, 351, 371, 381, 391, 401, 441, 451 Radiation Therapy: RAD 360, 370, 380, 390, 400, 410, 420, 430, 440 MRI and CT: RAD 364, 374, 384, 394, 404, 414, 424, 434	
<i>Total</i>	120

Radiologic Sciences Suggested Curricular Guide with Options in Ultrasound, Radiation Therapy, MRI and CT

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	RAD 102, RAD 222	3	10
MATH 108 or 113	3	-	RAD 112	4	-
Human HLTH, SPCM 101	2	3	RAD 202	3	-
Science (GR 1, GR 2)	3	3	Social Science	3	-
Humanities (GR 1)	3	-	Integrative	-	3
Social Science	-	3	<i>Total</i>	13	13
Humanities	-	3			
<i>Total</i>	14	15			
			SECOND YEAR	SUMMER	
			RAD 232	4	
			RAD 212	2	
			<i>Total</i>	6	
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
RAD 332, RAD 312	10	3	Option Courses	13	12
RAD 322	-	3	<i>Total</i>	13	12
RAD 342,	-	3			
RAD 352	-	3			
Fine Arts, Integrative	3	3	FOURTH YEAR	SUMMER	
<i>Total</i>	13	15	Option Courses	6	

Courses (RAD)

- 102-3 Introduction to Radiologic Technology and Radiographic Technique.** Designed to introduce the student to the medical radiography profession. Students will begin their study of medical terminology, professional behavior, ethics, theory of radiographic exposure and radiation protection. Prerequisite: admission to major and consent of school.
- 112-4 Anatomy and Positioning.** Designed to provide the student radiographer with didactic instruction and laboratory experience which will lead to the development of clinical competencies. It will serve as a foundation for the development of advanced clinical skills as well. The competencies developed are chest, abdomen, upper and lower extremities, pelvic girdle, spine and digestive system. Lab fee: \$75. Prerequisite: admission to program or consent of the school.
- 132-3 Anatomy and Positioning II.** A continuation of 112 designed to further develop clinical skills and competencies through continued didactic and laboratory experience. Positioning competencies developed in this course include radiography of the pelvic girdle, spine and digestive system. Eight weeks. Prerequisite: 112 and consent of program adviser.
- 199-1 to 10 Individual Study.** Provide first year radiologic sciences students with the opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access to the resources of the radiologic sciences facilities. Each student will work under the supervision of a sponsoring program faculty member. Prerequisite: consent of school.
- 202-3 Radiographic Physics.** This course will concentrate on general theories of physics as they relate to matter, mechanics and electricity. It also involves the study of the nature and production of radiation and understanding of the complexity of radiographic equipment and circuitry. Prerequisite: 102 and 112.
- 212-2 Special Procedures.** Includes the study of contrast producing agents which are used to visualize specific parts of the body. Radiographic technique employed in this type of imaging is highly specialized and will be studied in depth. Prerequisite: 222, 372a and consent of program adviser.

222-10 Radiography Clinic I. The student is assigned to a selected clinical education center for the entire semester. During this semester, the student radiographer is expected to practice and perfect the professional skills developed the previous semester on campus. The student is supervised by a qualified radiographer and directed in specific experiences and film critique assignments designed to meet objectives for the semester. Prerequisite: 102, 112, and 202.

232-4 Selected Systems (Radiography). Designed to instruct the student in the anatomy and positioning of the skull, facial bones, sinus, digestive, urinary, biliary and human reproductive systems. Routine projections common to most health facilities will be described, demonstrated and then practiced on a phantom in the energized laboratory. Particular emphasis will be placed on radiography of the trauma patient. Lab fee: \$75. Prerequisite: 222.

299-1 to 16 Individual Study. Provides students with opportunity to develop a special program of studies to fit a particular need not met by other offerings. Enrollment provides access for advanced radiologic sciences students to the resources of the radiologic sciences facilities. Each student will work under the supervision of a sponsoring program faculty member. Prerequisite: consent of school.

312-3 Radiographic Pathology. Deals with the etiology and processes of trauma and disease. Emphasis will be placed on radiographic pathology of the body systems and the manifestation of this pathology. Prerequisite: 332, 372b, and consent of program adviser.

322-3 Radiographic Contrast and Sectional Anatomy. Included is an introduction into the use of radiopharmaceuticals for enhancement of various anatomical structures within the human body. Also includes the study of anatomical structures on the transverse, coronal, and sagittal perspectives. Emphasis will be placed on (1) understanding the physiological effects of radiopharmaceuticals on various organ systems; (2) identifying the imaging plane demonstrated; (3) identifying anatomy visualized in a given place. Prerequisite: 332.

332-10 Radiography Clinic II. The student returns to the clinical education center for this semester. The student radiographer is expected to continue to practice previously developed professional skills and to assume performance of additional examinations studied during the previous semester. This semester of clinical study includes proficiency testing which, when completed, will allow the student to assume full responsibility for the examination in the future. The student will also complete film critique assignments to meet the objectives of the semester. Prerequisite: 212 and 232.

341-1 Fundamentals of Sonography. This course is designed to introduce the profession of Diagnostic Medical Ultrasonography. Topics of study include historical perspectives, patient care and communication, medical ethics and terminology. Prerequisite: limited to major or consent of school.

342-3 Radiation Biology. Designed to instruct the student radiographer in the principles and terminology of radiobiology. Emphasis will be placed on how these principles relate to radiation protection for both the patient and radiographer. Also included are introductions to nuclear medicine and radiation therapy technology. Prerequisite: 332.

351-3 Obstetric and Gynecologic Sonography. This course is an in-depth study of gynecologic and obstetric/fetal anatomy, physiology and pathology. Emphasis will be placed on related clinical signs and symptoms, laboratory tests, and normal and abnormal sonographic patterns. This course includes a laboratory component. Not for graduate credit. Prerequisite: Limited to major or consent of school.

352-3 Special Imaging Modalities. This course provides the student with the knowledge and understanding relevant to the function, operation and application of the various techniques used in image production. This course also includes a complete review of the radiography curriculum in preparation for the American Registry of Radiologic Technologies National certifying examination. Prerequisite: 332.

360-2 Fundamentals of Radiation Therapy. The rationale for and methods employed in the treatment of cancer by radiotherapy. The role of radiotherapy and its relationship to other modalities utilized in the treatment of cancer are explored and defined. Also, an introduction to the principles and concepts of radiobiology. Prerequisite: limited to major or consent of school.

362-4 Radiography Clinic III. Last clinical course of the program. Students are expected to demonstrate knowledge and competency of radiographic examinations listed in categories one through nine. Image evaluations will be performed on a weekly basis by the clinical instructor as well as behaviors/attitudinal ratings. Prerequisite: 312, 322, 342 and 352.

364-3 Computed Tomography Technology. This course will focus on the physical principles of computed tomography. Topics of discussion will include the history of computed tomography, its instrumentation, data acquisition, image reconstruction, contrast agents, patient care/safety, and quality assurance. Special imaging application for pediatrics/geriatrics, interventional, trauma, and oncology will be discussed. Prerequisite: Limited to major or consent of instructor.

370-3 Techniques and Applications of Radiation Therapy. The technical aspects of radiotherapy including dosimetry, shielding, radioactive sources and methodology. Lecture and laboratory format. Lab fee: \$100. Prerequisite: limited to major or consent of school.

371-3 Abdominal Sonography. This course is an in-depth anatomy, physiology and pathology study of abdominal, retroperitoneal and superficial structures. Emphasis will be placed on related clinical signs and symptoms, laboratory tests, and normal and abnormal sonographic patterns. All sections of 371 have \$100 lab fee. Prerequisite: limited to major or consent of school.

372-4 (1,1,2) Radiographic Film Critique. (a) Concurrent with clinical study, the student will participate in the technical review of the films taken fulfilling introductory objectives set for this course. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: 102, 112, 132, 202, English 101 and 102 or consent of school. (b) The student will continue to develop abilities to review an examination from a technical standpoint utilizing more advanced knowledge to fulfill course objectives. Prerequisite: 212, 232. (c) Final competencies in the technical production and review of the

finished radiograph are determined and evaluated. Also included is a review of the knowledge learned in the program. Lab fee: \$25. Prerequisite: 312, 322, 342, 352 or consent of school.

374-4 Sectional Anatomy and Imaging Applications. This course focuses on identifying anatomical structures produced by Magnetic Resonance Imaging (MRI) and Computed Tomography (CT) scanners in the transverse, sagittal, coronal, and orthogonal planes. The MRI and CT images place emphasis on the head, neck, spine, chest, abdomen, pelvis, musculoskeletal (joints), and vascular system. In addition, information on MRI and CT imaging applications will be presented. Prerequisite: limited to major or consent of school.

380-3 Physics of Radiotherapy. Physical principles and application thereof, specifically in radiation therapy. A review of basic radiotherapy principles which will be expanded upon in later courses. Lab fee: \$100. Prerequisite: limited to majors.

381-3 Ultrasound Physics and Instrumentation. A study of diagnostic medical ultrasound physics. Topics include ultrasound wave generation and propagation; transducers; pulse echo instruments; pulse echo imaging; image storage and display; Doppler; artifacts; quality assurance; bioeffects and safety. Prerequisite: limited to major or consent of school.

384-4 Magnetic Resonance Imaging Technology. This course will focus on the physical principles of magnetic resonance imaging. Topics of discussion will include the history of magnetic resonance imaging, its physical principles, instrumentation, imaging techniques, contrast agents, patient care/safety, and quality assurance. Prerequisite: limited to major or consent of school.

390-2 Oncologic Nursing. Nursing techniques utilized on patients with cancer and those in the terminal state of illness. Emphasis on the psychological needs and problems of those suffering terminal illness. Special topics will include the many different types of malignancies, care of the skin during and after radiotherapy, assisting patients in learning home care, and dealing empathetically with patients and relatives. Prerequisite: limited to major or consent of school.

391-3 Sectional Anatomy-Sonography. A study of sectional anatomy in the transverse, longitudinal and coronal planes, with emphasis on the organs of sonographic interest within the abdomino-pelvic cavity. This course includes a laboratory component. Prerequisite: limited to major or consent of school.

394-3 MRI and CT Pathology. This course is designed as an overview of pathologies commonly seen in magnetic resonance imaging and computed tomography. Along with distinguishing various types and pathologies as seen on MRI and CT scan, emphasis will be placed on a general understanding of the description, etiology, epidemiology, signs and symptoms, imaging characteristics, treatment, and prognosis of those pathologies. Prerequisite: limited to major or consent of school.

400-3 Radiation Dosimetry and Instrumentation. The principles of radiation dosimetry and related instrumentation. Topics include aspects of calibration, monitoring, protection and dose determination of x and gamma radiation. Not for graduate credit. Prerequisite: limited to major or consent of school.

401-12 Sonography Clinical Internship I. The student is assigned to a clinical education center to practice and perfect sonography skills. The student will be supervised by qualified sonographers and directed in specific experiences designed to meet the objectives for the semester. Not for graduate credit. Prerequisite: 341, 351, 371, 381, 391, or consent of school.

404-10 MRI and CT Clinical Internship I. This is first clinical internship in a two-course sequence. During the first clinical internship, the student will be assigned to a selected clinical education center for the entire semester. During this semester, the student is expected to practice and perfect the professional skills developed the previous semester on campus. Not for graduate credit. Prerequisite: 364, 374, 384, and 394 and concurrent enrollment in 414.

410-10 Radiation Therapy Clinical Internship I. This is first clinical internship of a two-course sequence. A practicum at a selected clinical education center in which the student functions under direct supervision and applies the knowledge gained in the classroom. The student will function in the clinical setting to interpret and execute the radiation oncologist's orders and operate the ionizing radiation equipment during actual patient treatments and simulations. Construction of treatment aids will also be performed. Not for graduate credit. Prerequisite: 360, 370, 380, 390, 400 and concurrent enrollment in 420.

414-2 Special Studies in MRI and CT. Individual projects in MRI and CT will be selected by the student with approval of the instructor and culminate in case study reviews. In addition, the student will prepare to challenge The American Registry of Radiologic Technologists professional examinations in either MRI or CT. A portion of this course is on-campus. Not for graduate credit. Prerequisite: 364, 374, 384, 394 and concurrent enrollment in 404.

420-2 Special Problems in Radiation Therapy. A review of the many types of cancer to include discussion of clinical symptoms, treatment patterns, technical pitfalls, survival statistics and patient/family interactions. Quality assurance procedures for a Radiation Therapy Department will also be reviewed to include the different QA tests, tolerances, and frequencies. Both written and oral seminar responses will be included in this course. Not for graduate credit. Prerequisite: 360, 370, 380, 390, 400 and concurrent enrollment in 410.

424-4 MRI and CT Clinical Internship II. This is the second clinical internship in a two-course sequence. The student will be assigned to a selected clinical education center. During this semester, the student will continue to perfect his/her professional skills developed during the previous clinical internship. In addition, the student will focus on developing hands-on skills in radiation therapy treatment simulation, interventional techniques, stereotactic procedure and trauma. Not for graduate credit. Prerequisite: 404 and 414 and concurrent enrollment in 434.

430-4 Radiation Therapy Clinical Internship II. This is the second clinical internship of a two-course sequence. A clinical practicum at a selected clinical education center in which the student functions under direct and remote supervision and applies the knowledge gained in the classroom and Clinical Internship I.

The student will practice and improve the professional skills developed the previous semester to include radiation therapy treatment, simulation and medical dosimetry. Not for graduate credit. Prerequisite: 410 and concurrent enrollment in 440.

434-2 Seminar in MRI and CT. This course is designed to prepare the student to challenge The American Registry of Radiologic Technologists professional examinations in either MRI or CT. During the course the student will take mock registry exams in either MRI or CT and review pertinent material. Career development activities will include interviewing techniques, resume and cover letter preparation, and the application process. A portion of this course is on campus during finals week. Not for graduate credit. Prerequisite: 404 and 414 and concurrent enrollment in 424.

440-2 Seminar in Radiation Therapy. This course is designed to prepare the student to challenge the American Registry of Radiologic Technologists Radiation Therapy exam. During this course the student will take mock registry exams in the specialty of radiation therapy and go through review materials. A portion of this course is on-campus. Professional development is addressed. Not for graduate credit. Prerequisite: 420 and concurrent enrollment in 430.

441-4 Sonography Clinical Internship II. Clinical practicum at a selected clinical education center. The student will function under direct and remote supervision to perfect professional skills developed the previous semester to include Doppler/color flow, special procedures, and complicated cases. Not for graduate credit. Prerequisite: 401, concurrent enrollment in 451, or consent of school.

451-2 Seminar in Sonography. This course is designed to prepare the student for the American Registry of Diagnostic Medical Sonographers (ARDMS) Physics and Instrumentation; Abdomen; Obstetrics and Gynecology examinations. Professional developments addressed. A portion of this course is on campus. Not for graduate credit. Prerequisite: 401, concurrent enrollment in 441, or consent of school.

Recreation (Major, Courses, Faculty)

The Recreation major prepares the student for positions in the management of leisure services. The curriculum, built on a broad core, offers professional courses within the department and draws from many related majors for competencies and skills in the preparation of professionals for the recreation field. The curriculum emphasizes the practical and theoretical aspects of recreation by offering supervised field experience and internships in various recreational settings throughout Illinois and the nation.

Students admitted to Recreation must meet the College of Education and Human Services requirements and follow their procedures for acceptance. Incoming freshmen must rank in the top one-half of their high school graduating class and have a standard composite ACT score of 19 or higher. Transfer students seeking admission from another institution or from another program at SIUC must have a 2.25 grade point average or above. Transfer students with fewer than 26 semester hours must have a 2.25 grade point average or above as well as the rank and test score requirements of an entering freshman. In order to be admitted to practicum courses, students must have a grade point average of 2.25 and the consent of the instructor. Students who do not meet the College of Education and Human Services requirements must be screened and approved by the department undergraduate faculty.

Students majoring in recreation are required to complete 41 hours of University Core Curriculum courses, 35 hours of professional core courses and 44 hours of professional courses in at least one area of specialization. Electives for their chosen area of specialization must have adviser approval. A total of 79 hours beyond the University Core Curriculum is required. A grade of C or better is required in all Recreation prefix required courses. Students may not enroll in Recreation 300, 301, 303 and 305 more than two times.

Recreation offers courses leading to specializations in therapeutic recreation and leisure services management. A careful selection of recommended electives can be used to build competencies in recreation administration, outdoor recreation and commercial recreation.

Students majoring in recreation should meet early in their college careers with a faculty member in the department to identify their area of interest and recommended electives. Within the field of recreation, certifications may be required for employment in different interest areas and faculty will discuss these with interested students. All students are encouraged to obtain First Aid Certification. Stu-

dents focusing on a therapeutic orientation should attempt to acquire either academic or practical experience related to physiological, psychological and sociological functioning and the concomitant effect of disability. As soon as possible, recreation majors will decide on one of the two specializations and elect courses for their area of specialization.

Bachelor of Science Degree in Recreation, College of Education and Human Services

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Recreation</i>	79
English 290	3
Recreation 300, 301, 302, 303, 305, 367, 380-4, 490-12	32
One of the specializations listed below	44
<i>Total</i>	120

LEISURE SERVICES MANAGEMENT

Recreation 365, 375 or 445, 425, 465	12
Accounting 210 or 220	3
Health Education 334	3
Workforce Education and Development 306 or Curriculum and Instruction 483a	3
Six hours selected from Psychology 301, 303, 304, 305, 307, 320, 323, 333	6
Electives (May be subject to certification requirements.)	17
<i>Total</i>	44

THERAPEUTIC RECREATION SPECIALIZATION

Recreation 304, 460, 461, 462	12
Six hours selected from Recreation 440a, 440b, 440c, 440d, 440e	6
Psychology 305 and 431	6
Health Care Professions 241	4
Health Care Professions 105	2
Health Education 311	3
Electives (in accordance with certification requirements)	11
<i>Total</i>	44

Courses (REC)

- 300-3 Introduction to Leisure Services.** An introduction to the professional field of recreation. A study of the historical, philosophical, sociological, psychological, and economic development of leisure and recreation. Insight into the fundamental concepts, values, and functions of leisure and recreation as an individual emotional experience as well as a necessary part of community life. May only be repeated once.
- 301-3 Leadership in Recreation.** An examination of leadership theories and styles appropriate for activity leaders in recreation. Emphasis will be placed on leadership process and methodology as applicable to leisure service settings. May only be repeated once.
- 302-3 Program Design and Group Dynamics.** A study of essential elements and basic principles involved with the organization and administration of various types of recreation programs and services. Prerequisite: 300 or concurrent enrollment. May only be repeated once.
- 303-3 Recreation for Individuals with Disabilities.** An examination of the philosophy and principles of recreation for individuals with disabilities as well as an investigation of programming/activity alternatives. Presentation of general physiological, psychological and social characteristics of various disabilities and societal and personal attitudes are explored. May only be repeated once. Prerequisite: 300 or consent of instructor.
- 304-3 Principles and Practices of Therapeutic Recreation.** Study of the existing practices and principles utilized in therapeutic recreation; professionalism; legislation; team approaches; activity analysis; supervision functions; community resources; special recreation programs. May only be repeated once. Prerequisite: 300, 302, 303.
- 305-1 Pre-Practicum.** An introduction to the responsibilities and opportunities of field experience within the field of recreation. The course includes field experience identification and selection, resume preparation, letters of application, interview procedures, professional skills, and development. May only be repeated once.

330-3 Outdoor Education. Philosophy and principles underlying the programs and methods in modern outdoor education and school camp programs with emphasis on curriculum enrichment through our natural resources. Expenses for required field trip not to exceed \$20. Prerequisite: 300, 302, 303 or consent.

331-3 Outdoor Living Skills. Introduction to basic living skills in wilderness environments. Topics include low-impact camping, food rations planning, clothing, travel techniques, equipment, and navigation. Sixteen class meetings plus a one-week wilderness trip. Trip fee not to exceed \$350. Wilderness Education Association Stewardship Certification may be earned. May only be repeated once.

365-3 Administration of Leisure Services. Administrative procedures in park and recreation departments — organization, finance, personnel, facilities, program, public relations, and other areas. May only be repeated once. Prerequisite: 302.

366-3 Workshop in Administrative Issues in Recreation. Designed to examine in a workshop current administrative issues in recreation such as practices and trends in budget and finance, legal aspects, grant writing, personnel practices and policies, and others. May only be repeated once. Prerequisite: 365.

367-3 Research and Evaluation in Recreation. An introduction to methodological approaches to the scientific study of phenomena inherent to recreation and leisure. The course includes basic research and evaluation designs, research and evaluation report writing, analysis of current leisure research, and use of computers in leisure research and evaluation. May only be repeated once. Prerequisite: 300, 302, 303.

375-3 Commercial Recreation and Tourism. Problems of commercial recreation and tourism will be addressed in this class. Topics include: free enterprise, marketing, transportation industry, attractions, food and lodging industry and government's role in tourism. May only be repeated once.

377-3 Overview of Campus Recreation. Focuses on the administration, organization, planning, implementation, and evaluation of programs and facilities in the campus recreation field. Specific topics addressed include historical and philosophical aspects, administrative practices, competitive and non-competitive programming, future trends and issues, budgeting, public relations, professional associations, and examination of individual characteristics of a variety of campus recreation programs conducted nationwide. May only be repeated once.

380-2 to 6 (2,2,2) Field Work in Recreation. Supervised leadership experiences in a public or private recreation setting. Students register for two hours per semester. Only one field work may be done per semester. Students must complete field experience in at least two areas of specialization. A minimum of four hours and a maximum of six hours of credit may be earned. Prerequisite: 300, 301, 302, 303 and 305; a minimum gpa of 2.25.

385-1 to 2 Readings in Recreation. Selected readings in professional publications for the purpose of becoming acquainted with the types of research current in community, park, special populations, outdoor recreation, outdoor education, and related fields. For recreation majors only. Prerequisite: 15 hours in recreation.

386-1 to 2 Problems in Recreation. Designed to enable students to effectively request funds, request personnel, initiate new programs, or support recreation leisure services. Prerequisite: 15 hours in recreation.

401-3 Fundamentals of Environmental Education. (Same as Agriculture 401 and Forestry 401) A survey course designed to help education majors develop and understanding of environmental education principles and teaching both inside and outside the classroom. Requires field trip transportation fee not to exceed \$25 per course registration. Prerequisite: Ten hours of biological science or ten hours of recreation and/or education, or consent of instructor.

423-3 Environmental Interpretation. (Same as Agriculture 423 and Forestry 423.) Principles and technique of natural and cultural interpretation. Two hours lecture, three hours laboratory. Requires field trip transportation fee not to exceed \$40 per course registration. Prerequisite: ten hours biological science or ten hours of recreation.

425-3 Planning and Design of Recreational Facilities. An examination of major design considerations for a variety of recreation facilities such as recreation centers, recreation sport complexes, parks, visitors centers, and natatoriums. Special attention will be given to long range facility planning. Prerequisite: 300, 301, 303, senior or graduate standing.

431-3 Expedition Leadership. Course focuses on professional leadership of highly adventurous wilderness trips. Emphasis is on development of sound judgment, decision-making, and teaching in wilderness expeditions. Three to five week expeditions in a wilderness setting. Trip fee not to exceed \$750. Outdoor Leader Certification by Wilderness Education Association is offered. Prerequisite: 331.

440-15 (3,3,3,3,3) Therapeutic Recreation for Specific Populations. Students will examine problems and characteristics of individuals with various disabilities. Emphasis is upon the role of therapeutic recreation with these specific populations in institutional and community settings: (a) therapeutic recreation for individuals with psychological disorders, (b) therapeutic recreation for individuals with developmental disabilities (c) therapeutic recreation for the aged, (d) therapeutic recreation for those in the criminal justice system, and (e) therapeutic recreation for individuals with physical disabilities. Prerequisite: 300, 302, 304 or consent.

445-3 Outdoor Recreation Management. Philosophy and principles underlying the growth and development of outdoor recreation management. Outdoor recreation is examined in terms of historical values, long range planning, site design, visitor needs, and environment impact. A laboratory cost of up to \$14 may be required. Prerequisite: 300, 302, 303 or consent of department.

460-3 Therapeutic Recreation Management. Organization and administration of therapeutic recreation programs in hospitals, nursing homes, schools for the retarded, detention centers, prisons and other institutions. Financial management and reimbursement issues are stressed. Prerequisite: 300, 302, 304 or consent.

461-3 Program Design and Evaluation for Therapeutic Recreation. To equip the student with skills necessary to systematically design and evaluate programs. Philosophy and nature of systems, system analy-

sis, assessment, individual treatment planning, implementation and evaluation of treatment programs. Prerequisite: 300, 302, 304, one section of 440, or consent of department. Concurrent enrollment in 380.

462-3 Facilitation Techniques in Therapeutic Recreation. This course is designed to provide an understanding of the basic processes and techniques of therapeutic recreation and to develop technical competencies necessary for the provision of quality therapeutic recreation services. Emphasis is on the skillful application of various processes and techniques to facilitate therapeutic changes in the client and the client's environment. Prerequisite: 304 or concurrent enrollment.

465-3 Advanced Administrative Techniques. Designed to examine current administrative topics in recreation such as practices and trends in budget and finance, legal aspects, grant writing, personnel practices and policies and others. Prerequisite: 365, 380.

475-3 to 39 (3 credits per topic) Recreation Workshop. Critical examination and analysis of innovative programs and practices in one of the following areas: (a) Budget and Finance, (b) Campus Recreation Services, (c) Commercial, (d) Maintenance of Areas and Facilities, (e) Outdoor Recreation, (f) Personnel, (g) Technological Advances, (h) Therapeutic Recreation—Aging, (i) Therapeutic Recreation—Developmental Disability, (j) Therapeutic Recreation—Emotional Illness, (k) Therapeutic Recreation—Physical Disability, (l) Therapeutic Recreation—Prisons and Detention Centers, (m) Tourism.

485-2 to 12 Practicum in Outdoor Education. A supervised experience in a professional setting. Emphasis on administrative, supervisory, teaching, and program leadership in outdoor, conservation, or environmental education setting. Costs for travel are the responsibility of the student. Prerequisite: consent of instructor.

490-12 Internship in Recreation. Supervised practicum experience in a professional recreation setting. Emphasis on administrative, supervisory, teaching, and program leadership in the student's area of specialization. For undergraduate credit only. Must be taken during student's senior year. Prerequisite: completion of all requirements for major in recreation or consent of course coordinator; 2.25 grade point average.

Recreation Faculty

Abernathy, William, Assistant Professor, *Emeritus*, M.S.Ed., Southern Illinois University, 1963.

Birch, David A., Professor and *Chair*, Ph.D., Pennsylvania State University, 1990.

Glover, James, Associate Professor, Ph.D., University of Maryland, 1980.

Glover, Regina, Associate Professor, Ph.D., University of Maryland, 1983.

Malkin, Marjorie J., Professor, Ed.D., University of Georgia, 1986.

McEwen, Douglas, Professor, *Emeritus*, Ph.D., Michigan State University, 1973.

Teaff, Joseph, Professor, *Emeritus*, Ed.D., Columbia University, 1973.

Yang, Heewon, Assistant Professor, Ph.D., Indiana University, 2000.

Rehabilitation Services (Major, Courses, Faculty)

The major in Rehabilitation Services is part of the Rehabilitation Institute. The mission of the baccalaureate program in Rehabilitation Services is to prepare students to work with people with disabilities in a variety of settings in a wide range of positions. Students will learn the knowledge and skills necessary to assist individuals with disabilities to obtain and maintain meaningful employment, to live as independently as possible, to participate to the fullest extent possible in their communities, and to assume control of their lives. Students who graduate from the program will be prepared to fill various roles including developmental training coordinator, independent living specialist, employment specialist, habilitation program coordinator, rehabilitation coordinator, substance abuse technician, community-based training instructor, case manager, job placement specialist, work adjustment specialist, residential service director, and job coach supervisor. They will be employed in settings such as vocational training programs, residential and day treatment programs, independent living centers, community rehabilitation programs and substance abuse programs. Students also will be well prepared to enter a master's degree program in rehabilitation or a related field.

Students majoring in Rehabilitation Services are required to complete 41 hours of University Core Curriculum courses, 45 hours in the major, and 34 hours of electives which are chosen by the student in conjunction with the advisor.

Students must maintain a 2.25 on a 4.0 scale overall and a 2.5 in major coursework to remain in the program and to graduate with a degree in Rehabilitation Services. Additionally, students must earn a C or better in all required rehabilitation services prefix courses.

The Capstone Option is available to students and is described in Chapter 3.

Bachelor of Science Degree in Rehabilitation Services, College of Education and Human Services

<i>University Core Curriculum Requirements</i>	41
From within the Disciplinary Studies courses, students are encouraged to take Psychology 102	
<i>Requirements for Major in Rehabilitation Services</i>	45
Rehabilitation 400, 401, 405, 406, 407, 426, 445b, 445h, 452, 461, 474, 493, 495	45
<i>Electives by Advisement</i>	34
Suggestions include: Communication Disorders and Sciences 301, 385; Health Education 311, 410; Psychology 222, 301, 303, 304, 431; Recreation 303; Rehabilitation 419, 445f, 446, 471; Sociology 303, 321; Special Education 400, 430	
<i>Total</i>	120

Courses (REHB)

205-3 Disability and Chronic Disorders. (University Core Curriculum) This course focuses upon the common characteristics of physical, sensory, developmental, medical, and psychiatric disabilities. The course will discuss the definition and classification of each particular type of disability. Emphasized will be the diagnostic criteria and the biological, cognitive, behavioral, and social aspects of each particular disorder as they occur over the lifespan.

400-3 Introduction to Rehabilitation. An introduction to the broad field of rehabilitation, to include the processes (services), facilities and personnel involved.

401-3 Disability, Diversity and Society. This course will address the relationship between prevailing societal attitudes and environmental designs and the opportunity of persons with disabilities to participate fully in society. It will examine the physical, mental, gender and cultural characteristics of persons with disabilities as determinants of their needs, values, aspiration and opportunities. How public policies can promote or limit inclusion and equal opportunities for persons with disabilities will also be addressed.

403-3 Independent Living Rehabilitation. Survey of principles and methods of independent living for persons with disabilities with attention to client assessment for rehabilitation, effective techniques for specific individuals with disabilities, and the variety of types and organization of independent living programs.

405-3 Introduction to Aging and Rehabilitation. Introduction to the field of aging. Includes social, political, economic and legal issues pertinent to an aging society and rehabilitation.

406-3 Introduction to Behavior Analysis and Therapy. A survey of the principles and procedures in behavior analysis and therapy and the scope of its application to human needs and problems.

407-3 Basic Practices in Rehabilitation. Provides students with the basic pragmatic knowledge and skill base necessary for effective day-to-day practice in entry-level rehabilitation positions. The material will include but is not limited to: the team process and being an effective team-member; clinical interviewing and relationship building skills; active communication; rights and advocacy, ethics and ethical decision-making; intervention and psychotherapy models; psychopharmacology; and record-keeping and information management. Not for graduate credit.

419-1 to 3 Cross-Cultural Rehabilitation. (Same as Black American Studies 490.) Major focus on the relationship/comparison of basic cultural, economic, and psychosocial processes relative to the rehabilitation of people in contemporary societies. Prerequisite: consent of instructor.

426-3 Community-Based Employment for Persons with Disabilities. Focuses on community work options for adults with severe disabilities. These community work options, supported work and supported employment, the issues surrounding transition from school to work, and the difference between sheltered and non-sheltered employment will be discussed from philosophical and practical viewpoints. Prerequisite: 400.

445-3 to 12 Rehabilitation Services with Special Populations. Procedures and programs pertinent to the care and treatment of special populations. Three semester credits will ordinarily be granted for each unit. Prerequisite: consent of instructor.

(a)-9 (3,3 3) Alcohol and Drug Abuse.

(b)-9 (3,3,3) Emotionally Disturbed.

(c)-9 (3,3,3) Juvenile Offender.

(d)-9 (3,3,3) Mental Retardation.

(e)-9 (3,3,3) Physically Disabled.

(f)-9 (3,3,3) Public Offender.

(g)-9 (3,3,3) Sensory Disabled.

(h)-9 (3,3,3) Developmental Disabilities.

446-3 Psychosocial Aspects of Aging. Selected theories of psychosocial aspects of aging will be presented and the psychological and sociological processes of aging with the ensuing changes will be related to these conceptual frameworks. Included for discussion and related to field experience will be such concerns as stress reactions to retirement, physical disabilities, impact of reduced economic resources, and other personal-social changes in aging. Topics will address the knowledge base needed by students concerned with rehabilitation of aging clients in institutional, community and home settings. Therapeutic techniques to ameliorate these stresses will be an integral part of the course.

447-3 Biomedical Aspect of Aging. The aging process in a life-span developmental perspective; biological theories of aging, physiological changes in middle and old age and their effects on behavior, performance potential, and psychosocial functioning; senility and other age-related disabilities, their prevention and management; geriatric health maintenance and rehabilitation; institutionalization; death and dying.

452-3 Individual Service Planning. This course provides students with the skills to develop individual service plans for individuals being served in community rehabilitation programs. Topics covered include person-centered assessment, functional community based training, and written treatment plans. Prerequisite: 406 and 445h or consent of instructor.

453-1 to 4 Personal and Family Life Styling. The academic and personal competencies that are characteristic of fully functioning, integrated persons within the context of our twentieth century environment will be systematically reviewed for adoption in every day living as well as in professional functions. Participants will focus on and experience life styling theories, models, and skills for their own growth and development and learn to assess basic risk-factors in their rehabilitation clients and families prior to helping them program a more balanced, synergistic, and holistic approach to living. Prerequisite: consent of instructor.

461-3 Introduction to Alcoholism and Drug Abuse. Orientation and introduction to a variety of topics related to alcohol and drug abuse; surveys history, theories of cause and development, consequences of abuse, classes and types of drugs, legislation, and other current issues relating to substance abuse and addiction.

468-3 Sexuality and Disability. Research and rehabilitation practices pertaining to the unique psychosexual aspects of various chronically disabling conditions will be examined.

471-3 Rehabilitation and Treatment of the Alcohol and Drug Abusers. A comprehensive examination of substance abuse treatment and rehabilitation; focus on various treatment approaches, treatment settings, and types of counseling to include an overview of individual, group, and family techniques; the rehabilitation counselor's role is addressed and necessary skills in treating drug and alcohol abusers. Prerequisite: 461 or consent of instructor.

474-3 Introduction to Staff Supervision. This course provides an introduction to the skills necessary to supervise staff in rehabilitation settings. Students will receive training and practice in using management styles, time management, delegation, disciplining, coaching, behavioral supervision, goal-setting, performance evaluation, giving feedback, keeping documentation, listening, conflict resolution and facilitating meetings. Not for graduate credit. Prerequisite: 400.

479-3 Technical Writing in Rehabilitation. Fundamentals of writing skills for rehabilitation specialists, including preparation and drafting of program/grant proposals, vocational evaluation/work adjustment reports, news releases and other publicity materials. Prerequisite: consent of instructor.

490-1 to 6 (1 to 3 per semester) Readings in Rehabilitation. Supervised readings in selected areas. Prerequisite: consent of instructor.

493-3 Clinical Evaluation. This course will provide students with the skills necessary to act as critical consumers of rehabilitation-related research. It will also provide students with the analytical skills necessary to apply the logic of research methodology to their work with consumers. The relationship between the scientific process and rehabilitation services will be emphasized throughout the course, including an introduction to research on program evaluation. Also emphasized will be the critique and interpretation of published research, as well as the writing competencies required for the student to successfully prepare a literature review paper. Prerequisite: simultaneous enrollment in or prior completion of 406.

494-1 to 12 Work Experience in Rehabilitation. Credit granted for work experience in rehabilitation. Rehabilitation 494 and 594 both cannot be counted for graduate degree; only one or the other can satisfy requirements toward a master's degree. Graded P/F only. Prerequisite: consent of department.

495-3 to 12 Internship in Rehabilitation. Supervised field experience in an agency or organization providing rehabilitation services. Not for graduate credit. Prerequisite: satisfactory completion of all other required undergraduate Rehabilitation courses, and minimum gpa of 2.5 in required Rehabilitation courses. P/F grading.

Rehabilitation Institute Faculty

Allen, Harry A., Professor, *Emeritus*, Ed.D., University of Arkansas, 1971.

Anderson, John O., Professor, *Emeritus*, Ph.D., Ohio State University, 1950.

Austin, Gary, Professor, *Emeritus*, Ph.D., Northwestern University, 1973.

Beck, Richard, Associate Professor, Ph.D., University of Wisconsin-Madison, 1987.

Bender, Eleanor, Assistant Professor, *Emerita*, M.S., Southern Illinois University, 1962.

Benshoff, John J., Professor and *Interim Director*, Ph.D., University of Northern Colorado, 1988.

Blache, Stephen E., Professor, *Emeritus*, Ph.D., The Ohio University, 1970.

Bordieri, James E., Professor, Ph.D., Illinois Institute of Technology, 1980.

Brackett, I. P., Professor, *Emeritus*, Ph.D., Northwestern University, 1947.

Brutten, Gene J., Professor, *Emeritus*, Ph.D., University of Illinois, 1957.

Bryson, Seymour L., Professor, Ph.D., Southern Illinois University, 1972.

Crimando, William, Professor, Ph.D., Michigan State University, 1980.

Cuvo, Anthony J., Professor, Ph.D., University of Connecticut, 1973.

Davis, Paula K., Professor, Ph.D., Southern Illinois University Carbondale, 1989.

Dickey, Thomas W., Assistant Professor, *Emeritus*, M.A., Southern Illinois University, 1964.

Dixon, Mark R., Professor, Ph.D., University of Nevada, 1998.

Falvo, Donna R., Professor, *Emerita*, Ph.D., Southern Illinois University, 1978.

Flowers, Carl R., Associate Professor, Ph.D., Southern Illinois University Carbondale, 1993.
Gardner, Margaret S., Associate Professor, *Emerita*, Ph.D., Northwestern University, 1960.
Greene, Brandon F., Professor, Ph.D., Florida State University, 1979.
Grenfell, John E., Professor, *Emeritus*, Ed.D., Oregon State University, 1966.
Hafer, Marilyn, Associate Professor, *Emerita*, Ph.D., Texas Tech University, 1971.
Hoshiko, Michael S., Professor, *Emeritus*, Ph.D., Purdue University, 1957.
Koch, D. Shane, Associate Professor, Rh.D., Southern Illinois University Carbondale, 1999.
Lee, Robert E., Associate Professor, *Emeritus*, Ph.D., University of Minnesota, 1964.
Lehr, Robert, Professor, *Emeritus*, Ph.D., Baylor University, 1971.
Poppen, Roger L., Professor, *Emeritus*, Ph.D., Stanford University, 1968.
Rehfeldt, Ruth Anne, Associate Professor, Ph.D., University of Nevada, 1998.
Renzaglia, Guy A., Professor, *Emeritus*, Ph.D., University of Minnesota, 1952.

Riggat, Theodore F., Professor, Ed.D., University of Northern Colorado, 1977.
Rubin, Stanford E., Professor, *Emeritus*, Ed.D., University of Illinois, 1968.
Schultz, Martin C., Professor, *Emeritus*, Ph.D., University of Iowa, 1955.
Schumacher, Brockman, Professor, *Emeritus*, Ph.D., Washington University, 1969.
Simpson, Kenneth O., Associate Professor, Ph.D., University of Nebraska-Lincoln, 1995.
Smith, Linda McCabe, Associate Professor, Ph.D., Southern Illinois University Carbon-dale, 1994.
Taylor, Darrell, Associate Professor, Ph.D., University of South Florida, 1992.
Tammel, Rebecca, Clinical Instructor, M.S., Eastern Illinois University, 1986.
Upton, Thomas D., Associate Professor, Ph.D., The University of Iowa, 2000.
Vieceli, Louis, Associate Professor, *Emeritus*, M.S.Ed., Southern Illinois University, 1959.
Worsdell, April S., Assistant Professor, University of Florida, 2002.
Wright, W. Russell, Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1974.

Respiratory Therapy Technology (Major, Courses)

Respiratory Therapy is an allied health specialty concerned with the treatment, monitoring, diagnostic testing, management, control and care of patients with deficiencies and abnormalities associated with respiration. It involves the therapeutic use of medical gases and administering apparatus, environmental control systems, medications, ventilator control and breathing exercises, cardiopulmonary resuscitation, maintenance on natural, artificial and mechanical airways, diagnostic cardiac and pulmonary function studies and disease prevention and patient education.

The respiratory therapy curriculum is designed to prepare students to become registered respiratory therapists. Completion of the program provides graduates the educational requirements necessary to take the national entry-level and advanced practitioner examinations administered by the National Board of Respiratory Care (NBRC) and the Pulmonary Specialty Exam (CPFT).

To be considered for enrollment into the Respiratory Therapy Technology program, prospective students must first obtain admission into the University and specify Respiratory Therapy Technology as the major of choice. Accreditation guidelines place limits on the enrollment in this program. Twenty-five full-time students will be admitted to begin the sequence of professional majors (RESP) courses. Students should apply to the University as soon as possible, since enrollment in the Respiratory Therapy Technology program is limited.

Students can enroll in Respiratory Therapy Technology prefix courses when the course prerequisites and English 101 have been successfully completed. Students with a health care background should contact the program director to determine whether advanced placement is available.

The Respiratory Therapy Technology program has a Linkage Agreement with Southeastern Illinois College, John A. Logan College, Rend Lake College, Kaskaskia College, Lakeland College, Frontier College, Olney Central College, Wabash Valley College and Shawnee College. If you have questions about this agreement, contact the community college advisor or SIUC School of Allied Health at (618) 453-7211.

The professional respiratory therapy courses consist of both formal classroom, laboratory and clinical experiences. The clinical experience will be in a variety of locations to provide maximum opportunity for procedures. These sites are chosen in consultation with the student and the clinical coordinator of the program.

The minimum length of time to complete this program is two and one-half calendar years (five academic semesters and one summer session). While the regular semesters will utilize classrooms, laboratories and clinical education experiences, the final fall semester is a full-time clinical internship at designated full-service hospitals. In the final semester, the program and adjunct faculty to assess clinical and theoretical competency administers exit evaluations. Students must satisfactorily complete these exit evaluations to obtain a certificate of completion from the program. Other programs on campus offer students an opportunity to apply respiratory therapy technology program courses toward baccalaureate degree requirements.

In addition to University tuition, fees and books, students should be prepared to cover the cost of uniforms, professional association dues, mock board examination fees, appropriate health tests and vaccines, and travel to clinical sites.

In accordance with Federal and Healthcare Accreditation guidelines, the clinical sites will require proof of current CPR certification and completion of HIPPA and blood-borne pathogens training. Affiliation sites may also require students to undergo a criminal background check and drug screening.

Associate in Applied Science Degree in Respiratory Therapy Technology
College of Applied Sciences and Arts

Requirements for Major in Respiratory Therapy Technology

University Core Curriculum Requirements	18
English 101, Speech Communication 101, Mathematics 108 or 110 or 113 or 125, Chemistry 106, Physics 101, Psychology 102.	
Support Courses	14
Health Care Management 364, Microbiology 201, Health Care Professions 241, Information Systems and Applied Technologies 229	
Major Courses	48 ¹
Respiratory Therapy 203, 213, 223, 243, 253, 263, 273, 283, 293, 300, 303, 313, 323, 343, 353, 363, 373a,b,	

Total 80

¹Students must pass all major course requirements with a grade of C or better in order to graduate.

Respiratory Therapy Technology Suggested Curricular Guide

FIRST YEAR			SECOND YEAR		
	FALL	SPRING		FALL	SPRING
University Core Curriculum	9	9	RESP 203, 263	5	3
Support Courses	7	7	RESP 213, 273	1	1
			RESP 223, 283	2	3
			RESP 243, 293	3	2
			RESP 253, 323	1	3
			RESP 313, 363	3	3
Total	16	16	Total	15	15
SUMMER SESSION			THIRD YEAR		
	SUMMER			FALL	SPRING
RESP 300	3		RESP 353	8	
RESP 303	1		RESP 373a	2	
RESP 343	2		RESP 373b	2	
Total	6		Total	12	

Courses (RESP)

199-1 to 10 Individual Study in Respiratory Therapy. Provides students in the first year of the program with the opportunity to develop a special program of studies or clinical review or experiences to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: consent of school.

203-5 Principles of Respiratory Therapy. A course designed for the beginning respiratory therapy student. An introduction to the state of the art and fundamental principles and devices used in respiratory care practice. Significance is given to indications and contra-indications for therapeutic modalities, appropriate equipment selection, airway management and rehabilitation. Five hours lecture per week. Prerequisite: respiratory therapy major, consent of school and completion of or concurrent enrollment in a college physics course.

213-1 Respiratory Therapy Exercises. Concepts and theories are applied in a laboratory setting to provide and enhance a working knowledge with respiratory therapy equipment, the physical principles of equipment operation and pulmonary therapeutic techniques. One hour credit for three laboratory hours weekly. \$30 laboratory fee is required. Prerequisite: concurrent enrollment in 203.

223-2 Patient Care Techniques. Presents basic principles and essential skills necessary to perform patient care safely and effectively. Skills include medical asepsis, terminology, communication, patient assessment and positioning, medical ethics and behavioral problems unique to patients with respiratory illnesses. Lecture. Prerequisite: consent of school.

243-3 Basic Cardiopulmonary Physiology. A presentation of physiological functions including acid-base relationships, gas perfusion, functions of ventilatory control, ventilation perfusion analysis, cardiopulmonary hemodynamics and blood gas analysis. Prerequisite: Health Care Professions 241, chemistry or equivalents.

253-1 Clinical Practice I. Orientation to the clinical setting with special emphasis on basic procedures and the role of the respiratory therapy department as part of the health care system. Equivalent to one eight-hour session per week for the semester. Prerequisite: concurrent enrollment in 203, 213, 223, 243 and 313.

263-3 Principles of Mechanical Ventilation. Introduces mechanical function of equipment used in continuous and intermittent ventilation of adult, pediatric and neonatal patients. Indication, contraindications, and hazards of continuous ventilation with significance given to ventilatory management and monitoring techniques. Three lecture hours per week. Prerequisite: 203, 213, concurrent enrollment in 273 and respiratory therapy major.

273-1 Mechanical Ventilation Laboratory. A laboratory practical course with emphasis on functional mechanical ventilation characteristics, assembly of patient circuits, ventilator monitoring and weaning techniques. Also included is the analysis of arterial blood gas parameters and assessment of the ventilator patient. \$40 laboratory fee is required. Three hours per week for one credit. Prerequisite: concurrent enrollment in 213 and 263 and respiratory therapy major.

283-3 Survey of Pulmonary Diseases. An introduction to the nature, cause and treatment of pulmonary diseases which involve changes in structure and function. Prerequisite: Allied Health 241 or equivalent.

293-2 Clinical Practice II. Supervised clinical experience which emphasizes fundamental respiratory therapy procedures and introduces the student to critical care management. Equivalent to sixteen clinical hours per week. Prerequisite: 203, 213, 243, 313 and 253.

299-1 to 10 Individual Study in Respiratory Therapy. Provides students in the program with the opportunity to develop a special program of studies or clinical review or experiences to fit a particular need not met by other offerings. Enrollment provides access to the resources of facilities of the entire institution. Each student will work under the supervision of a sponsoring staff member. Prerequisite: enrollment in the program and consent of school.

300-3 Seminar in Trends and Issues in Respiratory Care. A topical seminar conducted by staff with clinical faculty and guest lectures to review and expand on pertinent areas applicable to respiratory and cardiopulmonary technology. Lecture and discussion. Prerequisite: consent of school.

303-1 Clinical Simulation Study. Designed for the advanced respiratory care student or practitioner in preparation for the clinical simulation examination required for the NBRC advanced practitioner credential. Content will review format, matrix and examples of clinical simulations and typical case studies used on the examination. Conducted via independent study with a computer emphasis. One lecture/assessment hour per week. Computer lab as necessary. Prerequisite: consent of school.

313-3 Respiratory Pharmacology. This course is devoted to the study of drugs, their nature, properties and effects on the human body. Special emphasis is given to drugs which affect the cardiopulmonary and renal systems. Prerequisite: chemistry, mathematics, Allied Health 241 or equivalent.

323-3 Respiratory Pathophysiology. A discussion of pulmonary complications with obstructive and restrictive disease components and their relationship with pulmonary function studies and blood gas analysis. Emphasis is given to patients with complications directly or indirectly affecting respiration and clinical applications. Prerequisite: 243, physiology, and respiratory therapy major.

343-2 Neonatal/Pediatric Respiratory Care. Respiratory care of the neonate and pediatric patient is presented with emphasis on: physiology; cardiopulmonary disorders and diseases; assessment, evaluation and monitoring; and respiratory therapy modalities of treatment. Prerequisite: 243.

353-8 Clinical Internship. Integration of clinical practice knowledge for the advanced student. Students receive clinical experience in neonatal and adult intensive care units with an emphasis in ventilatory management. Students should plan to attend a major medical institution off-campus for sixteen weeks in the fall. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: 263, 273, 293, 303, 323, 343, 363, Allied Health 300, English 101 and consent of school.

363-3 Cardiopulmonary Evaluation and Monitoring. An intensive study of diagnostic testing and monitoring techniques used in the clinical evaluation of the cardiac pulmonary systems. Cardiopulmonary assessment is presented using pulmonary function testing, electrocardiograph and noninvasive and invasive cardiopulmonary tests. Prerequisite: 243, 313.

373A-2 Clinical Practice III. Through a systematic review of didactic material covered in prior respiratory therapy courses, and clinical internship experience with respiratory therapy therapeutic, diagnostic and monitoring procedures, students will demonstrate knowledge and proficiencies to be a practicing respiratory therapy graduate. Prerequisite: 293 and respiratory therapy major.

373B- 2 Clinical Practice III. Research seminar: a faculty supervised research project identifying rural clinical problems relevant to respiratory therapy is completed by the student. Project requires research instrument development and analysis. Prerequisite: 293 and respiratory therapy major.

Restaurant Management

(SEE FOOD AND NUTRITION)

Rural Appraisal

(SEE AGRIBUSINESS ECONOMICS)

Rural Development

(SEE AGRIBUSINESS ECONOMICS)

Science (College, Courses)

Courses (SCI)

201-1 Career Preparation Seminar for Health Professions. Preprofessional information and experience for preparation to enter schools of medicine, dentistry, osteopathy, podiatry, optometry and veterinary medicine. Classroom and off-campus experience. Graded Pass/Fail. Prerequisite: Mathematics 108 and 109, or 111, Biology 200a,b and Chemistry 200, 201. Minimum 3.0 overall gpa.

210A-3 Integrated Science I. (Advanced University Core Curriculum course) An integrated, inquiry-based science course based on topics delineated in national and state science education standards. This course is designed to help prepare teachers to teach science. Content focus is on physics, earth/space sciences, and science inquiry. Satisfies University Core Curriculum Science Group I requirement. Lab fee: \$10. Prerequisite: elementary education, child and family services and preschool-primary only; Mathematics 120, Curriculum and Instruction 120 or Mathematics 114.

210B-3 Integrated Science II. (Advanced University Core Curriculum course) An integrated, inquiry-based science course based on topics delineated in national and state science education standards. This course is designed to help prepare teachers to teach science. Contents focus is on chemistry, biological sciences, and science inquiry. Satisfies University Core Curriculum Science Group II requirement. Lab fee: \$10. Prerequisite: elementary education, child and family services and preschool-primary majors only; Mathematics 120, Curriculum and Instruction 120 or Mathematics 114.

257-2 to 8 Concurrent Work Experience Credit. Practical experience in a laboratory or other work directly related to course work in a College of Science program and to the student's educational objectives might be used as a basis for granting credit in the College of Science. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit for ongoing work experience is sought by petition and must be approved by the dean and the executive officer of the student's major program before registration. Mandatory Pass/Fail.

258-2 to 8 Work Experience Credit. Practical experience in a laboratory or other work directly related to course work in a College of Science program and to the student's educational objectives might be used as a basis for granting credit in the College of Science. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit for past work experience is sought by petition and must be approved by the dean and the executive officer of the student's major program. No grade for past work experience.

259-2 to 24 Vocational Education Credit. Formal, post-secondary, educational credit earned in a military service or other vocational, technical, or occupational program and directly related to the student's educational objectives may be used as a basis for granting credit in the College of Science. Credit is given when specific program credit cannot be granted and is usable for elective credit only. Credit is sought by petition and must be approved by the dean and the executive officer of the student's major program.

300-1 to 12 Internship. Supervised training in a formalized internship program of a scientific nature. May not be used for credit in a science major. Mandatory Pass/Fail. Prerequisite: science major and prior approval of the sponsoring agency and the department.

388-0 to 36 Study Abroad. Provides credit toward the undergraduate degree for study at accredited foreign institutions or approved overseas programs. Final determination of credit is made on the student's completion of the work. Zero to eighteen credits per semester, zero to nine for summer session. Prerequisite: one year of residence at Southern Illinois University Carbondale, good academic standing, and prior approval of the course of study by the major department and the College of Science.

Social Studies

(SEE CURRICULUM AND INSTRUCTION)

Social Work (Major, Courses, Faculty)

The course of study consists of three major components: (1) required University Core Curriculum course work; (2) required social work major course work; (3) general university electives. The University's core curriculum program, required of all students pursuing a bachelor's degree, is a carefully balanced series of courses in the sciences, social sciences, humanities, fine arts, English and communication skills, mathematics, health, multicultural and interdisciplinary studies. The university core curriculum courses in sociology, political science, economics, human biology and psychology are particularly relevant to the social work major.

The social work requirements in the curriculum include courses that define the role of the profession as it relates to society, politics, and the economy; that provide the conceptual framework to address problems and changed circumstances for individuals, families, groups, and communities; and that examine the structure, functions, policies, programs, and strategies of the social welfare system. Methods courses cover interviewing and interpersonal helping skills, problem solving, group theory, community organization, community development, and social research. This core of courses is designed to give students a solid foundation in understanding, creating and applying research that will help the students become effective professionals; and to give the students the potential to add to the body of knowledge that will guide their daily decisions and behavior. The field practicum provides an opportunity to integrate theoretical knowledge and helping skills learned in the classroom with the *real world* settings of Southern Illinois social service agencies. A concurrent weekly seminar supports this integration of theory and practice. The practicum is taken in the second semester of the senior year.

General university electives may be chosen from any university courses, which are relevant to personal interests, and/or social work major. Students may use university electives to pursue a minor in a field of study related to social work major, for example: Black American Studies, Women's Studies, Child and Family Services, Administration of Justice, etc.

Social work majors must maintain a minimum overall grade point average of 2.25 (on a 4.0 scale). Students admitted into the program must achieve at least a grade of C in Social Work 275 & 383 courses and maintain at least a 2.25 overall grade point average (on a 4.0 scale) in each semester to remain in the program.

Students must have an overall grade point average of 2.50 (on a 4.0 scale) in Core Social Work Courses (Social Work 275, 383, 400a, 400b, 401, 402, 411 and 421) to enroll in field practicum (441 & 442).

The School of Social Work is accredited by the Council on Social Work Education (CSWE), 1725 Duke St. Suite 500, Alexandria, VA 22314-3457, Phone: (703) 683-8080.

Bachelor of Science Degree in Social Work, College of Education and Human Services

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for Major in Social Work</i>	60
<i>Plant Biology 115 or Zoology 115, Sociology 108, Political Science 114, Psychology 102 and Economics 113</i>	(9) + 6
Foundations of Social Work: Social Work 275, 400a, 400b, 411, 421	15
Social Work Practice: Social Work 383, 401, 402, 441, and 442	21
Social Work Policy, Practice, and Issues: A total of 6 hours selected from Social Work 350, 361, 366 or other university courses	6

Social Work 291	3
At least two Liberal Arts electives at the 300- or 400-level selected from: anthropology, philosophy, history, political science, psychology, sociology	6
An introduction to statistics course	3
Electives	19
Total	120

Social Work Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
SOC 108 ¹ , PSYC 102 ¹	3	3	PLB 115 or ZOOL 115 ¹	3	-
Core Humanities ²	3	3	POLS 114 ¹ , ECON 113 ¹	3	3
ENGL 101, 102	3	3	Core Multicultural	3	-
MATH 113, SPCM 101	3	3	Core Fine Arts,	3	-
Core Health	2	-	Elective	3	10
Core Science	-	3	Core Interdisciplinary	-	3
Total	14	15	Total	15	16
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
SOCW 275, SOCW 400a	3	3	SOCW 400b	3	-
SOCW 291, SOCW 401	3	3	SOCW 402, 441 ⁴	3	9
SOCW 383, SOCW 421	3	3	SOCW 411, 442	3	3
SOCW Elective, LA Elective....	3	3	SOCW Elective	3	-
LA Elective, Statistics ³	3	3	Elective	3	3
Total	15	15	Total	15	15

¹ Required for Social Work major.
² The school recommends that electives in the humanities include Philosophy 104 or 105.
³ Required to enroll for Social Work 411.
⁴ Students must have a gpa of 2.5 (on a 4.0 scale) in Core Social Work Courses (Social Work 275, 291, 383, 400a,b, 401, 402, 411 and 421) to enroll in Field Practicum.

Courses (SOCW)

275-3 Social Welfare as a Social Institution. Explores the interdependence of social, cultural, political and economic factors in the history and practice of social welfare with special reference to development of the social work profession. Focus on service integration and coordination in community-based delivery systems in rural areas, especially for poor and oppressed populations.

291-3 Social Services and Minority Groups. Exploration of the needs, experiences and attitudes of minority populations pertaining to delivery of social services in rural settings. Emphasis on relationship of cultural diversity to practice, policy and research content.

295-1 to 6 Field Service Practicum in Southern Illinois. This course is designed for freshman and sophomores who are volunteering service to community, social service, or health agencies in southern Illinois. Credit based upon time spent in direct service. Mandatory Pass/Fail.

350-1 to 6 Social Work Special Issues. (one per topic) (a) Practice. (b) Policy and planning. (c) Public welfare services. Topics will be selected from these three areas. Limited to no more than three credit hours per semester. May be repeated as topic varies up to six semester hours.

361-3 Child and Family Services. Problems of child-parent relationships and difficulties in social functioning of children and adolescents. Adoptions, foster home and institutional placements, protective services. Focus on services in rural areas.

363-3 Social Work with the Aged. Basic concepts of social work methods applied to the older adult group. Characteristics of the aged group, its needs and potentials. Social trends and institutions involved in services to the aged.

366-3 Public Policies and Programs for the Aged. An introduction to public policy, program and planning for the aged. A framework is utilized for analyzing policy issues, programs and research in such areas as income maintenance, long term care, transportation, leisure time, housing and social services in order to aid present and future practitioners who work with the aged.

383-3 Interviewing and Interpersonal Helping Skills. This is an introductory course in interpersonal skills in the social services in a systems context. Intake, interviewing and recording are emphasized. Focus on practice in multi-service settings. Prerequisite: Psychology 102.

396-1 to 3 Readings in Social Work. Varying topics not ordinarily covered in depth in regular courses and of specific interest to advanced students. Prerequisite: consent of instructor.

397-3 Statistics for Social Workers. Statistical methods as applied to social work, focusing on basic descriptive and inferential statistics and their relationship to social work research. Students are provided with statistical methods and models that are applicable to social work research. Lastly, students are prepared to critically analyze published research and apply statistical principles in their own research. Prerequisite: social work majors only.

400A-3 Human Behavior and Social Environment I. The first of two courses that examine the normal and dysfunctional life span development from a systems theory perspective. The first course focuses on the behavior of individuals and families. It also explores the impact of the environment and the implications for

generalist practice with rural populations. Not for graduate credit. Prerequisite: Plant Biology 115 or Zoology 115 and Sociology 108.

400B-3 Human Behavior and Social Environment II. Continuation of 400a. A systems perspective is used to examine the theoretical and practice implications of the life cycle as they relate to the development of groups, organizations and communities in rural settings. The course links content to generalist practice skills taught in 401 and 402. Not for graduate credit. Prerequisite: 400a, 401 and 421.

401-3 Generalist Practice I. The first of two courses, which prepares for generalist practice. Focuses on intervention skills with individuals and families at a beginning level of proficiency. Emphasis on assessment and treatment in multi-service agencies in rural settings. Not for graduate credit. Prerequisite: 275, 383.

402-3 Generalist Practice II. Continuation of 401. Generalist practice skills and knowledge with groups, organizations and communities at beginning level of proficiency. Emphasis on assessment and treatment in multi-service agencies in rural settings. Not for graduate credit. Prerequisite: 400A, 401 and 421.

411-3 Methods of Social Research. Social work research in generalist practice. Examines the principles, concepts and methods of scientific investigation in terms of its application to social work research and practices. Provides basic skills for self-assessment research in field practicum in spring semester. Not for graduate credit. Prerequisite: 400a, 401, 421, and an introduction to statistics course.

426-4 Social Factors in Personality and Adjustment. (Same as Psychology 464) Review of selected theoretical orientations and research traditions in social psychology. Comparison of different theoretical and methodological approaches – symbolic interaction, role theory, developmental and social psychology, theories of attitude organization and change, studies of belief and value systems, theories of socialization.

441-9 Field Practicum. Students are expected to complete 420 hours in an approved social service agency during the course of the semester. Utilizes learning contracts with goals, objectives and evaluation to integrate course content into practice, including practice self-assessment. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: senior standing, 275, 291, 383, 400a, 400b, 401, 402, 411, 421; and a 2.5 gpa in Social Work. Must be taken concurrently with weekly practicum seminar.

442-3 Field Practicum Seminar. The seminar assists the student who is in field practicum to systematically conceptualize and integrate the field experience with generalist systems theory, skills and knowledge. The seminar builds on and reemphasizes content provided in previous social work courses. Seminar discussion focuses on shared fieldwork experiences: practice issues related to social work principles, ethics and professionalism, and intervention strategies. Not for graduate credit. Prerequisite: concurrently with 441.

446-1 to 3 Selected Topics in Social Work. Seminar on selected problems and issues in the social work practice. Content varies with interests of instructor and students. Prerequisite: junior standing.

478-1 to 6 International Social Work: Generalist Policy and Practice. Provides an international perspective for the study of social work groups, organizations and communities. Focuses on the examination of assessment and problem solving interventions and cross-cultural comparisons of policy and practice in foreign countries.

496-1 to 3 Independent Research in Social Work. Provides opportunity for students to conduct independent research with the guidance of a faculty member. The student and faculty member identifies topics of research. Prerequisite: consent of instructor.

Social Work Faculty

Baker, Connie J., Clinical Instructor, M.S.W., Southern Illinois University Carbondale, 1987.

Buila, Sarah, Assistant Professor, Ph.D., University of Illinois at Urbana-Champaign, 2005.

Chezem, Joanne, Clinical Instructor, M.S.W. Southern Illinois University Carbondale, 1990.

Dreuth Zeman, Laura, Associate Professor, Ph.D., Vanderbilt University at Nashville, 1996.

Jurkowski, Elaine T., Associate Professor, Ph.D., University of Illinois at Chicago, 1997.

Kawewe, Saliwe, Professor, Ph.D., St. Louis University, 1985.

McFadden, Judith V., Clinical Instructor, M.S.W., University of Illinois at Urbana-Champaign, 1983.

Miah, Mizanur R., Professor and *Director*, Ph.D., Southern Illinois University, 1985.

Mukherjee, Dhnibodhi, Assistant Professor, University of South Carolina, 2006.

Paris, Wayne, Assistant Professor, University of Huddersfield, UK, 2006.

Reichert, Elisabeth, Associate Professor, Ph.D., University of Tennessee at Knoxville, 1989.

Soliman, Hussein, Professor, Ph.D., University of Tennessee, 1993.

Steen, Julie, Assistant Professor, Ph.D., Florida State University, 2003.

Sociology (Department, Major, Minor, Courses, Faculty)

Sociology is the science of society. It explains how human groups, institutions, and social movements shape our lives. Sociology develops students' insights into theoretical and practical aspects of life. Sociology students study such topics as deviance, sex and gender roles, social movements, social problems, large-scale business and government organizations, international development, and social change.

Training in sociology is basic both to creative living and to such practical tasks as the development and effective working of businesses, families, community service agencies, political movements and parties, churches, social clubs, government, industry, and schools.

Those with degrees in sociology find meaningful and rewarding employment as consultants to business and government, social change agents (e.g., community organizers), politicians, educators, and diplomats. Like other liberal arts students, sociology majors also enter the business world, particularly in the sales or personnel divisions of major corporations.

An undergraduate major in sociology is excellent preparation for those anticipating graduate study in law, social welfare, business administration, journalism, and many of the technical and scientific fields. In addition, many students have enjoyed the benefits of double majors or major-minor combinations between sociology and one of these related fields. Sociology and paralegal studies is an example of double majors involving two programs that are both in the College of Liberal Arts, while sociology and journalism are double majors involving programs in the College of Liberal Arts and the College of Mass Communication and Media Arts.

The Department of Sociology offers the two following alternative plans of study for completion of its major.

General Sociology Plan. This plan is for students seeking a broad academic background in sociology. Those who want a general liberal arts education in the social sciences or those anticipating graduate study in one of the social sciences usually choose it.

Applied Sociology Plan. This plan combines general study in sociology in individually planned programs built around applied courses, including field work/internship experience. The applied sociology plan is primarily for those who seek careers in governmental, business, or community service occupations for which graduate school training either is unnecessary or taken as an option somewhat later in one's career. Both the general and applied plans provide maximum flexibility in course selection by students, while still ensuring that all majors receive training in the fundamentals of the field. Such flexibility enables students to tailor either their general or applied plan to specific career goals.

Academic Advisement. A student planning to major or minor in sociology should consult the department's director of undergraduate studies as early as possible for initial advisement on the major and to be assigned a faculty advisor. Subsequently the student will visit a faculty advisor each semester until all major requirements have been completed. A record of progress for each student will be on file in the department.

To graduate with a major in sociology the student must meet all the University Core Curriculum requirements and the requirements of the College of Liberal Arts. The major requires thirty-six hours of course work. Four courses are required: Sociology 108, 301, 308 and 312. A capstone course during the senior year, Sociology 497 or 498, which requires prior consent of instructor, is also required. Each student must also take two additional 400-level courses in sociology. These requirements are summarized below.

Transfer Students. Credits for some sociology courses taken at community colleges are transferable. Students should have their sociology credits evaluated by the department's director of undergraduate studies at the earliest opportunity. At least 20 hours of sociology credit must be earned at Southern Illinois University Carbondale. The two 400-level courses must be taken at a senior level institution and Sociology 497 or 498 must be taken at Southern Illinois University Carbondale.

Bachelor of Arts Degree in Sociology, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements (See Chapter 4)</i>	14
<i>Requirements for Major in Sociology</i>	36
1) Sociology Requirements: Sociology 108, 301, 308 and 312	14
2) Senior Year Work: Sociology 497 (or 498)	4
3) At least two additional sociology 400-level courses	6
4) Sociology course electives	12
<i>Electives</i>	29
<i>Total</i>	120

No more than nine hours of Sociology Core Curriculum courses, including Sociology 108, can count toward both the University Core Curriculum requirements and the Sociology major.

Sociology Minor

A minor in sociology consists of a minimum of 15 hours, including Sociology 108 and at least three more 300- or 400-level sociology courses at SIUC. An average gpa of 2.0 or higher must be achieved in sociology courses. No more than six hours of Sociology Core Curriculum courses, including Sociology 108, may count toward both the University Core Curriculum requirements and the sociology minor.

Internships in Sociology

Internships are open to sociology majors with junior standing and a gpa of 2.5 or above. They are intended to give students practical and sociologically relevant work experience, allowing them to try out a field in which they might wish to work upon graduation. Internships require a minimum of 120 hours of unpaid work with an organization or business approved by the Internship Coordinator.

Honors Program

The department offers an honors program for academically outstanding sociology majors. Qualifications for acceptance into this program are: (1) an overall grade point average of at least 3.00; and (2) completion of 8 hours in sociology courses with a grade point average of at least 3.25 in all sociology courses taken at Southern Illinois University Carbondale, and the completion of no fewer than six, nor more than fourteen, semester hours in research or independent study which are counted toward the major. Successful completion of the department's honors program is noted on the academic record at the time the degree is recorded and on the diploma, i.e., Departmental Honors in Sociology. For details, qualified students interested in this program should consult the department's director of undergraduate studies.

Courses (SOC)

108-3 Introduction to Sociology. (University Core Curriculum) [IAI Course: S7 900] An introduction to the sociological perspective on human behavior, the structure and processes involved in social relationships, social stratification and inequality, social institutions, and social change. A survey of major areas of interest in sociology. Required of majors and minors in Sociology.

215-3 Race and Ethnic Relations in the United States. (University Core Curriculum) [IAI Course: S7 903D] Current theory, research and events in race-ethnic relations in the United States, including the intersection of class, gender and sexuality. Topics include the European colonization of North America, dynamics of immigration, identity formation among ethno-racial groups and political economy of racism.

223-3 Women and Men in Contemporary Society. (University Core Curriculum)(Same as Women's Studies 223.) Examines theories of women's and men's roles in society. Surveys contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movements, alternative family/lifestyles and childrearing.

233-3 Sport and Modern Society. (Same as Physical Education 245.) An examination of the social, cultural, political and economic aspects of contemporary sport. Special attention given to gender, race, and social class issues related to sport.

298-1 Multicultural Applied Experience. (Multicultural Applied Experience Course) An applied experience, service-oriented credit in American diversity involving a group different from the student's own. Difference can be manifested by age, gender, ethnicity, nationality, political affiliation, race, or class. Students can sign up for the one-credit experience in the same semester they fulfill the multicultural requirement for the University Core Curriculum or coordinate the credit with a particular core course on American diversity, although neither is required. Students should consult the department for course specifications regarding grading, work requirements and supervision. Graded Pass/Fail only.

301-3 Theory and Society. Sociological theories explain concrete social phenomena by modeling them abstractly. This course exposes students to exemplary theories, either classical or contemporary, and analyzes the general strategies sociologists used to develop them. Required of majors in sociology.

302-3 Contemporary Social Problems. Examines how social phenomena come to be defined as social problems and the outcomes of these processes for specific cases. How is it that a social phenomenon comes to be seen as a social issue? Analysis of selected social problems and critical assessment of claims-making about these problems.

303-3 Sociology of Deviance. Review of sociological perspectives used in the study of deviance and deviants. Does deviance have functions in society? How is it that a group of individuals comes to be defined as deviant? Examines societal reactions to deviance and consequences for people defined as deviant. Analysis of selected forms of deviance, such as mental illness, "punk" subcultures, eating disorders, drug and alcohol abuse and sex workers.

304-1 Global Perspectives on the Family. (University Core Curriculum) [IAI Course: S7 902] People around the world experience family life under different circumstances and from different perspectives. This course will focus on these differences and how societies have evolved to meet the needs of family units within their different social settings. Other key topics that affect families around the world will be discussed: global economy and families, gender inequality, familial violence, and environment concerns.

306-1 Popular Culture in Society. (University Core Curriculum) Examines the social organization of popular culture, treating popular culture objects as products that are created, manufactured, distributed and consumed. The focus is on the people, activities, organizations and institutions that are involved in popular culture.

308-4 Statistics for Social Science. Methods and application of statistics in the social sciences. Measures to describe distribution, measures of relationship, statistical inference.

312-4 Elements of Sociological Research. The student is introduced to a variety of research methods in the social sciences including use of the library, techniques of observation, and elementary steps in quantitative measurements and analysis. Satisfies the CoLA Writing-Across-the-Curriculum requirement.

321-3 Society and the Individual. Introduction to basic concepts in sociological and social psychology (micro-sociology). Examines how individuals create and shape the social world that simultaneously shapes and creates individuals. Emphasizes face-to-face interaction, socialization, social location and identity.

340-3 Family. The family in historic and contemporary society; evolution of the modern family; changes in family functions, structure, roles; and an examination of variation and change in family systems.

351-3 Sociology of Religion. Examines the dynamics of religious institutions in society, and of religious beliefs and attachments among individuals, including the connections between religion and family, health, education, and politics.

371-3 Population Problems. Characteristics and problems of population growth, composition, distribution, mortality, birth control and fertility, international and internal migration, and government policies.

372-3 Criminology. An examination of the socially constructed nature of crime, and historical and contemporary theories of criminality. Additional topics of interest include types of offenses, methods of studying crime, and the correlates of crime.

386-3 Environmental Sociology. Focus on social structural conditions and institutions that have changed the natural environment as a social problem. Responses to these problems will be addressed on the individual, group (race, class and gender) and institutional levels.

396-1 to 6 Readings in Sociology. Instructor and student select reading topics which are not covered in depth in regular course offerings. Prerequisite: consent of department and instructor.

397-3 Special Topics in Sociology. Varying sociological topics selected by the instructor for study in depth and breadth. Topics will be announced in advance of registration for the course. Prerequisite: consent of department and instructor.

399-2 to 8 Internship in Sociology. Designed to provide students majoring in sociology the opportunity to engage in applied sociology and gain valuable work experience. Classroom meetings are required. Prerequisite: Minimum of junior standing and consent of the instructor. No more than three hours of 399 to count toward the major.

406-3 Social Change. Theories and problems of social change; their application, with emphasis on the modern industrial period.

415-3 Logic of the Social Sciences. (See Philosophy 415.)

423-3 Sociology of Gender. (Same as Women's Studies 442.) Examines social science theory and research on gender issues and contemporary roles of men and women. The impact of gender on social life is examined on the micro level, in work and family roles, in social institutions, and at the global, cross-cultural level.

424-3 Social Movements and Collective Behavior. An analysis of social behavior in non-institutional settings such as crowds, disasters, riots, mass panics, crazes, cults, and social movements. Emphasis is on the cultural and structural factors leading to collective action and its impact on social change.

426-3 Social Factors in Personality and Behavior. (Same as Psychology 464.) Advanced study of social psychology from both sociological and psychological perspectives. Analyzes the reciprocal influence of groups

and individuals, including the development of self, social interaction, gender and ethnic relations, impression management, interpersonal attraction, and social influence.

435-3 Social Inequality. Discussion of theories and evidence pertaining to the socio-structural causes and consequences of inequality based on social class, prestige, power, gender, wealth and income.

437-3 Sociology of Globalization and Development. Survey of sociological theories and research on globalization and development: modernization, dependency, world-system, and global economy. Problem areas include population growth and control, economic growth and underdevelopment, role of state, transnational corporations, financial institutions, and organizations, non-government organizations, work, population, migration, social movements and resistance, gender, race-ethnic, class, and sexuality issues.

438-3 Sociology of Ethnic Relations in World Perspective. Examines theories, concepts and research on the structure of ethnic relations and ethnic problems in contemporary societies in major world regions. Assimilationist, pluralist, secessionist, and militant types of ethnic and racial group relations are covered in selected societies. Designed for students with advanced interest in comparative ethnic relations. Prerequisites: 215 is recommended.

460-3 Sociology of Medicine. Analyzes the social structures and issues involved in health, illness, and health-care delivery systems in the United States. Explores the economic and political influences on the role of medicine in society, as well as the organization of medical care and health institutions. Critically examines the social processes and factors that influence health and illness behavior.

461-3 Women, Crime and Justice. (Same as Administration of Justice 460 and Women's Studies 476.) Addresses the topic of women as offenders, as victims and as workers in the criminal justice system.

462-3 Victims of Crime. (Same as Administration of Justice 462.) Examines the extent and nature of victimization, theories about the causes of victimization, the effects of crime on victims and services available to deal with those effects, victims' experiences in the criminal justice system, the victims' rights movement and alternative ways of defining and responding to victimization. Satisfies the CoLA Writing-Across-the-Curriculum requirement.

465-3 Sociology of Aging. The adult life cycle from a sociological perspective, with emphasis on the later stages of adulthood. Special topics on aging include demographic aspects, family interaction, ethnicity, and cross-cultural trends.

471-3 Introduction to Social Demography. Survey of concepts, theories, and techniques of population analysis; contemporary trends and patterns in composition, growth, fertility, mortality, and migration. Emphasis is on relationship between population and social, economic, and political factors.

473-3 Juvenile Delinquency. (Same as Administration of Justice 473.) Nature of sociological theories of delinquency; analytical skills in studying the delinquent offenders; systematic assessment of efforts at prevention, control, and rehabilitation in light of theoretical perspectives. Prerequisite: 6 hours of social/behavioral science recommended.

474-3 Sociology of Education. Methods, principles, and data of sociology applied to the educational situation; relation of education to other institutions and groups.

475-3 Political Sociology. (Same as Political Science 419.) An examination of the social bases of power and politics, including attention to global and societal political relations, as well as individual-level political beliefs and commitments primary focus on American politics.

476-3 Religion and Politics. (Same as Political Science 476.) Examines the connection between religious beliefs and institutions and political beliefs and institutions. Comparative studies will focus on religious political movements in the United States and throughout the world.

497-4 Senior Seminar. Contemporary issues in sociology and the analysis of these issues. Prerequisite: senior standing with 20 hours in sociology (including 301), or consent of instructor. Not for graduate credit. Satisfies the CoLA Writing-Across-the-Curriculum requirement.

498-1 to 8 Independent Research. Students who wish to pursue specific topics in depth, or who have developed specific research projects, may submit proposals to faculty members who can serve as mentors. Independent research normally results in a significant paper or research report that serves as a demonstration of scholarly competence and concludes the major. May substitute for 497 only when student demonstrates substantial preparation or need. Satisfies the CoLA Writing-Across-the-Curriculum requirement. Not for graduate credit. Prerequisite: senior standing with 20 hours in sociology (including 301), and consent of instructor.

Sociology Faculty

Alix, Ernest K., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1966.

Benford, Robert D., Professor, Ph.D., University of Texas at Austin, 1987.

Burger, Thomas, Associate Professor, *Emeritus*, Ph.D., Duke University, 1972.

Calhoun, Thomas C., Professor, Ph.D., University of Kentucky, 1988.

Clark, Timothy, Assistant Professor, Ph.D., University of Minnesota, 2006.

Dunn, Jennifer L., Associate Professor, Ph.D., University of California, Davis, 1999.

Fowler, Frieda, Assistant Professor, Ph.D., University of Nebraska-Lincoln, 2003.

Hawkes, Roland K., Associate Professor, *Emeritus*, Ph.D., John Hopkins, 1967.

Hendrix, Lewellyn, Professor, *Emeritus*, Ph.D., Princeton University, 1974.

Martin, Derek, Assistant Professor, Ph.D., University of California, Irvine, 2005.

Miller, Michelle Hughes, Associate Professor, Ph.D., University of Nebraska-Lincoln, 1997.

Nall, Frank C., II, Associate Professor, *Emeritus*, Ph.D., Michigan State University, 1959.

Patterson, Edgar I., Assistant Professor, *Emeritus*, M.A., University of Kansas, 1961.

Schneider, Mark A., Associate Professor, Ph.D., Yale University, 1985.

Sherkat, Darren, Professor and Chair, Ph.D., Duke University, 1991.

Ward, Kathryn B., Professor, Ph.D., University of Iowa, 1982.

Whaley, Rachel B., Assistant Professor, Ph.D., University at Albany, State University of New York (SUNY), 1999.

Special Education (Major, Courses, Faculty)

The Department of Educational Psychology and Special Education offers an undergraduate major in special education, which entitles the student to qualify for the State of Illinois Standard Special Certificate with the Learning Behavior Specialist I endorsement. The special education major prepares teachers to teach students with disabilities, ages Pre-K to 21 receiving services along the full continuum of service delivery options. This program is fully approved by the Illinois State Board of Education and National Council for the Accreditation of Teacher Education (NCATE).

Admission To be considered a Special Education major students must meet the following requirements.

1. Meet the criteria for admission into the College of Education and Human Services Teacher Education Program.

2. Completion of a minimum of 30 semester hours in University Core Curriculum courses with an overall grade point average of 2.75 (4.0).

3. Submit documentation that the applicant has had at least 100 hours of direct contact and experience with individuals with disabilities. Satisfactory documentation of the experience will include a letter on company; agency or organization letterhead stating the number of hours of direct contact the applicant has been engaged in with persons with disabilities. The letter should state the name, address and phone number of an individual who can verify the experience of the applicant.

4. Pass the Illinois Certification Test for Basic Skills.

5. A total of three letters of recommendation from college, university faculty or other individuals familiar with their performance as a student.

Freshman are advised by a College of Education and Human Services adviser for the purpose of completing the courses required for Special Education majors. Transfer students must meet University admission requirements to be a Special Education major.

Students who are currently enrolled or previously attended SIUC in a major other than Special Education may request admission to the Special Education program.

Retention Criteria. There are specific and sequential criteria for a student to be retained as a special education major or to be allowed to continue in special education coursework. These criteria include not only continued satisfactory academic performance, but also acceptable professional behaviors which the faculty deem essential for competent and effective educators, and which are articulated in the Council for Exceptional Children Code of Ethics and Standards for Professional Practice for Special Educators. The criteria include:

1. Retention in the Special Education program requires completion of all courses listed in the requirements for the major with a grade of C or better. Other retention criteria include: (a) attainment of an overall grade point average of 2.75, and (b) a favorable endorsement of the special education faculty.

2. To be eligible for the professional semester (Special Education 401: Student Teaching) the student must have attained a minimum 2.75 gpa in the major with a minimum overall gpa of 2.5.

Bachelor of Science Degree in Special Education, College of Education and Human Services

SPECIAL EDUCATION MAJOR—STANDARD SPECIAL CERTIFICATE WITH APPROVAL IN BEHAVIORAL DISORDERS, OR MENTAL RETARDATION, OR LEARNING DISABILITIES

<i>University Core Curriculum Requirements</i>	41
To include Psychology 102 and Mathematics 220 or Curriculum and Instruction 120 (Mathematics 120, Curriculum and Instruction 120 are prerequisites that are not counted in the core) ¹ .	
<i>Requirements for Major in Special Education</i>	54
Special Education 300, 410, 411, 417, 418, 422, 419, 423, 425, 430, Curriculum and Instruction 407f, Mathematics 321 or Curriculum and Instruction 321, Communication Disorders and Sciences 328, 460, Education Psychology 412, Workforce Education 306 or Curriculum and Instruction 487	
Electives (one hours) in content area e.g., Curriculum and Instruction 423, 435, 424, 426, 468, 469, English 393	
Professional Education Requirements	11
Education 310, 311, 314, 315, 317	
Additional Clinical Requirements	21
Special Education 494a,b, Education 312 (one hour), Education 312, 400 (six hours), 401 (twelve hours)	
Total	127

¹Check with your advisor to complete non-western civilization/third world culture requirement.

SPECIAL EDUCATION MAJOR—JOINT CERTIFICATION IN SPECIAL EDUCATION AND ELEMENTARY EDUCATION SPECIALIZATION

<i>University Core Curriculum Requirements</i>	41
To include Psychology 102 and Mathematics 220 or Curriculum and Instruction 220 (Mathematics 120 and Curriculum and Instruction 120 are prerequisites that are not counted in the core) ¹ .	
<i>Requirements for Major in Special Education</i>	48
Special Education 300, 410, 411, 417, 418, 419, 422, 423, 425, 430, Curriculum and Instruction 407f, Mathematics 321, Curriculum and Instruction 321, Communication Disorders and Sciences 328, 460, Educational Psychology 412, Workforce Education 306 or Curriculum and Instruction 487	
Professional Education Requirements	11
Special Education 310, 311, 413, 315, 317	
Elementary Education Requirements	25
Curriculum and Instruction 322, 423, 424, 426, 427, 435	
Mathematics 322 or Curriculum and Instruction 322, Physical Education 101	
Clinical Requirements	23
Special Education 494a,b, Education 312 (one hour), 312 (one hour)/400 (six hours), 401 (twelve hours)	
Total	148

¹check with your advisor to complete non-western civilization/third world culture requirement.

Courses (SPED)

300-3 Introduction to Special Education. An overview of characteristics of all types of exceptional children and youth including physical, mental, emotional and social traits. The course also covers the effects of disabling conditions in learning situations, and an overview of the history of special education including legislation and litigation.

315-3 Teaching Mathematics in the Elementary School. (Same as Curriculum and Instruction 315.) Objectives of mathematics education, learning theory as it is related to mathematics, major concepts to be taught, modern approaches to instruction with emphasis on the use of concrete learning aids. Four class

hours and two laboratory hours per weeks. Prerequisite: Mathematics 114 and 314, or consent of instructor. Junior standing and an over all gpa of 2.5.

403-3 Characteristics of Children and Youth Labeled Gifted. Designed to help teachers in the identification of and programming for children labeled gifted and talented. Prerequisite: 300 or concurrent enrollment or consent of the department chair.

405-3 Introduction to Early Childhood Special Education Methods: Infants, Toddlers, and Preschoolers with Special Needs. This course focuses on effective methods, materials and programs for infants, toddlers, and preschoolers with special needs, including IEPs, IFSPs, working with families, service delivery, case-management, transition planning, and curriculum methods and procedures Prerequisite: 412 or consent of instructor.

407-3 Characteristics of Children and Youth with Mild, Moderate, Severe and Profound Mental Retardation. Presents historical, theoretical and research developments in the field of mental retardation. Provides the basic developmental, identification, assessment, instructional and curricular background for prospective education of individuals with mild, moderate, severe or profound mental retardation. Prerequisite: 300 or concurrent enrollment.

409-1 to 6 Cross-Cultural Studies. Seminar and/or directed independent study concerned with socio-cultural variables affecting the educational needs of children and youth with a disability. Prerequisite: 300 or consent of instructor and department chair.

410-3 Characteristics of Students with Learning Disabilities, Emotional/Behavioral Disorders, and Mental Retardation. This course presents the behavioral, emotional, physical and learning characteristics of children and youth labeled learning disabilities, emotional/behavior disorders or mental retardation.. Screening, identification, placement, instructional practices, classroom management and use of related services will be examined. Prerequisite: 300 or 420 or concurrent enrollment.

411-3 Assessment in Special Education. Course covers general assessment information, norm reference testing, curriculum based assessment, adaptive behavior scales and issues relating to cultural diversity. Fee: \$15. Prerequisite: 300/420 and 407 or 410, or concurrent enrollment.

412-3 Introduction to Assessment and Curriculum Methods in Early Childhood Special Education. This course presents an introduction to child and family assessment and the development of child and family goals in Early Childhood Special Education. Topics will include types of assessment commonly used, rationale for assessment, methods of assessment, reporting assessment results, writing child and family goals. A fee for testing materials is required. Fee: \$15. Prerequisite: 300/420 or concurrent enrollment or consent of instructor.

417-3 Behavior Management for Children and Youth with Disabilities. This course focuses on the implementation of behavior management strategies and tactics to be used with students with disabilities in a variety of educational environments. Prerequisite: 300 or 420, 410 or 407, 411, 423 and must be admitted to the TEP as a special education major, or consent of instructor.

418-3 Methods and Materials for Teaching a Functional Curriculum. This course covers the principles of curriculum construction, program development and evaluation, classroom organization, instructional approaches, strategies and materials for teaching a functional curriculum. Prerequisite: 300 or 420, 410, 411, 423 and must be admitted to Teacher Education Program as a special education major.

419-3 Academic Methods and Materials for Student with Disabilities. This course covers the academic methods, materials and strategies used with students with disabilities receiving special education services in school and community settings. Prerequisite: 300 or 420, 410, 411, 423 and must be admitted to the Teacher Education Program as a special education major.

420-3 Advanced Theories and Practices in Special Education. The course is an advanced survey of exceptional populations and addresses educational, social, legal, cultural and community practices associated with individuals with disabilities, ages 0 - 21 years old.

421-3 Methods for Teaching Children and Youth with Multiple Disabilities. This course focuses on developing knowledge and skills for providing instruction and specialized teaching methods to students with moderate and severe disabilities with a focus on academic, personal, vocational and recreation and leisure domains related to functional outcomes.

422-3 Teaching Reading in the Elementary School. (Same as Curriculum and Instruction 422) Examination of the reading process with emphasis on the factors and conditions that affect reading. Emphasis on the formulation of a philosophy of reading and it implications in relation to methods, materials, organizational procedures, and evaluation. Prerequisite: Elementary education major – grade of C or better in Curriculum and Instruction 321 and 435 and Education 310 or consent of instructor; Special Education majors;; admission to the Teacher Education Program.

423-3 General Procedures in Special Education. Presents key provisions of Public Law 94-142 and subsequent amendments, including Individualized Education Programs (IEPs). Course content also includes principles of applied behavior analysis and effective instruction of students with disabilities. Prerequisite: 300, 410 or 407 and 411 or concurrent enrollment.

425-3 Home-School Coordination in Special Education. The course covers techniques used in parent interviews, conferences and referrals by school personnel: due process and procedural safe guards for parents and youth with disabilities. Prerequisite: 300 or 420, 312, 315, 410 or 407, 411, 423 or concurrent enrollment in 417 or 418 and 419. Must also be admitted to the TEP as a special education major, or consent of instructor.

430-3 Secondary Programming for Students with Disabilities. Deals with modifications of and additions to school programs to ensure that they are appropriate to the needs of the adolescents with disabilities. Content includes coverage of remedial and compensatory program models, transition programming, career

and vocational education. Prerequisite: 300 or 420, 312, 315, 407 or 410, 411, 423, or concurrent enrollment in 417 or 418 and 419. Must be admitted to the Teacher Education Program as a Special Education major.

431-2 Work-Study Programs for Adolescents Labeled Severely Disabled. This course is designed to prepare educators and other human service professionals to assist adolescents and young adults with severe disabilities for community integrated employment options. Content will include community-referenced curriculum objectives, community-based instruction for employment and functional skill development.

490-1 to 4 Readings in Special Education. Study of a highly specific problem area in the education of exceptional children. Open only to selected seniors. Not for graduate credit. Prerequisite: 300 and consent.

494A-1 Practicum in Special Education-Assessment. This course includes clinical experiences in public school and community settings in the selection, administration and interpretation of norm-referenced and curriculum-based assessments, adaptive behavior scales, behavior rating scales and checklists and issues relating to cultural diversity. This course is to be taken concurrently with 411. Prerequisite: 300 or 420, 410 and must be admitted to the Teacher Education Program as a special education major.

494B-1 Practicum in Special Education-Functional Curriculum. This course includes clinical experiences in public school and community settings in planning, implementing and instructing a functional curriculum. This course is to be taken concurrently with 418. Prerequisite: 300 or 420, 410, 411, 423 and must be admitted to Teacher Education Program as a special education major.

Educational Psychology and Special Education Faculty

Asner-Self, Kimberly, Assistant Professor, Ed.D., George Washington University, 1999.

Bates, Paul, Professor, Ph.D., University of Wisconsin, 1978.

Beggs, Donald L., Professor, *Emeritus*, Ph.D., University of Iowa, 1966.

Bradley, Richard W., Professor, *Emeritus*, Ph.D., University of Wisconsin, 1968.

Brown, Beverly, Professor, Ph.D., University of Iowa, 1974.

Bruns, Deborah, Assistant Professor, Ph.D., University of Illinois at Urbana-Champaign, 2000.

Casey, John P., Professor, *Emeritus*, Ed.D., Indiana University, 1963.

Cody, John J., Professor, *Emeritus*, Ph.D., University of Wisconsin, 1961.

Cordoni, Barbara, Professor, *Emeritus*, Ed.D., Duke University, 1976.

Coulson, Richard L., Professor, Ph.D., University of Toronto, 1971.

Crowner, James, Professor, *Emeritus*, Ph.D., Michigan State University, 1960.

Deichmann, John W., Associate Professor, *Emeritus*, Ph.D., St. Louis University, 1969.

DeWeese, Harold L., Professor, *Emeritus*, Ed.D., University of Illinois, 1959.

Dillon, Ronna, Professor, Ph.D., University of California at Riverside, 1978.

Duys, David, Assistant Professor, Ph.D., Western Michigan University, 1998.

Elmore, Patricia B., Professor, Ph.D., Southern Illinois University, 1970.

Ewing, Norma J., Associate Professor, Ph.D., Southern Illinois University, 1974.

Foley, Regina, Professor, Ed.D., Northern Illinois University, 1989.

Headrick, Todd C., Associate Professor, Ph.D., Wayne State University, 1997.

Hisama, Toshiaki, Associate Professor, *Emeritus*, Ph.D., University of Oregon, 1971.

Juul, Kristen D., Professor, *Emeritus*, Ed.D., Wayne State University, 1953.

Karmos, Joseph, Visiting Professor, *Emeritus*, Ph.D., Southern Illinois University, 1974.

Leitner, Dennis, Associate Professor, *Emeritus*, Ph.D., University of Maryland, 1975.

Lewis, Ernest, Professor, Ph.D., Southern Illinois University, 1971.

Miller, Sidney R., Professor, *Emeritus*, Ph.D., Pennsylvania State University, 1974.

Morgan, Howard, Professor, *Emeritus*, Ed.D., Wayne State University, 1962.

Mouw, John T., Professor, *Emeritus*, Ed.D., University of South Dakota, 1968.

Mundschenk, Nancy, Associate Professor, Ph.D., University of Iowa, 1992.

Pierce, Corey D., Assistant Professor, Ph.D., University of Nebraska, Lincoln, 2004.

Pohlmann, John T., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1972.

Prichard, Karen K., Associate Professor, Ph.D., Kent State University, 1981.

Snowman, Jack, Professor, *Emeritus*, Ph.D., Indiana University, 1975.

Teska, James, Associate Professor, *Emeritus*, Ph.D., University of Illinois, 1969.

White, Gordon, Assistant Professor, *Emeritus*, Ph.D., University of Iowa, 1969.

White, Lyle J., Professor and *Chair*, Ph.D., University of Iowa, 1988.

Woehlke, Paula L., Professor, *Emeritus*, Ph.D., Arizona State University, 1973.

Yates, J. W., Professor, *Emeritus*, Ed.D., University of Missouri, Columbia, 1951.

Speech Communication (Department, Major, Minor, Courses,

Faculty)

The Department of Speech Communication offers courses in the history, theory and application of communication. These courses reflect liberal arts, humanities and social science traditions as approaches to theory and application.

The department also sponsors co-curricular activities in debate, forensics, performance studies (oral interpretation), and public relations, all of which are open to non-majors.

English is the language of instruction in the Department of Speech Communication and proficiency in written and oral English is required of all students in Speech Communication. To meet the requirements for a major in the Department of Speech Communication a student must demonstrate the following basic skills: the ability to deliver effective oral public presentations; the ability to write clear, correct English prose; the ability to communicate effectively at the interpersonal level as well as in groups; and the ability to understand and apply communication theory and research.

These communication competencies may be demonstrated by completing the major program and any one of the specializations described below and by receiving no lower than a C grade in courses listed in the required core and as required in the student's chosen specialization. Under certain circumstances, a student may elect to demonstrate a competency by passing a proficiency examination administered by the Department of Speech Communication.

Bachelor of Science Degree in Speech Communication, College of Liberal Arts

SPEECH COMMUNICATION MAJOR

<i>University Core Curriculum Requirements</i>	41
<i>College of Liberal Arts Academic Requirements</i> (See Chapter 4)	8-11
Includes: one year of foreign language and two writing intensive courses chosen from those listed in the required curriculum specializations below.	
<i>Requirements for Major in Speech Communication</i>	42-45
Required Core Courses	9
Communication theory: 230	
Communication skills: 3 hours of public communication selected from 221, 325, 326 or 370; and 3 hours of interpersonal communication selected from 261, 262, 371 or 383.	
Required Curriculum Specialization (see below)	33-39
<i>Intercultural Communication Specialization</i>	33
For students interested in communication topics and practices as they occur in social, cultural, and cross-cultural settings, verbal and nonverbal transaction and exchange at the interpersonal, group, organizational, and public levels, and the challenges of cultural diversity at home and abroad; domestic and international careers in business, industry, teaching, and government with a focus on intercultural understanding, consensus, and appreciation.	
Required: 262, 341, 361, 440, 441, 448; and fifteen hours selected from any other speech communication courses.	
Electives: (a) Highly Recommended: ANTH 340, 402, SOC 215; (b) Recommended: ANTH 231, 301, 360, 410h, BAS 215, 330, HIST 361, 365, JRNL 401, LING 200, 201, 402, 415, MKTG 336, 435, PHIL 362, PSYC 307, 333, SOC 423, 424, or 426.	
<i>Interpersonal Communication Specialization</i>	33
For students interested in topics of communication in interpersonal relationships, language in everyday interactions, group communication dynamics, and non-verbal and intercultural aspects of communication; and careers in communication skills training, interviewing, communication research, conflict management, and employee or client relations.	

Required: 261, 262, 341, 361, 401, 463; and 15 hours selected from any other speech communication courses.

Organizational Communication Specialization 33

For students interested in a broad spectrum of communication topics in the context of the organization including, but not limited to, compliance-gaining, superior-subordinate interaction, communication audit methods, organizational networks, organizational climate and culture, conflict resolution, impact of new communication technology, and information flow.

Required: 280, 281, 326, 383, 441, 480, 483; 12 hours selected from any other speech communication courses.

Performance Studies Specialization 34

For students interested in theatrical and everyday performance and the oral interpretation of literature, and in careers in performance, writing-as-performance, and public presentation from business to the arts.

Required: 370, 371, 471, 472; 6 hours selected from 474, 475, 476; at least one hour selected from 390f or 490f; and 15 hours selected from any other speech communication courses.

Persuasive Communication Specialization 33

For students interested in public and political discourse, argumentation, rhetoric, social influence and media, careers in law, politics, sales, corporate and public advocacy, and selected areas in business and mass media.

Required: 221, 325, 326, 401, 411; six hours selected from 310, 358 (Political Science 318), 382, 412, 421 (3,3), 451; and 12 hours selected from any other speech communication courses.

Public Relations Specialization 33-39

For students interested in public relations: the study of internal and/or external communication between an organization or client and its publics. Includes media relations, writing for mass media, research, case studies, and planning of communication campaigns.

Required: 280, 281, 326, 381, 382, 481, Journalism 310 and 335, Journalism 311 or 302, three hours of Speech Communication 390h or 494h, six hours from Journalism, Radio-Television or Speech Communication 390, 490, 493, and 494.

Minor or cognate study in related areas: Fifteen hours in a single department or related field of study beyond the University Core Curriculum and required courses. Cognate study must be approved by a member of the Public Relations Faculty.

Electives 10-26

(Electives for majors specializing in Public Relations include 15 hours of coursework in a minor or cognate study in a related area.)

Total 120

Minor

A minor in speech communication consists of a minimum of fifteen hours (in addition to Speech Communication 101), which must include nine hours at the 300-or 400-level.

Courses (SPCM)

100-3 Speech Communication Workshop. A workshop in debate, oral interpretation, or public speaking for secondary school seniors interested in intensive study in one or more of these areas. Prerequisite: consent of instructor.

101-3 Introduction to Oral Communication: Speech, Self and Society. (University Core Curriculum) [IAI Course: C2 900] This course provides theory and practical application relevant to students' development of basic oral communication competencies appropriate to a variety of contexts as situated in a culturally diverse world.

102-1 Speaking with Confidence: Overcoming Communication Apprehension. Designed for students with high speech anxiety that are reluctant to enroll in Speech Communication 101 or are currently enrolled in 101. This course provides exercises and opportunities to significantly lessen and control communication apprehension. Pass/Fail only.

201-3 Performing Culture. (University Core Curriculum) A critical examination of human communication - from everyday conversation to cultural formation - as performance. Lecture and discussion format with consideration of primary texts drawn from conversational transcripts, multicultural literature and popular culture.

221-3 Advanced Public Speaking. The components of effective speech with preparation and presentation of several types of speeches. Prerequisite: 101 or consent of instructor.

230-3 Introduction to Speech Communication Theory. Examination of history and theoretical issues as a basis for understanding areas within the discipline of speech communication.

258-1 to 30 Work Experience. Credit given for work experience by students enrolled in the Department of Speech Communication. Such credit is granted upon approval of the department chair.

261-3 Small Group Communication. Introduction to small group communication and the small group process. Special emphasis given to problem-solving discussion groups.

262-3 Interpersonal Communication. Theoretical approaches and contemporary research on patterns of interpersonal communication in romantic, friendship, family, and work relationships. Emphasis on developing skills for analyzing interpersonal processes through close description and interpretation. Satisfies the College of Liberal Arts Writing-Across-the-Curriculum requirement for speech communication majors. Prerequisite: 101 or consent of instructor.

280-3 Business and Professional Communication. A survey of communication theory pertaining to business and professional settings. Provides practice applicable to interviews, conference briefings, and presentation techniques. Prerequisite: 101.

281-3 Introduction to Public Relations. Introduction to public relations theories, philosophies and principles for agency, business, governmental and not-for-profit organizations. Historical perspectives, current and future trends, professional associations and career opportunities explored.

301I-3 Communication Across Cultures. (University Core Curriculum) This course provides an introduction to communication between/among people from different cultures, focusing on the application of intercultural communication theory and research. Class assignments and exercises examine everyday encounters with individuals from different races, ethnicity, religions, gender, ages, sexual orientations and physical abilities. Credit cannot be earned in both 301i and 341.

310-3 Speechwriting. Advanced study and practice of the principles of composition, revision and delivery of effective public speeches. Satisfies the CoLA Writing-Across-the-Curriculum requirement for speech communication majors. Prerequisite: 221 or consent of instructor.

325-3 Argumentation and Debate. Through the study of argument, evidence, reasoning, and oral advocacy this course seeks to ensure competence in the ascertainment of truth by investigation and research and the establishment of truth through proof. The ultimate rationale for the course is the discovery and support of intelligent decisions. Prerequisite: 101 or consent of instructor; 221 recommended.

326-3 Persuasion. The means of influencing individuals and groups through communication. Emphasizes the shaping of others' values, beliefs, attitudes and behavior. Provides theoretical information about and practice in persuasive speaking for sources and targets of persuasion. Satisfies the CoLA Writing-Across-the-Curriculum requirement for speech communication majors.

340-3 Introduction to Language Acquisition. Interdisciplinary approaches to the interaction between language acquisition and communication development. Topics include nonverbal communication, phonology, syntax, semantics, and pragmatics. Provides a background for those working with young children.

341-3 Introduction to Intercultural Communication. (Same as Linguistics 341.) Examination of the elements and structure of intercultural and transracial communication in the United States. Designed to analyze and describe the interactions between social perception and expression as manifest in verbal and nonverbal behavior. Emphasis on the functional communication of minority groups. Prerequisite: 101 or 262 or consent of instructor. Credit cannot be earned in both 301i and 341.

358-3 Political Campaigns and Elections. (See Political Science 318.)

361-3 Nonverbal Communication. A survey of the nonverbal factors that influence the communicative interaction among persons. Review research findings and conduct projects germane to nonverbal communication. Readings, discussions, and research projects. Prerequisite: 262 or consent of instructor.

362-3 Communication and Social Process. Introduction to the phenomenology of human communication and social process. Analysis and description of interpersonal communication in the development and operation of human communities. Special emphasis is given to the nature of persons, consciousness, and communication exchange in society.

370-3 Performance of Literature. Theory and practice in performance as a method for literary study, with emphasis on the student as performer. Prerequisite: 201 or consent of instructor.

371-3 Storytelling and the Oral Tradition. Theory and practice in the art of storytelling with emphasis upon practical application, source materials, and historical and ethnic backgrounds.

381-3 Public Relations in Practice. Application of public relations theory and principles through training and practice in the development of public relations writing and production skills including message construction and delivery, verbal, nonverbal, and visual production work and special events components. Satisfies the CoLA Writing-Across-the-Curriculum requirement for speech communication majors. Prerequisite: 281 with a grade of C or better or consent of instructor.

382-3 Research Methods in Public Communication. An introductory survey of methods and techniques of audience analysis and public opinion research. Introduction to the design of research tools, sample selection, interviewing, and data analysis.

383-3 Interviewers and Interviewing. Planning, conducting, and analyzing interviews with emphasis on roles of interviewer and respondent in professional and organizational communication settings. Study of factors affecting accuracy, openness, and goal attainment in use of interview methods for evaluation and research. Individual and small group projects with selected aspects of interviewing. Prerequisite: 262 or 280 or consent of instructor.

390-1 to 6 Applied Communication. Supervised individual and group performance in various communication arts. Emphasis on the practical application of communication skills in the following areas: (a) Communication Pedagogy; (b) Debate; (c) Intercultural communication; (d) Interpersonal communication; (e) Organizational communication; (f) Performance studies; (g) Persuasive communication; (h) Public relations. May be repeated for credit up to a maximum of six hours total from 390, 490 and 491 toward degree requirements. Prerequisite: consent of instructor.

401-3 Communication Theories and Models. An advanced examination of the purposes and processes of constructing and using theories and models in communication research. Students critically analyze existing communication theories from both social scientific and interpretive paradigms in order to explicate and evaluate their implicit and explicit assumptions about human being, knowledge, and value. For graduate students and advanced undergraduates. Satisfies the CoLA Writing-Across-the-Curriculum requirement for speech communication majors. Prerequisite: 230.

411-3 Rhetorical Criticism. Designed to develop the student's ability to criticize public discourse, including speeches, written works and the mass media. Satisfies the CoLA Writing-Across-the-Curriculum requirement for speech communication majors.

412-3 Environmental Rhetoric. An exploration of rhetorical structures and strategies in environmental policy, activism and public discourse. This course traces the significant contributions rhetoric and public debate have made in the struggle to protect environments from excessive industrial and commercial exploitation. A lecture, reading and discussion course.

421-3 to 9 (3,3,3) Studies in Public Address. Critical studies of speakers and issues relevant to social and political movements dominant in national and international affairs. A lecture, reading and discussion course. Students may repeat enrollment to a total of nine hours.

430-3 Speech in Elementary Schools. Survey of normal speech development with emphasis on the elementary school years. Concept of speech as skill basic to reading, writing, and spelling. Psychological and sociological variables affecting language as it relates to school learning. Speech experiences supportive of the child's linguistic, intellectual, and social development.

432-3 Secondary School Forensic Program. Designed to evaluate and plan the proper role of forensics in the secondary school and to prepare the students for their tasks as teachers and administrators in that program. Students enrolled as majors in speech communication with a specialization in communication education must complete this course before enrolling for student teaching. Not for graduate credit. Prerequisite: 201, 325.

433-3 Children's Literature in Performance. Study of children's fiction and poetry through analysis, creative drama, and performance, including solo and group work.

435-3 to 6 (3,3,3) Topics in Performance Studies. An exploration of advanced theories and techniques for conducting sessions in performance studies. Topics vary and are announced in advance. Students may repeat enrollment in the course, since the topics change. Lecture, discussion, class projects, school visitations.

440-3 Language Behavior. Study of linguistic approaches to speech communication based on behavioral determinants such as culture, history, speech community, value orientations, social perception and expression, and the nature and function of interpersonal transaction.

441-3 Intercultural Communication. Application of semiotic and cultural theories to language behavior. Emphasis on speech communication as an approach to the study of intercultural communication. Prerequisite: 341 or consent of instructor.

442-3 Psychology of Human Communication. Nature, development, and functions of verbal and non-verbal behavior; application of psychology theories and research to the communication process in individuals and groups. Emphasis on the systemic nature of communicative behavior.

443-3 General Semantics. Formulations from the works of Alfred Korzybski and from neo-Korzybskian interpreters are presented. General semantics is discussed as an interdisciplinary approach to knowledge. Relationships are made to contemporary problems in human affairs.

444-3 Studies in Language Acquisition. Research in and theories of the development of verbal and non-verbal language with attention to the maturational process. Includes investigation of social, phonological, syntactical, and semantic correlates of communication development. Appropriate for advanced students interested in working with or conducting research involving children.

445-3 Conversational Performance. Analysis of performance acts within everyday interaction: stories, jokes, laughter, teasing, etc. Application of theories of play, metacommunication and framing. Re-

performance of recorded, transcribed conversations as method of exploring aesthetic dimensions of communication. Prerequisite: 9 hours of speech communication courses or consent of instructor.

446-3 Sociology of Language Discourse and Signs. Introduction to sociological semiotics, especially structuralism and post-structuralism. Reference to French theorists such as Barthes, Baudrillard, Bourdieu, Certeau, Deleuze and Guattari, Greimas, Group Mu, Lacan, Lyotard, and Perelman. Emphasis on the practice of discourse, language, and signs as a model for research in the human science of communicology.

448-3 Intercultural Training. Introduction to communication theories and practices informing the training of individuals and groups anticipating extensive interactions with persons from differing cultural communities. The course provides content and learning opportunities aimed toward the design, development, and evaluation of effective, ethical culture-specific and culture-general intercultural training programs. Prerequisite: 341 or 301i or consent of instructor.

451-3 Political Communication. (Same as Political Science 418.) A critical review of theory and research which relate to the influence of communication variables on political values, attitudes, and behavior. Prerequisite: 358 or consent of instructor.

452-3 Interpersonal Communication and the Mass Media. A review, synthesis, and analysis of communication theory and research which deals with the process, interactive nature of interpersonal, and mass channels of communication. Prerequisite: 401 or consent of instructor.

460-3 Small Group Communication: Theory and Research. A critical examination of small group theory and research in speech communication. Emphasis is given to the development of principles of effective communication and decision-making in the small, task-oriented groups. Prerequisite: 261 or consent of instructor.

461-3 Laboratory in Interpersonal Communication I. Interpersonal communication is studied as human encounter. The philosophy and theoretical bases of existential phenomenological approaches to human communication are discussed. Projects are evolved by small groups that contribute to the understanding of human communication.

462-3 Laboratory in Interpersonal Communications II. Various theories of social and cultural change are explored. The role of interpersonal communication in the development of human consciousness is explicated. Projects are evolved by small groups that examine values and priorities of human nature and cultural nature.

463-3 Interpersonal Conflict. Study of sources, patterns, and outcomes of conflict in interpersonal relationships. Emphasis on interactive, systems-level analysis of naturally-occurring conflict episodes. Practice in managing conflicts, reframing, negotiation, and mediation. Prerequisite: 262 or consent of instructor.

465-3 Philosophy of Communication. An introduction to philosophical approaches to the study of communicative interaction. Topics include the relation of meaning and conceptual structures to bodily experience and the interpretative nature of communicative.

471-3 Prose Fiction in Performance. Study of prose fiction through analysis and individual performance. Satisfies the CoLA Writing-Across-the-Curriculum requirement for speech communication majors. Prerequisite: 370 or consent of instructor.

472-3 Poetry in Performance. The study of poetic form through analysis and performance. Prerequisite: 201, 370 or consent of instructor.

473-3 Performance Ethnography. An exploration of culture, ritual, narrative, community and personal identity as performance. Readings, field work and assignments focus on performance ethnography, communicative dimensions of performance and performance epistemology. Prerequisite: six hours of performance studies or consent of instructor.

474-3 Staging Literature. Theory and practice of staging literary texts with emphasis on adaptation and directing. Prerequisite: 370 or 371 or consent of instructor.

475-3 to 6 (3,3) Production Texts and Contexts. Advanced study related to theoretical and practical issues in performance staging with special emphasis on textual production, scripting, social contexts and performance practices. May be repeated for a total of six hours. Prerequisite: 6 hours of performance studies courses or consent of instructor.

476-3 Writing as Performance. An examination of the practical and theoretical links between composition and performance. Lectures, reading and assignments focus on performance as a means and an end to creative writing. Satisfies the CoLA Writing-Across-the-Curriculum requirement for speech communication majors.

480-3 Dynamics of Organizational Communication. Introduction to interrelationships of communicative behaviors and attitudes with organizational policies, structures, outcomes. Uses case studies and role-plays to teach principles. Individual research into selected aspects of organizational communication. Prerequisite: 280, or consent of instructor.

481-3 Public Relations Cases and Campaigns. Advanced course in public relations case analysis and campaign planning. Students critique public relations campaigns created by various profit, nonprofit and agency organizations. Students also design and implement public relations campaigns from problem identification through evaluation stages. Satisfies the CoLA Writing-Across-the Curriculum requirement for speech communication majors. Prerequisite: 381 and 382 with a grade of C or better or consent of instructor.

483-3 Studies in Organizational Communication. Study of communication systems and behaviors within organizations. Consideration of relevance of communication to management operations, employee morale, networks, superior-subordinate relations, production, and organizational climates. Individual research into selected aspects of organizational communication. Prerequisite: 480 or consent of instructor.

490-1 to 6 Communication Practicum. A supervised experience using communication skills. Emphasis on the development of performance skills in the following areas: (a) Communication pedagogy; (b) Debate; (c) Intercultural communication; (d) Interpersonal communication; (e) Organizational communication; (f)

Performance studies; (g) Persuasive communication; (h) Public relations. May be repeated for credit. Undergraduates limited to a maximum of six hours total from 390, 490, and 491 and graduate students to three to be counted toward degree requirements. Prerequisite: twelve hours of speech communication and consent of instructor.

491-3 Independent Study in Communication. Readings, creative projects, or writing projects focusing on a theoretical study of communication. The independent study should normally be completed in one semester under the tutorial supervision of a faculty sponsor. A maximum of six hours from Speech Communication 390, 490 and 491 may be counted toward degree requirements. Not for graduate credit. Prerequisite: twelve hours of speech communication and consent of instructor.

492-2 to 8 Workshop in Performance Studies. Summer offering concentrating in specialized areas of performance studies. Prerequisite: 201 and 370 or consent of instructor.

493-3 to 9 (3,3,3) Special Topics in Communication. An exploration of selected current topics in communication arts and studies. Topics vary and are announced in advance; both students and faculty suggest ideas. Students may repeat enrollment in the course, as the topic varies.

494-1 to 6 Internship. A supervised experience in a professional or career setting. Available in the following areas: (a) Communication pedagogy; (b) Debate; (c) Intercultural communication; (d) Interpersonal communication; (e) Organizational communication; (f) Performance studies; (g) Persuasive communication; (h) Public relations. Maximum of six hours to be counted toward degree requirements. Not for graduate credit. Mandatory Pass/Fail. Prerequisite: consent of instructor.

Speech Communication Faculty

Bardhan, Nilanjana R., Associate Professor, Ph.D., Ohio University, 1998.

Crow, Bryan, Associate Professor, Ph.D., University of Iowa, 1982.

Daughton, Suzanne M., Associate Professor, Ph.D., University of Texas at Austin, 1991.

Gingrich-Philbrook, Craig, Associate Professor, Ph.D., Southern Illinois University, Carbondale, 1994.

Graham, Todd, Director of Debate, Ph.D., Arizona State University, 2000.

Gray, Jonathan, Associate Professor, Ph.D., Louisiana State University, 1999.

Hinchcliff-Pelias, Mary, Associate Professor, Ph.D., Southern Illinois University, 1982.

Kleinau, Marion L., Professor, *Emerita*, Ph.D., University of Wisconsin, 1961.

Kleinau, Marvin D., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1977.

Kline, Kimberly N., Assistant Professor, Ph.D., University of Georgia, 1996.

Langsdorf, Lenore, Professor, Ph.D., SUNY at Stony Brook, 1977.

Lanigan, Richard L., Professor, Ph.D., Southern Illinois University, 1969.

Nicholas, Cheryl L. Assistant Professor, Ph.D., University of Oklahoma, 2004.

Pace, Thomas J., Professor, *Emeritus*, Ph.D., University of Denver, 1957.

Pelias, Ronald J., Professor, Ph.D., University of Illinois, 1979.

Pineau, Elyse, Associate Professor, Ph.D., Northwestern University, 1990.

Remke, Robyn, Assistant Professor, Ph.D., Purdue University, 2005.

Smith, William D., Associate Professor, *Emeritus*, Ph.D., Southern Illinois University, 1964.

Stucky, Nathan, Associate Professor and Chair, Ph.D., University of Texas at Austin, 1988.

Wiley, Raymond D., Assistant Professor, *Emeritus*, M.S., Southern Illinois University, 1965.

Zukic, Naida, Assistant Professor, Ph.D., University of Minnesota, 2005.

Speech Pathology and Audiology

(SEE COMMUNICATION DISORDERS AND SCIENCES)

Technical Resource Management (Major, Courses, Faculty)

The Bachelor of Science in Technical Resource Management (TRM) is designed to prepare technicians for career advancement into management and supervisory roles. The degree focuses on preparing technicians to be team leaders, and managers in their fields of technical expertise.

As a technical resource manager, the graduate can apply principles of planning, budgeting, job design, labor relations, and legal codes, in order to effectively implement production or operational plans. Graduates can apply research and data analysis techniques to measure monitor, and control workplace processes, especially those involving quality, in order to monitor and report productivity out-

comes. The program provides these skills to prepare technicians to effectively assume leadership role in the technical operation of the workplace. Technical Resource Management also provides an excellent foundation for technicians focused on pursuing entrepreneurial career goals.

The program is designed specifically for the student who has entered a technical career path for which a traditional baccalaureate degree is not available. It is ideally suited for community college and technical institute graduates possessing occupation-oriented associate degrees. The student develops an individualized learning contract with the assistance of the TRM academic advisor. The individualized nature of the program affords the flexibility to meet the needs of students from many diverse backgrounds who desire to enhance their career opportunities and develop skills in management of their technology. Students interested in technical areas not available through associate degrees are also encouraged to consider this major.

The Capstone Option is available to students who have earned an Associate in Applied Science (AAS) degree or the equivalent and who have cumulative 2.25/4.0 grade point average on all accredited coursework prior to the completion of the AAS. The Capstone Option reduces the University Core Curriculum requirements from 41 to 30 hours. See Chapter 3 for more information regarding the Capstone Option.

The Technical Resource Management program has a long history of serving students from community colleges throughout Illinois. A number of Illinois community college programs have transfer agreements with the TRM program. Such agreements are designed to help students prepare for transfer into the Technical Resource Management program at Southern Illinois University Carbondale by outlining the most efficient academic plan for a particular technical discipline. To determine whether a community college program has an agreement with TRM contact the community college or the School of Information Systems and Applied Technologies.

Students who are interested in pursuing a degree in Technical Resource Management are encouraged to contact a program representative as early as the first semester at their community college. For more information, contact the School of Information Systems and Applied Technologies. Contact information may be found at <<http://www.siu.edu/~isat>>.

Bachelor of Science Degree in Technical Resource Management, College of Applied Sciences and Arts

The Bachelor of Science degree in Technical Resource Management requires a minimum of 120 semester hours, with a minimum of 60 semester hours at SIUC or an accredited four-year college.

<i>University Core Curriculum Requirements</i> ¹	41
<i>Requirements for Major in Technical Resource Management</i>	36
TRM Core Requirements (or approved equivalents): Technical Resource Management 316, 364, 383, and one of the following: 332 or 421	12
Nine hours selected from Technical Resource Management 361, 362, 363, 421, 426, 464, 483, 488, 490 or approved equivalents	9
Fifteen hours of approved electives	15
<i>Approved Technical or Career Electives</i>	43
An associate in applied science degree from an accredited community college meets this requirement.	
A maximum of 12 credit hours of internship, work experience or independent study may be part of these 43 hours.	
<i>Total</i>	120

¹The first and second years are usually satisfied by an Associate of Applied Science (AAS) degree and students enter TRM as juniors.

Technical Resource Management Suggested Curricular Guide¹

THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
TRM 316, 383	3	3	TRM 464, 332 or 421	3	3
TRM 364, TRM 362 or 426 ²	3	3	University Core ¹	6	6
University Core ¹	3	6	TRM 483, 488, 490 or ap-		
TRM 361 or 362 ²	3	-	proved Electives ²	3	3
Approved Elective	3	3	Approved Elective	3	3
<i>Total</i>	15	15	<i>Total</i>	15	15

¹Some students will have transferred in with more university core course equivalents than other students. Those needing less core or just hours at a four-year school can substitute elective courses, work experience or internship.

²Certain AAS majors may substitute advanced coursework offered by the college, AAS majors or other Technical Resource Management courses.

Courses (TRM)

258-1 to 30 Work Experience Credit. Credit will be granted via departmental evaluation of prior job skills, management-worker relations and supervisory experience gained through experiences related to the student's academic and career objectives. Unless otherwise determined by the department chair. This credit may be applied only to the approved technical or career electives requirements of the technical resource management degree. Prerequisite: technical resource management major.

259-1 to 60 Occupational Education Credit. Credit will be granted via departmental evaluation of past occupational experiences related to the student's academic education and career objectives. Unless otherwise determined by the department chair, the credit may be applied only to the approved technical or career elective requirement of the technical resource management degree. Prerequisite: technical resource management major.

316-3 Applications of Technical Information. (Same as Information Systems and Applied Technologies 366) The course will increase students' abilities in communicating various type of workplace documents common to technical disciplines. Oral presentations will use computerized presentation software. The course is designed to meet the writing portion of the college's Communication-Across-the-Curriculum initiative. Prerequisite: junior standing and English 101; restricted to Applied Sciences and Arts majors or school.

319-1 to 15 Occupational Internship. Each student will be assigned to a University approved organization engaged in activities related to the student's academic program and career objectives. The student will perform duties and services as assigned by the preceptor and coordinator. Reports and assignments are required to be completed by the student. Hours and credits to be individually arranged. Mandatory Pass/Fail.

320-1 to 10 Work Study Internship. Provides work-study students with an opportunity to participate in an on-campus work experience related to their academic program and career objectives. Hours and credits are to be individually arranged. Mandatory Pass/Fail.

321-3 Seminar in Applied Sciences and Arts. This course is designed to allow College of Applied Sciences and Arts' students to become knowledgeable of specific and current requirements in the profession to which they aspire. Subject matter will be determined by academic major.

332-3 Labor-Management Problems. Students will gain a general understanding of the economic situation of which labor-management problems represent a subset. They will develop a perspective on the evolution of labor relations in the United States economy and on how the interaction of labor and management differs throughout the world. The collective bargaining section introduces the student to the techniques of bargaining used by labor and management in their ongoing interactions. Lecture three hours.

350-1 to 32 Technical Career Subjects. In-depth competency and skill development and exploration of innovative techniques and procedures used in business, industry, professions, and health service occupations offered through various workshops, special short courses, and seminars. Hours and credit to be individually arranged. This course may be classified as independent study. Prerequisite: consent.

361-3 Fiscal Aspects of Technical Management. An introduction to fiscal structures and problems encountered in the technically oriented enterprise. Lecture three hours.

362-3 Legal Aspects of Technical Management. An introduction to the types of legal problems encountered in the technically oriented enterprise. Prerequisite: 316 or consent of the school.

363-3 to 15 (3,3,3,3,3) Special Topics in Technical Management. Specialized study for the investigation of management problems relating to the student's career objective. (a) Management field experience. Structured practical experience in a controlled management environment. (b) Research management applications. Studies of management techniques as practiced in the profession. (c) Comparison analysis of organizational strategies in the professions. (d) Current trends. Readings regarding economic trends impacting upon the business or profession. (e) Employee relations. Study of the techniques of employee relationships to include the dynamics and procedures required for managing the work center. Need not be taken sequentially.

364-3 Work Center Management. A study of the problems of managing a small working unit (division, department, work center, section, etc.) within a larger unit (agency, company, regional office, etc.). Included items will be work center goals identification, staffing needs, monitoring of work process reporting, work center communications, and interpersonal relations within the work center. Lecture three hours.

383-3 Data Interpretation. (Same as Information Systems and Applied Technologies 365) This course will give students an understanding of the basic principles and techniques involved in the statistical treatment of data, including the selection of data source, the design of statistical studies, the analysis of data, and the utilization of data. Students will gain experience in using data for decision-making in their respective pro-

essions. Prerequisite: University Core Curriculum mathematics requirement or consent of school. Restricted to Applied Science and Arts majors.

421-3 Professional Development. Introduces students to the various elements involved in obtaining a position in their chosen career field. Topics included are: personal inventories, placement services, employment agencies, interviewing techniques, resumes, letters of application, references, and employment tests. Each student will develop a portfolio including personal and professional information related to individual career goals. Not for graduate credit. Prerequisite: 316 and College of Applied Sciences major or consent of school.

426-3 Technology and International Trade. The international trade of products and services is studied by examining the technology development and transfer concerns of transnational corporations and national governments in industrialized, newly industrialized and developing countries.

464-3 Managing For Quality. The course focuses on management techniques used to upgrade the level of quality of products and services in organizations. Topics cover the processes of continuous quality improvement: strategies and objectives, quality measures, participative management practices, worker empowerment, customer preferences and expectations, vendor/supplier inputs, process technology outputs, integrated feedback loops, and quality audits and review. Lecture three hours. Not for graduate credit. Prerequisite: 364 and 383 or consent of school.

483-3 Quality Measurement. Specialized study of the design of quality control for the improvement of processes and to enhance product or service outcomes. Instruction will focus on the construction of Statistical Process Control (SPC) diagrams and charts appropriate to the technologies found in various types of work environments. The major course project requires students to design aspects of an SPC program based on their specialty area. Lecture three hours. Not for graduate credit. Prerequisite: 383 or consent of school.

488-3 Technical Innovation. A lecture course intended to educate students on how to survive and prosper in hyper-innovative work places. Both intrapreneurial and entrepreneurial aspects will be pursued, as will planned obsolescence and product replacement. Not for graduate credit. Prerequisite: 316, 383, 364 or consent of school.

490-3 Technical and Professional Theory. A department honors seminar with challenging assignments and limited enrollment to prepare the student for the values, needs, demands, ethics, epistemologies, and socioeconomic roles of technical work, technicians, professional arenas and professional fields. Not for graduate credit. Prerequisite: 3.25 gpa or better, 316 or equivalent, and consent of school.

Technology (Department)

Two undergraduate degree programs are available in technology. One program leads to the Bachelor of Science degree with a major in engineering technology (see Engineering Technology) with specialization in electrical engineering technology. The other program leads to the Bachelor of Science degree with a major in industrial technology.

Engineering technology courses contain topics related to the design and development of products. Industrial technology courses contain topics related to the manufacture and distribution of products.

The present technological society has increased the demand for new types of personnel known as technologists. A technologist utilizes established methods to achieve improvements in existing designs and systems. Technologists should be knowledgeable in the state of the art of a particular technology, capable of utilizing handbooks and other forms of codified information with skill and discrimination, and sufficiently versed in mathematics and science to recognize sound procedures.

The industrial technology program is flexible enough to provide the means whereby a graduate of a two-year occupational program can obtain a bachelor's degree in a minimum length of time. The program also provides credit to individuals for related work experience outside the institution.

The programs are designed to provide the necessary training for entry into employment upon the completion of the baccalaureate degree. Opportunities for advanced study are available in manufacturing systems.

Theater (Department, Major, Minor, Courses, Faculty)

The Department of Theater is an accredited institutional member of the National Association of Schools of Theatre, 11250 Roger Bacon Drive, Suite 21, Reston, VA. 20190.

The Bachelor of Arts degree in Theater is designed to provide the student with broad-based exposure to human experience and sound foundation in basic skills of theater craft. The undergraduate theater major provides the student with invaluable interpersonal and intrapersonal skills and builds inquiring and open minds—qualities required in most professions the student might wish to pursue after graduation—and further offers essential education and training for continued work in graduate or professional schools.

Courses in acting, voice, movement, directing, theater history, dramatic literature, playwriting, production design, and technical theater, are augmented by the extensive production schedule in two theaters—a proscenium house, the McLeod Theater, seating about 488, and the Christian H. Moe Laboratory Theater, a flexible space seating 100—providing training in all aspects of theater. The production schedule is extensive enough to allow students the opportunity to design sets, lights, and costumes and to write, perform, and direct for productions bridging all dramatic genres, including musical theater.

In addition to the University Core Curriculum requirements, all theater majors must complete a theater core curriculum of 27 semester hours, all of which must be completed with a grade of C or better; a liberal arts component of 20 hours, selected by advisement from courses outside the Department of Theater; and 33 hours of theater electives, to include at least 9 hours at the 400 level. These 33 hours may include a minor of 15 hours in such complementary fields as art, fashion design and merchandising, computer science, English, foreign languages, history, journalism, music, philosophy, psychology, recreation, sociology, and speech communication.

Theater course credit earned at other institutions of higher learning, not used for University Core Curriculum requirements at the time of transfer, can be applied to the Bachelor of Arts degree program with the approval of the faculty of the Department of Theater.

Bachelor of Arts Degree in Theater, College of Liberal Arts

<i>University Core Curriculum Requirements</i>	41
Must include Theater 220 as substitute for Theater 101.	
<i>Requirements for Major in Theater</i>	80
Theater Core Curriculum	27
Theater 205, 218a, 218b or c, 217, 300, 311a, 354a,b, 402a	
Liberal Arts Component (by advisement)	20
Theater Electives (minimum of 9 semester hours at the 400 level)	33
Students interested in acting might elect: Theater 203, 303a, 303b, 317a, 317b, 450, 402b, 403 or 417	
Students interested in design/technical might elect: Theater 218b or c, 450, 407, 408, 409, 414, 418 or 419	
<i>Total</i>	121

Theater Minor

<i>Requirements for Minor in Theater</i>	16
A minor in theater consists of Theater 311a, with Theater 101 as a prerequisite, Theater 354a or b, 218a,b or c, 217 and 300-1.	

Courses (THEA)

101-3 Theater Insight. (University Core Curriculum) [IAI Course: F1 907] Through lectures, discussions, projects, text readings and written critiques, students examine how plays are written and produced and how these plays reflect the people and cultures that produce them. \$10 fee required.

203-3 Introduction to Voice and Movement. Fundamentals of vocal production and movement for the stage: breathing, phonation, kinesthetic awareness, warm-up, use of space and introduction to the International Phonetic Alphabet.

205-2 Stage Make-up. General survey covering design and application of makeup for the stage, including youth, middle and old age, texture, color, special effects, wigs and latex. \$10 lab fee required.

217-3 Acting. Preparing the actor's instrument through basic acting technique; concentration/relaxation exercises; improvisations. The course objective is the discovery and development of the actor's inner resources. Contemporary American plays are studied from the actor's point of view.

218-9 (3,3,3) Beginning Stagecraft. (a) Scenery. Fundamentals of scenic construction and state rigging, including basic tools and equipment. Each class has a practical laboratory requirement of 45 hours. \$15 lab fee required. **(b)** Lighting. Fundamentals of stage lighting including instrument handling, focusing, basic electrical theory. Each class has a practical laboratory requirement of 45 hours. \$15 lab fee required. **(c)** Costumes. Fundamentals of stage costume construction. Each class has a practical laboratory requirement of 45 hours. \$15 lab fee required.

220-3 Freshman Theater Seminar. (Advanced University Core Curriculum course) Through lectures, discussions, projects, text readings and written critiques, students examine how plays are written and produced and how these plays reflect the people and cultures that produce them. Students are exposed to information skills and strategies necessary to succeed in the Department's academic and production programs. Strong focus on American plays and practice. Satisfies University Core Curriculum Fine Arts requirement in lieu of 101.

260-1 to 15 Internship. Outside departmental internship, which is, related to the major program but not part of a regular instructional course. Written reports are required of student and outside supervisor. Mandatory Pass/Fail. Prerequisite: theater major; written proposals must be approved by undergraduate advisor and curriculum committee prior to internship.

300-1 to 4 (1 per semester) Theater Practicum. Offers students an opportunity to increase their skills in stagecraft, stage lighting, and costumes by working on department productions. Prerequisite: 218a,b, or c.

303A-3 Movement for the Actor. Intermediate studies in stage movement. Prerequisite: 203 and 217.

303B-3 Voice for the Actor. Intermediate studies in stage voice, IPA, standard speech, text analysis, scan-sion, cold readings. Prerequisite: 203.

311A-3 Play Analysis. Development of basic skills in play analysis and application of these skills to a variety of dramatic forms through class discussions and written assignments. Satisfies CoLA Writing-Across-the-Curriculum requirement for Theater majors. Prerequisite: 101 or 220, or one course in dramatic literature.

311B-3 to 6 Playwriting Workshop for Undergraduates. Practical experience in producing original plays combined with class discussions and critiques. Actors, designers and technicians attend class sessions, as well as rehearsals and work calls, and have work progressively evaluated. Workshop productions are staged in cooperation with 511. Prerequisite: audition or interview.

317A-3 Intermediate Acting. The study and application of Stanislavskian-based technique to the acting process. Coursework includes scene and monologue work. Prerequisite: 203, 217, 303a, 303b.

317B-3 Intermediate Acting. The study and application of European realism in the development of the actor's process. Prerequisite: 317a.

322-1 to 12 SIUC Summer Theater. Practical experience in summer stock play production. A maximum of twelve credit hours may be accumulated for performance or technical work in SIU Summer Theater only. Open to majors or non-majors. Prerequisite: audition or consent of instructor.

354-6 (3,3) History of the Theater. (a) Theater history from primitive times to the 17th century. **(b)** Theater history from the 17th century to the present.

390-1 to 6 Independent Study. Independent work on selected problems in academic or blend of academic and creative research. A maximum of three hours may be taken for a single project and a cumulative maximum of six hours may count toward the degree. Prerequisite: majors only; written proposals; consent of undergraduate adviser and instructor.

400-1 to 6 (1 to 2 per semester) Production. Practicum for support of major department productions in all areas. Roles in department productions may fulfill requirement.

401A-2 Stage Management. Study of the theories and skills required to successfully stage manage a theater production. Prerequisite: 217, 218a and consent of instructor, concurrent enrollment in 401b.

401B-1 Stage Management Lab. Practical application of the theories and skills learned in the 401a course and applied on a department of theater production. Concurrent enrollment in 401a. Prerequisite: 217, 218a and consent of instructor.

402A-3 Play Directing. The history of the director, the evolution of the director into a position of predominance in modern theater hierarchy. The function of the director; and examination of theoretical viewpoint. Textual analysis; establishing the ground work for the director's approach to production. Prerequisite: junior standing; 217 and 311a; or consent of instructor.

402B-3 Advanced Directing I. The principles of play direction including play selection, analysis and patterning of auditory and visual elements of production. Directing of a one-act play. Prerequisite: consent of instructor.

403A-3 Advanced Movement for the Actor. Advanced studies in stage movement with special attention to period styles. Prerequisite: 303a, 317a, 317b.

403B-3 Advanced Voice for the Actor. Advanced studies in voice with special attention to stage dialects. Prerequisite: 303b, 317a.

404-3 Theater Management. Discussion of legal and financial aspects concerning the professional and community theaters of the United States. Consideration of and practice in managerial activities of an educational theater including administration, purchasing, and accounting practices, direct sales, publicity, promotion and public relations.

405-1 Applied Theater. Explores the application of theatrical techniques in fields outside the traditional conception of theater, such as law, medicine, politics, communications. Students will have the opportunity to explore practical applications.

- 406-9 (3,3,3,) Properties Studio.** Beginning and advanced studio work in traditional and non-traditional crafts for theatrical events, including mask work, puppetry, stage furniture construction, upholstery, weaponry, armor, and special effects. Repeatable. Laboratory fee: \$50. Prerequisite: 218a or consent of instructor.
- 407-3 Scene Design.** Technical and artistic aspects of scene design. Theory and practice. Supplies at least \$25. Prerequisite: 218a, 309, 409, or consent of instructor.
- 408-3 Model Making.** Craft of scenic model making for the stage and other dramatic media. Prerequisite: 218a or consent of instructor.
- 409-6 (2,2,2) Scene Painting Studio.** Studio work in basic and advanced scene painting techniques and materials. Projects include wood, drapery, foliage, marble, transparencies, scrim painting, dye painting, faux finishes, metal reflections, and murals. Repeatable. Laboratory fee: \$50. Prerequisite: 218a or consent of instructor.
- 410-9 Children's Theater.** Theory and practice in performing theater for children. Class activities include lectures on various aspects of production as well as producing a touring children's play for local area schools. Prerequisite: audition or interview.
- 411A-3 Playwriting — The Short Play.** Principles of dramatic structure as they apply to the writing of a short play. Through class discussion, analysis of short plays, and the writing of specific projects and exercises, students will write at least two drafts of a 20-30 minute complete play. Individual plays may be considered for production in the theater's program for new plays. Prerequisite: 311a for major, or consent of instructor.
- 411B-3 Playwriting — The Full-Length Play.** Principles of dramatic literature as they apply to the writing of a full-length (90-120 minute) play. Typical well-made patterns are studied, along with experimental forms and variations. Some discussion of marketing plays is included. Prerequisite: 411a or its equivalent or consent.
- 412-2 Patterning and Draping for the Theatre.** This course introduces the theatrical costume design and technical student to the basics of pattern development and construction techniques used to develop a 3-dimensional theatrical costume, with focus on giving the student a working knowledge of costume production, flat patterning, and draping techniques. Prerequisite: 218c or consent of instructor.
- 413-6 (3,3) Drafting for the Theater.** Development of the student's skill in scenographic techniques including ground plans, sections, elevations, and detail construction drawings. Prerequisite: 218a or consent of instructor.
- 414-3 Costume Design.** History of western costume from Greek to Renaissance and its adaptation to stage use. Theory and practical application of design and color. Prerequisite: 218c or consent of instructor
- 415A-2 to 4 Costume Crafts I.** This course focuses on advanced skills in costume technology, including but not limited to, millinery, jewelry-making, armor and masks. Prerequisite: 218c, 412 or consent of instructor.
- 415B-2 to 4 Costume Crafts II.** This course focuses on advanced skills in costume technology, including but not limited to, dyeing and fabric modification, ventilating, and basic puppetry.. Prerequisite: 218c, 412 or consent of instructor.
- 416-3 Structural Design for the Stage.** In-depth study of the art and practice of structural design for the stage and analysis of structural properties of standard stage scenic materials. Prerequisite: 218a and 309 or consent of instructor.
- 417-3 to 6 (3,3) Advanced Acting.** Utilization of the actor's process in the performance of various theories and styles of acting. May be repeated once for credit. Prerequisite: 317b.
- 418-3 Lighting Design.** Investigation of stage lighting design, theory and professional practice. Special attention to color theory and its application to stage lighting. Lecture/Laboratory. Prerequisite: 218b, 309 or consent of instructor.
- 419-3 Technical Direction.** Advanced study of principles and procedures of scenic construction and stage rigging. Includes scene shop organization, materials, and specialized stage equipment; preparation for professional technical direction. Lecture and laboratory to be arranged. Prerequisite: 218a,b, 309, 407.
- 420-2 Senior Seminar.** Students are provided an opportunity to integrate their previous training in theater and to assess it. Students are exposed to information skills and strategies necessary for survival in the professional world. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: consent of department and concurrent enrollment in 421.
- 421-1 Senior Project.** Preparation of any of the following based on the student's area of interest: a portfolio, script, critical research paper, design, acting recital or direction of a short play. Projects are chosen and prepared under the supervision of a theater faculty member. Mandatory Pass/Fail. Not for graduate credit. Prerequisite: consent of department and concurrent enrollment in 420.
- 450-1 to 9 Topical Seminar.** An intensive examination and application of selected areas of interest. Topics will vary and may include such areas as stage management, audition and interview, current political theater. Prerequisite: consent of instructor.
- 454-3 American Theater.** The development of American theater from colonial times to the present. Includes a study of the American musical theater from preminstrels through contemporary music-drama.
- 455-3 Dramaturgy.** An introduction to the theory and practice of dramaturgy, including a survey of contemporary critical theories as they apply to the pre-production work of the dramaturg. The student will apply methodologies studies to plays from the classical repertory and to the works of new playwrights. Prerequisite: 311 or consent of instructor.

Theater Faculty

Fletcher, Anne, Assistant Professor, Ph.D., Tufts University, 1992.

Holcombe, Robert, Associate Professor, M.F.A., Ohio University, 1999.

Kidd, J. Thomas, Assistant Professor, M.F.A. Southern Illinois University Carbondale, 1998.
Merrill-Fink, Lori, Associate Professor, M.F.A., University of Arizona, 1988.
Moe, Christian H., Professor, *Emeritus*, Ph.D., Cornell University, 1958.
Naversen, Ronald, Professor, Ph.D., Southern Illinois University, 1990.
Ojewuyi, Olusegun, Assistant Professor, M.F.A., Yale University, 1998.

Patrick Benson, Susan, Assistant Professor, M.F.A., Rutgers University, 1995.
Rush, David, Associate Professor, Ph.D., University of Illinois, 1974.
Straumanis, Alfreds, Professor, *Emeritus*, Ph.D., Carnegie Institute of Technology, 1966.
Wagner, Kathryn, Assistant Professor, M.F.A. Rutgers University, 1988.
Varns, Mark, Associate Professor and *Chair*, M.F.A., University of Missouri-Kansas City, 1990.

Tourism

(SEE FOOD AND NUTRITION)

Turfgrass

(SEE PLANT AND SOIL SCIENCE)

University (Courses)

Courses (UNIV)

001-1 to 6 (1 per year) Student Volunteer Community Service. Provides university students an opportunity to participate in community service activity. A maximum of one semester hour of credit may be awarded per year for thirty hours or more of community service. Credit may not be used for graduation or toward semester eligibility for athletics, financial aid, student loan status or University honors. Grade of *CR* only.

101-3 The New Student Seminar. This course assists new students in making a successful transition into the University. Examines the purpose of higher education and the student's responsibility in the learning process. Provides a thorough introduction to the knowledge and skills necessary for a positive academic and personal experience at SIUC. Only for students in their first semester. Special sections for community college transfer students, academic units and others.

102-1 Strategies for Success Seminar. This course facilitates the reentry into the University of students who have been academically suspended. It provides assistance and support in pursuing their academic degrees, focusing on the acquisition of knowledge, attitudes and skills associated with successful academic performance, career and personal development. Restricted to pre-majors in their first semester following suspension.

301-2 (1,1) Undergraduate Research and Professional Development Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Prerequisite: consent of the instructor. (a) Explores the undergraduate experience with a special concentration on research proposal writing and professional development. (b) Explores the research process through technical reading that focuses on ethical and social issues in higher education. Graded Pass/Fail only.

388-1 Study Abroad Continuing Enrollment. Continuing enrollment status for undergraduate students participating in an approved study abroad or travel/study program. Requires concurrent enrollment at host institution. Requires approval from the academic unit and study abroad programs. Mandatory Pass/Fail. This course does not count toward the 120 hours needed for graduation.

401-2 (1,1) Graduate School Preparation Seminar. Prepares McNair Scholars for graduate school by developing academic and research skills. Overviews credentials for acceptance into an appropriate graduate program. Not for graduate credit. Prerequisite: consent of the instructor. (a) Explores the graduate school application process with a concentration on professional development. (b) Focuses on the graduate school experience of first generation/low-income/minority students.

University Honors Program

The University Honors Program is a university-wide undergraduate program designed to reward SIUC's best students for their high academic achievement. The heart of the program is the Honors curriculum: small classes, called seminars, unique in character and specially designed for University Honors students by outstanding SIUC faculty. Each Honors seminar is limited in size to 15 students, and restricted in enrollment to honors students only. The University allows Honors students to substitute Honors seminars for any or all of their 29 semester

hours of Core Curriculum requirements in Disciplinary and Integrative Studies (see University Core Curriculum—approved substitutes, Chapter 3).

Membership in the University Honors Program brings additional advantages including extended checkout privileges at Morris Library, early academic advisement and registration, publication in *Papyrus* (journal of the Honors Program), and others.

Continuing SIUC students and transfer students with at least 12 semester hours of college credit qualify for admission to the University Honors Program on the basis of a cumulative grade point average of 3.25 or higher. Entering freshmen qualify for admission to the program on the basis of an ACT composite score in the 95th percentile or higher.

The University Honors Program is designed to offer unique educational experiences to participating students. The program includes seminars, special sections of certain classes and independent study. Some scholarships and internships are available to University Honors Students.

Members of the Program are designated as University Honors Students. Retention in the University Honors Program depends upon maintaining a 3.25 cumulative grade point average in all course work and no failing grades in honors courses.

Baccalaureate degrees for University Honors Students are awarded through the regular degree-granting units. Those who successfully complete the University Honors Program graduation option receive recognition on the academic record and on the diploma at the time the degree is recorded.

The Honors graduation option for continuing SIUC students, transfer students without Associate degrees, and entering freshmen is a minimum of 15 semester hours of Honors course work, including a senior Honors thesis or project, approved in advance by the director. The Honors graduation option for transfer students who enter SIUC with an Associate of Arts or an Associate of Science degree (including Capstone students) and two-year degree candidates at SIUC is a minimum of 9 semester hours of Honors course work, including a senior Honors thesis or project, approved in advance by the director. Substitution for this option may be arranged for a student in a major, which does not allow curricular flexibility.

University Honors Students may substitute a University Honors seminar for any or all of their University Core Curriculum requirements in Disciplinary Studies (Fine Arts, Human Health, Humanities, Science and Social Science) and Integrative Studies (Multicultural Diversity in the U.S., and Interdisciplinary). No Honors substitutions allowed for Foundation Skills requirements in composition, mathematics or speech.

University Honors Students may be exempted from all University Core Curriculum requirements if they (1) pass all five CLEP General Examinations before completing 12 semester hours of college credit with these minimum scores: natural sciences, social sciences, and humanities, 52; English composition with essay, 61; and mathematics, 58; and (2) complete the University Honors Program graduation option. No retroactive extension of the CLEP privilege will be allowed.

Fuller information and application forms are available at the University Honors Program office, Faner Hall 3341.

Courses (UHON)

111-3 Freshman Honors Colloquium. Open to freshmen. Prerequisite: consent of director.

301-3 to 9 (3 per topic) Honors Seminar. Open to undergraduates. Topics vary and will be announced by the University Honors Program each time the course is offered. Prerequisite: consent of the director.

351F-3 to 9 (3 per topic) Honors Seminar in Fine Arts. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in fine arts. Prerequisite: consent of the director of University Honors Program.

351I-3 to 9 (3 per topic) Honors Seminar in Interdisciplinary Studies. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to

satisfy the University Core Curriculum requirement for interdisciplinary studies. Prerequisite: consent of the director of University Honors Program.

351L-3 to 9 (3 per topic) Honors Seminar in Human Health. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in human health. Prerequisite: consent of the director of University Honors Program.

351M-3 to 9 (3 per topic) Honors Seminar in Multicultural Diversity in the United States. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for Integrative Studies in Multicultural Diversity in the United States. Prerequisite: consent of the director of University Honors Program.

351O-3 to 9 (3 per topic) Honors Seminar in Social Science. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in social science. Prerequisite: consent of the director of University Honors Program.

351S-3 to 9 (3 per topic) Honors Seminar in Science. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in science. Prerequisite: consent of the director of University Honors Program.

351U-3 to 9 (3 per topic) Honors Seminar in Humanities. Topics vary and will be announced by the University Honors Program each time the course is offered. These seminars may be used to satisfy the University Core Curriculum requirement for disciplinary studies in humanities. Prerequisite: consent of the director of University Honors Program.

399-1 to 15 Honors Project. Preparation of honors paper or comparable project under joint supervision of a faculty member in appropriate discipline and director of University Honors Program. Prerequisite: consent of the director of University Honors Program.

499-3 to 9 Undergraduate Honors Thesis. Preparation of Honors thesis or comparable project under supervision of a committee consisting of one or more faculty members in appropriate disciplines and director of University Honors Program. Not for graduate credit. Prerequisite: consent of the director of University Honors Program.

University Studies (Program)

The University Studies program allows students to design an interdisciplinary program of study leading to a Bachelor of Science or Bachelor of Arts degree. The Bachelor of Arts degree requires one full year of college-level foreign language; while the Bachelor of Science degree does not. Students must also take one course in English composition in addition to the University Core Curriculum composition requirement and one writing intensive course designated by a College of Liberal Arts department as fulfilling the Writing-Across-the-Curriculum requirement. To be admitted to the University Studies degree program, a student must meet the following criteria.

- 1. Earn a minimum of 30 semester hours while a university studies major.
 - 2. Have completed at least one full year of college course work (a minimum of 24 semester hours) with a 2.00 grade point average or higher.
 - 3. Have exceeded none of the limitations prescribed by the program.
- Although University Studies imposes few specific requirements for the degree, other than those, which are University-wide baccalaureate requirements, there are limitations on the selection of course work. In addition, students must achieve a minimum grade point average of 2.00 for the 40 semester hours of 300-400 level course work (including 300-level University Core Curriculum courses).

Bachelor of Arts Degree in University Studies

University Core Curriculum Requirements	41 ¹
Requirements for University Studies	79 ²
Foreign language	8
English Composition	3
Writing Intensive course	3
300-400 level coursework	40
Other courses approved by the chief academic advisor in the College of Liberal Arts.	25
Total	120

Bachelor of Science Degree in University Studies

<i>University Core Curriculum Requirements</i>	41
<i>Requirements for University Studies</i>	79 ¹
English Composition	3
Writing intensive course	3
300-400 level coursework	40
Other courses approved by the chief academic advisor in the College of Liberal Arts	33
Total	120

¹Two limitations are placed on course distribution:

a. Students may take no more than 40 semester hours excluding courses used to satisfy University Core Curriculum requirements in any College, except for the College of Liberal Arts where they may take up to 54 hours (but no more than 27 semester hours in the social sciences, humanities, or fine and performing arts)

b. Students may take no more than 20 semester hours excluding courses used to satisfy University Core Curriculum requirements, in a department or in a School within a College).

Urban Forestry

(SEE FORESTRY)

Watershed Management

(SEE FORESTRY)

Women's Studies (Minor)

A women's studies minor is interdisciplinary and designed to enrich and extend a student's major field of sharing insights gained from the study of women including issues of gender, race and class. Course work can be selected to reflect individual student interests and enhance the major by contributing knowledge, understanding, and sensitivities helpful to students in both the university and work settings.

Women's Studies is an appropriate minor for many undergraduate majors as well as for students planning graduate or professional studies. For example, people's orientation toward their work may be affected by an historical understanding of the significant roles women have played in various disciplines, and the ways women have been treated by the courts, the health care professions, the educational system, employment, religion, literature, or the arts.

Because it is interdisciplinary, inclusive of race and class scholarship, the Women's Studies minor should reflect academic work in the arts and humanities, the natural and social sciences, and race and cross-cultural issues.

Women's Studies Minor

Minors must be approved by the director of Women's Studies in order to assist students in developing a coherent program that meets their individual interests. The minor requires 18 semester hours of credit, 15 of which must be in Women's Studies courses, while the remaining 3 hours may be selected from a special interest or related course; for example, Black American Studies. Schedules of classes contain listings of relevant courses. The minor must include 201, 300 and 495. Individual Learning Program courses and Independent Study courses cannot be counted toward the minor. Elective courses should be taken from at least two different cross-listing departments. Students must discuss and plan their minors with the director of Women's Studies or with a faculty member who teaches women's studies courses.

Courses (WMST)

200-3 Women in French and Francophone Literatures. (University Core Curriculum)(Same as French 200.) This course offers a study of the representation of women in 20th century French and Francophone

literatures. The class will study female characters as they are represented in novels, short stories and essays of contemporary French and Francophone writers, and will analyze the development of women as characters from a psychological, sociological, and literary point of view. All readings and lectures are in English.

201-3 Multicultural Perspectives on Women. (University Core Curriculum) This survey will cover important issues within women's studies in the United States and will be interdisciplinary and multicultural in nature. The topics will include language, media, education, family, labor, politics, literature and the arts. Issues of race, class, gender and culture will consistently be examined within each topic.

220-3 The Anthropology of Sexual Behavior. (Same as Anthropology 221) Current issues of sexism and gender roles are brought into focus by a study of patterns of primate and human sexuality. Attitudinal and cultural distinctions between men and women are related to need and pressures on a cross-cultural basis.

223-3 Women and Men in Contemporary Society. (University Core Curriculum)(Same as Sociology 223.) Examines theories of women and men's roles in society. Surveys contemporary gender inequalities in the U.S. and developing countries. Special attention given to employment, race, sexual assault, feminist movements, alternative family/lifestyles and childrearing.

225-3 Women in Literature. (Advanced University Core Curriculum course) (Same as English 225.) [IAI Course: H3 911D] Examines the ways in which women are portrayed in literature, especially in twentieth-century novels, drama, short fiction, and poetry written by women. Prerequisite: English 102 or 120. Satisfies University Core Curriculum Multicultural requirement in lieu of English 205.

286-3 Marriage and Family Living. (Same as Curriculum and Instruction 227.) [IAI Course: S7 902] A study of relationships and adjustments in family living, designed largely to help the individual. To help student better understand the recent changes that have occurred in marriage and the family in the US.

298-3 Multicultural Applied Experience Option. (University Core Curriculum) An applied experience, service-oriented credit in American diversity involving interaction with those exemplifying life experiences centering on women's issues, organizations, services, etc. Students should consult the women's studies program staff to discuss placement options, supervision and grading. Prerequisite: approval of the women's studies director and site supervisor.

300-3 Feminist Theory. This course is an introduction to feminist social and political theory. The course covers the definition of feminism and feminist theory, the development of multiple perspectives within social and historical contexts, and major debates within feminism.

301L-3 Women in Science, Engineering and Technology. (University Core Curriculum) This course will explore the historical contributions of women and challenges they faced as they entered educational programs and careers in various fields of engineering, science and technology. The course will also consider the current status of women in these fields.

307L-3 Women in the Visual Arts. (See Art and Design 307I) (University Core Curriculum) This interdisciplinary course examines women's lives as artists, visual representations of women, and issues of gender distinction in the history of Western art from the medieval period to the present. From perspectives that include social history and cultural anthropology as well as both traditional and feminist art history, the course considers the ways in which the experiences of women and opportunities available to them have historically differed from those of men. The course examines how such differences have affected the emphases, subject matter, and traditions of women's art as well as the ways in which women have been represented.

320I-3 Language, Gender and Power. (University Core Curriculum)(Same as Linguistics 320i) This course looks at language practices and men and women from different cultures in terms of how speech reflects and shapes their social identities. Perspectives from the fields of linguistics, anthropology, psychology, sociology and speech communication will be used.

341-3 Psychology of Women. (Same as Psychology 333.) An examination of empirical evidence on the biological, psychological, and social functioning of women, describing women's roles, the genetic versus social determinants of women's behavior, and the implications for women's potential. Prerequisite: 102 or consent of instructor.

348-3 Women in Western Society: 1600 to Present. (See History 324.) The legal, social, economic and political positions of women in Western society during the past 350 years are examined against the backdrop of industrialization, political democratization, world wars totalitarianism. Emphasis is on women in England, France and the United States.

356-3 U. S. Women's History (Same as History 356.) This course will survey the role of women in US history from colonial times to the present. Students will be introduced to contributions made by women to US society, politics, and cultures.

357-3 Women and Work in the United States. (Same as History 357) An introduction to the diversity of women's experiences as workers in the home, the household economy, and the labor market segregated by race, ethnicity and gender.

360-3 American Rural History. (Same as History 360) An examination of America's rural history from the 17th to the 20th century, focusing especially on social and economic relationships and attitudes, the role of ethnicity and gender, environmental and technological issues, agrarian radicalism, and governmental activities.

401-3 Third Wave Feminism. This course discusses theories and practices of third wave feminism from a national and global perspective. We will discuss ways third wave feminism is being talked about and understood by others and ourselves. The selected readings offer a range of voices and articulation of third wave feminism including United States, post-colonial, transnational, queer, multicultural, theoretical, and practical. The course is heavy on reading. By the end of this course students should be able to express their understanding of third wave feminism.

406-3 Family, Gender and Sexuality in Pre-Modern Europe. (Same as History 406) A discussion of the history of family, creation of gender roles, and importance of sexuality from ancient times to the Industrial Revolution.

442-3 Sociology of Gender. (Same as Sociology 423.) Examines social science theory and research on gender issues and contemporary roles of men and women. The impact of gender on social life is examined on the micro level, in work and family roles, in social institutions, and at the global, cross-cultural level.

446-3 Gender and Global Politics. (Same as Political Science 456) An advance course examining gender systems and women's situations across cultures and countries. This course also studies the impact globalization has had on gender issues by looking at women's activism at international and transnational levels. Topics covered include women's political representation, gender and culture, women's social movements, gender and development, and gendered policy issues.

456-3 Feminist Philosophy. (See Philosophy 446.) (a) Feminists Philosophy. A general survey of feminist theory and philosophical perspectives. (b) Special Topics in Feminists Philosophy. A special area in feminist's philosophy explored in depth, such as Feminists Ethics, French Feminism, Feminist Philosophy of Science, etc. (c) Women Philosophers. Explores the work of one or more specific women philosophers, for example, Hannah Arendt, Simone DeBeauvoir, etc.

464-3 Audio Documentary & Diversity. (Same as Radio-Television 464.) The purpose of this course is the creation of short and long form documentaries by students, regardless of production background. It will introduce students to basic production techniques and diversity considerations during the making of a documentary. This course uses qualitative methods to investigate an issue or document an event, with an emphasis on observation and interview techniques. Topics will explore the role of gender, race, ethnicity and class during the planning, gathering and production stages of the documentary. Course open to non-majors.

468-3 Law and the Social Control of Women in American History. (Same as Administration of Justice 468 and History 468.) An examination of the ways in which the law affects the behavior, life chances, identities and experiences of women, from colonial times to the present. Team taught by faculty from History and Administration of Justice.

476-3 Women, Crime and Justice. (Same as Administration of Justice 460 or Sociology 461.) Addresses the topics of women as offenders, as victims and as workers in the criminal justice system. Prerequisite: Administration of Justice 201, 290 and 316; or consent of instructor.

490-1 to 6 Readings. Supervised readings in selected content areas of women's studies. Prerequisite: consent of instructor and women's studies coordinator.

491-1 to 6 Special Topics. Concentration on a topic of interest not offered through the regular course listings. Prerequisite: consent of instructor and women's studies coordinator.

492-3 Women and Religion. This course will heighten and strengthen student's awareness of the roles and responsibilities of women as outlined in the sacred writings and scriptures of various world religions and as carried out in various cultures around the world.

493-2 to 6 Individual Research. Exploration of a research project under the supervision of a faculty member having graduate faculty status. The project must result in a written research report, which is filed with the coordinator of women's studies. Prerequisite: consent of instructor and coordinator of women's studies and senior standing.

494-1 to 6 Practicum. Supervised practical experience in situations centering on women's issues, organizations, services, etc. The setting may be in one's own field of study or in general content areas recognized in the women's studies program. Prerequisite: consent of instructor and coordinator of women's studies.

495-3 to 6 Women's Studies Student Seminar. A synthesizing experience for individuals minoring or interested in women's studies, and all graduate students. Topics will differ each semester. Prerequisite: consent of women's studies director.

Workforce Education and Development

(Department, Major [Workforce Education and Development], Minor, Courses, Faculty)

The Department of Workforce Education and Development offers a major in Workforce Education and Development with specializations in: (a) Career and Technical Education; and (b) Education, Training, and Development. Graduates with a degree in Workforce Education and Development under the Career and Technical Education specialization are prepared for teaching positions in public secondary career/technical education programs. Graduates with the degree under the Education, Training, and Development specialization are prepared for such positions as instruction and learning (training) specialist, training curriculum developer/instructional systems designer, human resource specialist, or internal auditor/training evaluator in private sector training departments. Program areas of emphasis are offered within each specialization. On approval of the department, students may complete a minor in WED major within the Education, Train-

ing and Development specialization. A grade of C or better is required in all WED prefix courses. Eligible students may elect to apply for Capstone. Criteria for acceptance unto the Capstone Option appear in Chapter 3.

**Bachelor of Science Degree in Workforce Education and Development,
College of Education and Human Services**

<i>University Core Curriculum Requirements</i> ¹	30-41
<i>Requirements for Major in Workforce Education and Development</i>	83-91
Core Requirements	3
Three hours of upper division course work: Workforce Education and Development 466	
Specialization Requirements (see below) ²	80-88
<i>Total</i>	120-126

¹Capstone = 30; UCC = 41.
² Students choosing the health career option in the Career and Technical Education specialization must: (1) have an Associate Degree in Nursing; (2) qualify for admission to Capstone; and (3) complete the core requirement and 57 semester hours beyond the 60 semester hours earned in the Associates degree. Students choosing the technology education option in the Career and Technical Education specialization must: (1) have an Associate of Applied Science Degree; (2) qualify for admission to Capstone; and (3) complete the core requirements and 57 semester hours beyond the 60 semester hours earned in the Associates degree. For those students intending to receive state teacher certification, additional courses may be required.

Career and Technical Education Specialization

Students selecting this specialization will complete teacher certification requirements as identified by the Illinois State Teacher Certification Board for their selected career and technical education (6-12 Standard License) option.

BUSINESS, MARKETING AND COMPUTER EDUCATION OPTION

Accounting 210 or 220a,b,c; 230 or 240	6
Economics 240; 241	6
Finance 270 or 280; 330	6
Management/Accounting 208 or Technical Resource Management 383	3
Management 350	3
Marketing 304; 401 or 438; 305 or Workforce Education and Development 327	9
Workforce Education and Development 302, 408, 412, 413, 414a, 414b, 417	21
(For Business Computer Programming certification, an additional 6 hours of pre-approved courses in computer programming or systems analysis is required)	
Professional Education Requirements (See College of Education and Human Services)	28
<i>Total</i>	82

FAMILY AND CONSUMER SCIENCES OPTION

Curriculum and Instruction 227, 237, 327, 337 and approved elective ...	15
Finance 200	3
Marketing 305	3
Workforce Education and Development 322, 326, 327, 413, 431, 497	17
Additional hours of pre-approved courses required for certification in designated areas of Apparel and Textiles and/or Nutrition, Wellness and Hospitality	14
Professional Education Requirements (See College of Education and Human Services) or pre-approved career electives for Educational Services/Extension	28
<i>Total</i>	80

HEALTH CAREERS OPTION

Admission: Completion of the Associate Degree in Nursing (minimum of 60 hours – 45 hours of technical nursing courses plus 15 hours of transferred University Core Courses), licensed through the National Council Licensure Examination for Registered Nurses, and admitted to the Capstone Option.

Workforce Education and Development 413, 460, 463, 468, 498e	14
Professional Education Requirements (See College of Education and Human Services)	28
Electives	45
Total	87

TECHNOLOGY EDUCATION OPTION

Admission: Completion of the Associate of Applied Science Degree (minimum of 60 semester hours – 48 hours of technical courses plus 12 hours of transferred University Core Curriculum courses), credentialed through national or Illinois occupational/industry skills standards system in the industrial occupation that the student will teach, and admitted to the Capstone Option.

Workforce Education and Development 413, 460, 463, 498e	11
Professional Education Requirements (See College of Education and Human Services)	28
Electives	48
Total	87

Education, Training and Development Specialization

In support of the mission of the Workforce Education and Development major, the two-fold purpose of the Education, Training and Development (ETD) specialization is to (1) prepare occupationally competent people in the areas of instruction and learning, instructional systems design, human resources, and evaluation and quality assurance for professional and leadership positions in corporate, apprenticeship, proprietary, government, military, post-secondary and/or volunteer education and training organizations and to (2) articulate the undergraduate ETD offerings with those of the WED master's and doctoral program offerings along the same four dimensions of instruction and learning, instructional systems design, human resources, and evaluation and quality assurance.

The ETD specialization requires students to successfully complete course work in four areas: University Core, ETD Professional Sequence, Technical/Professional Training and Work Experience. The number of semester hours posted for each area represent the minimum number of semester hours needed to complete the 121 semester hour requirement for graduation.¹

ETD Specialization

Professional Sequence: 27 semester hours (see example programs of study below)	
Technical/Professional courses: 35 or 46 semester hours minimum ¹ ..	35-46
Work experience or approved interdisciplinary courses: 15 semester hours minimum	15
Total	77-88

¹The "regular" and "Capstone" versions of the ETD specialization differ. The regular version has a 41 semester hour University Core requirement and the Capstone version a 30-semester hour requirement. Also, the regular version requires the student to have, at a minimum, 35 semester hours of Technical/Professional Training whereas Capstone requires a minimum of 46 semester hours of Technical/Professional Training to account for the 11-semester hour difference in University Core requirements. Both versions require a minimum of 121 semester hours for graduation.

Examples of Education, Training and Development Programs of Study for Different Career Tracks*Instruction and Learning Specialist:*

WED 381-6	Training Proposal and Report Writing
WED 384-3	The Adult Learner
WED 460-3	Occupational Analysis and Curriculum Development
WED 462-3	Instructional Methods and Materials
WED 463-3	Assessment of Learner Performance
WED 495 and/or 496	Instructional/Professional Internship

Curriculum Developer-Instructor Systems Designer:

WED 381-6	Training Proposal and Report Writing
WED 401-3	Authoring Computer-Based Instruction in Workforce Education
WED 460-3	Occupational Analysis and Curriculum Development
WED 461-3	Workforce Education Needs Assessment
WED 474-3	Individualized Training
WED 495 and/or 496	Instructional/Professional Internship

Human Resources Specialist

WED 302-3	Business Communications
WED 381-6	Training Proposal and Report Writing
WED 460-3	Occupational Analysis and Curriculum Development
WED 461-3	Workforce Education Needs Assessment
WED 469-3	Training Systems Management
WED 495 and/or 496	Instructional/Professional Internship

Evaluation and Quality Specialist:

WED 460-3	Occupational Analysis and Curriculum Development
WED 461-3	Workforce Education Needs Assessment
WED 463-3	Assessment of Learner Performance
WED 495 and/or 496	Instructional/Professional Internship
EPSY 402-3	Basic Statistics
IT 386-3	Total Quality
IT 475-3	Quality Control
IT 485-3	Quality Control II

Workforce Education and Development Minor

A minor in Workforce Education and Development consists of 20 hours. The student and advisor plan minors for Workforce Education and Development.

Courses (WED)

258-1 to 30 Work Experience. Credit granted for past work experience while employed in business, industry, labor, government service or military organizations. Credit determined by departmental evaluation. Prerequisite: Completion of 12 semester hours of Workforce Education and Development courses with C or better.

259-1 to 60 Occupational Training. Credit for documented occupational study in accredited and selected other programs. Credit determined by departmental evaluation. Prerequisite: Completion of 12 semester hours of Workforce Education and Development courses with C or better.

302-3 Business Communications. (Same as Management 202.) Creating and managing written and oral administrative communications including the analysis, planning and practice of composing different types of internal and external communications in various administrative and business contexts. To successfully complete this course, a communication competency examination (additional fee required) must be passed with at least 70% accuracy prior to University course drop date. Prerequisite: English 101 and 102 or equivalent.

306-3 Introduction to Computers and Information Systems. Overview of computer technology and uses of information systems in education and business. Hands-on applications with business and educational software are stressed. An introduction to programming languages is incorporated using BASIC language. Prerequisite: Office Systems and Specialties 100 or equivalent.

308-3 Applications of Technology for Workforce Education and Training. Applications and analyses of technologies, information systems and computer programs used in business and workforce education and training programs. Demonstration of competency level necessary to train others in secondary/postsecondary education and business training environments on pertinent applications in technological administrative processes, data management and curriculum integration. Prerequisite: 306 and Office Systems and Specialties 100 or equivalent.

310-3 Introduction to Business Education. Teaching business in public and private schools and business and industry training. Curriculum structures, philosophical bases, student characteristics, employment requirements and career opportunities.

320-3 Family and Consumer Sciences Profession. Family and consumer sciences profession, history, philosophy, theory and foundation. Integrative focus for discipline and areas of specialization. Examination of family and social issues. Introduction of curriculum in school settings. Exploring career development process, skill standard and workplace skills.

321-2 Methods of Teaching for Non-Teaching Majors. Educational principles for use in situations mostly outside of the formal classroom. Selection and organization of materials. Practice in using a variety of techniques and teaching aids.

322-3 Curriculum in Family and Consumer Sciences. Planning curriculum to meet societal needs for the total family and consumer sciences programs in junior and senior high school settings. Includes management of department facilities and student organizations. Prerequisite: Education 315.

326-3 Interior Living Environment. Personal and family living environments including textiles, furnishings and color. Emphasis on creating a more knowledgeable consumer atmosphere appropriate to their lifestyles.

327-3 Management of Family Resources. Emphasis of the resources used in Family and Consumer Sciences (clothing, food, housing, money, time and other resources related to daily needs of individuals and families) to enhance family well-being. Emphasis given to life skills reflected in needs of students.

381-6 (3,3) Training Proposal and Report Writing. (a) Theoretical and applied, guided self-study develop skills necessary to conduct feasibility studies and write technical reports. (b) Principles and practices of preparing training proposals and reporting results in corporate or agency settings.

382-3 Developing Your Career. An introduction to the professional field of human resource development (HRD) with a focus on trends, issues, roles, and competencies. Content and activities are provided to assist students in planning and preparing for a career in human resource development (HRD).

384-3 Adult Education and Training. Planning and preparing adult and workforce programs. Characteristics of clientele, financial support, program development.

386-3 (1,1,1) Post-Secondary Work Education. Teaching in work education programs in post-secondary institutions and agencies. (a) Orientation to and preparation for teaching occupations, (b) Situations and issues which arise in professional education, (c) Interpersonal relations in teaching and other assignments.

395-1 to 30 Field Experience. Supervised work experience in a departmental approved position in business, industry, labor, government or military organizations for students in Workforce Education and Development. Clock hours/credit arranged by department coordinator.

398-1 to 3 Special Problems. Independent study for qualified students in Workforce Educational and Development. Prerequisite: consent of instructor.

401-3 Authoring Computer Based Instruction in Workforce Education. Develops the basic practical skills and theoretical knowledge required to create computer-based instruction for workforce education. Planning and developing CBT lessons are included. Restricted to WED majors or consent of department.

408-3 Integrating and Managing Technology Applications for Workforce Education and Training. Design of workforce training applications integrating professional advanced features of computer software, communication technologies and multimedia features, including management of educational LAN systems. Restricted to WED majors or consent of department. Prerequisite: 306.

410-3 Issues in Business Training/Education. Study of current issues in business training and education related to history, current status and trends. Organization of instruction, instructional settings, relation to general education, integration and impact of technology, curriculum development/review and evaluation of business training/education impact in the workplace. Restricted to Workforce Education and Development majors or consent of department.

412-3 Planning, Implementing and Evaluating Information Systems. This course examines planning for office systems development through investigation of procedures and systems used in various types of offices, including a study of work flow, the processing of information, employee and work group interactions. Topics will detail information systems from the perspective of end users by studying development and implementation processes, tactics and strategies based upon systems planning results through a field-based product. Restricted to Workforce Education and Development majors or consent of department.

413-3 Organizing and Directing Instruction in Secondary Career and Technical Programs. Techniques and procedures applicable to effective teaching including planning for instruction, instructional design technology and general teaching strategies for the secondary career and technical classroom. This course will study pedagogy and utilize various techniques and technology to help students master the skills needed in their respective careers. Students will learn about and practice various teaching methods including demonstrations, cooperative learning, service learning, integration of academics and technology into the workplace-oriented class, project-based learning, and contextual learning. A laboratory section will be required. Limited to Workforce Education and Development students admitted to the teacher education program or one of the career and technical education alternative certification programs in workforce education. Restricted to Workforce Education And Development majors or consent of department.

414-6 (3,3) Instructional Methods for Business Education. Specific methods, techniques and materials to deliver instruction in business education: (a) accounting, basic business (business and technology concepts, economics, consumer education, product-oriented marketing, small business management), and workplace skills; (b) business computer systems, information processing and keyboarding. This course requires an additional laboratory meeting time. Restricted to Workforce Education and Development majors or consent of department.

Prerequisite: 310, 462 or Education 315.

417-3 Administrative Office Communications. Application of communication theory, human relations concepts, research methods and information technology to professional application of automated information systems. Projects include oral and written reports, systems-related documents (reports, proposals and procedures) and system documentation for users; emphasis on human factors of communication in a technological environment. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 302 or equivalent.

418-3 Training and Development in Administrative Services. Theories of learning and instructional development to the education/training of employees in office systems/administrative services. Analysis of office and administrative services occupations, instructional design, instructional and presentation strategies, training evaluation, use of instructional technology, and the implementation, evaluation and management of training in an organizational environment. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 412 or equivalent.

431-3 Demonstration and Laboratory Techniques. Practice in planning and carrying out instructional demonstrations in Family and Consumer Sciences. Procedures for laboratory and guided practice to develop psychomotor skills. Attention given to TV/Media presentation and use of equipment. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 320 or consent of instructor.

460-3 Occupational Analysis and Curriculum Development. System approach to curriculum development. Includes analyzing occupations, specifying objectives and developing curriculum. Restricted to Workforce Education and Development majors or consent of department.

461-3 Workforce Education Needs Assessment. Overview of needs assessment and analysis procedures used in workforce education environments. Learners will design and develop needs assessment instruments, collect and diagnose data to identify those workplace performance issues requiring training solutions, and develop a formal report detailing needs assessment findings and training solution recommendations. Restricted to Workforce Education and Development majors or consent of department.

462-3 Instructional Methods and Materials. Instructional methods in occupational training program. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 460.

463-3 Assessment of Learner Performance. Development and use of evaluation instruments to assess student performance in training classrooms and laboratories. Criterion- and norm-referenced objectives, applications of taxonomies in development of written tests, performance tests and attitude measure. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 460.

466-3 Foundations of Work Force Education. Examination of the historical, social, economic and psychological foundations of workforce education. Nature and role of education and training in preparing people for the world of work. Restricted to Workforce Education and Development majors or consent of department.

468-3 Education/Labor Force Linkages. Attention given to the following areas: overcoming barriers to the linkage process; developing effective lines of communication; resource sharing; conducting joint problem solving with other agencies and individuals within the community; and jointly developing and providing programs and services. Restricted to Workforce Education and Development majors or consent of department.

469-3 Training Systems Management. Insight and understanding of administration and management of organizational training. Principles and techniques of managing training organizations. Process of planning, organizing, marketing, programming, staffing, budgeting and evaluating a training organization. Restricted to Workforce Education and Development majors or consent of department.

472-3 Organizing Cooperative Education. Introduction to cooperative education including history, rational, legislation, goals and objectives. Programming, public relations and evaluation of cooperative education. Introduction of student selection and management of cooperative education programs. Fulfills three semester hours of six required for State of Illinois certification. Restricted to Workforce Education and Development majors or consent of department.

473-3 Coordinating Cooperative Education. Competencies required for coordination of cooperative education programs. Selection and maintenance of training stations, student placement, related instruction and program management. Fulfills the remaining three semester hours required for State of Illinois Certification. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 472.

474-3 Individualizing Training. Study and development of theory, characteristics, appropriateness and evaluation techniques of individualized training packages. Review of current state of individualized instruction in work education. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 460.

484-3 Adult Training in Organizations, Business and Industry. A study of adult and workforce education as offered in a variety of educational settings. Major topics include organization, funding, instruction, student characteristics and evaluation. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: consent of instructor.

486-3 Adult Learning. Course focus is on adult development and learning principles. Adult learning styles and motivation to learn are discussed in the context of designing effective instructional strategies appropriate in various workforce education venues. Restricted to Workforce Education and Development majors or consent of department.

490-1 to 4 Readings. Supervised reading for qualified students in Workforce Education and Development. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: consent of instructor.

491-1 to 5 Advanced Occupational Skills. Modern occupational practice in selected fields for experienced professionals seeking advanced techniques. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: consent of instructor.

494-1 to 4 Workshop. Current workforce education issues for teachers, supervisors, and administrators. Emphasis of each workshop will be identified in workshop announcements. Restricted to Workforce Education and Development majors or consent of department.

495-2 to 12 Instructional Internship. Internship in approved education and/or training centers. Intern instructor will increasingly assume responsibilities for preparing, presenting and guiding occupational learning in Workforce Education and Development. Not for graduate credit. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 462 and 12 semester hours in Workforce Education and Development.

496-2 to 12 Professional Internship. Research, curriculum development or program management at approved education training sites. The intern will follow the program of the supervising professional in regular and related activities. For students in Workforce Education and Development. Not for graduate credit. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: 12 semester hours in Workforce Education and Development.

497-1 to 6 Practicum. Applications of work education skills and knowledge. Cooperative arrangements with corporations and professional agencies to study under specialist. Restricted to Workforce Education and Development majors or consent of department. Prerequisite: twenty hours in specialty.

498-1 to 5 Special Problems. Investigation of problems in workforce education and development. Restricted to Workforce Education and Development majors and consent of department. Prerequisite: consent of instructor.

Workforce Education and Development Faculty

Aguirre, Jeanne, Visiting Assistant Professor, Ph.D., Southern Illinois University, 1975.

Anderson, Marcia, Professor, Ph.D., Southern Illinois University, 1975.

Aydt, Roger, Visiting Assistant Professor, *Emeritus*, Ph.D., Southern Illinois University, 1987.

Bailey, Larry J., Professor, *Emeritus*, Ed.D., University of Illinois, 1968.

Baker, Clara Mae, Associate Professor, Ph.D., Ohio State University, 1989.

Bortz, Richard F., Professor, Ph.D., University of Minnesota, 1967.

Bourne, Shirley A., Visiting Assistant Professor, *Emerita*, Ph.D., Southern Illinois University, 1983.

Brown, Daniel, Visiting Instructor, M.S., Southern Illinois University, 1986.

Bubnas, Phyllis, Assistant Professor, *Emerita*, M.S., Southern Illinois University, 1960.

Buila, Theodore, Associate Professor, *Emeritus*, Ph.D., Cornell University, 1968.

Calvin, Jennifer, Assistant Professor, Ph.D., Ohio State University, 2005.

Chaves, Christopher, Visiting Assistant Professor, Ph.D., University of Southern California, 1999.

Davis, Marty S., Visiting Assistant Professor, Ph.D., Southern Illinois University, 1995.

Eversden, Terre, Lecturer, Ph.D., Southern Illinois University, 2001.

Forbes, Charles, Visiting Instructor M.S., Pittsburg State University, 2003.

Freeburg, Elizabeth, Associate Professor, Ph.D., Southern Illinois University, 1994.

Gooch, Bill G., Professor, *Emeritus*, Ed.D., University of Tennessee, 1973.

Hagler, Barbara, Assistant Professor, Ph.D., Arizona State University, 1991.

Hall, M. Eugene, Visiting Assistant Professor, Ph.D., Ohio State University, 1982.

Huck, John F., Associate Professor, *Emeritus*, Ed.D., University of Illinois, 1973.

Hunter, Wallace D., Visiting Assistant Professor, *Emeritus*, Ph.D., The Florida State University, 1974.

L'Angelle, David, Visiting Assistant Professor, *Emeritus*, Ph.D., Ohio State University, 1983.

Lee, Robert, Visiting Instructor, M.B.A., City University-Washington, 1998.

Lenear, Phoebe, Assistant Professor, Ph.D., University of Illinois, 2005.

Nettles, Steven, Visiting Assistant Professor, Ph.D., Washington State University, 2001.

Owens, Douglas, Visiting Instructor M.S., Eastern Illinois University, 2003.

Plessman, Connie K., Visiting Assistant Professor, Ph.D., University of Nebraska, 1985.

Putnam, Alvin R., Professor, Ph.D., Oklahoma State University, 1978.

Reneau, Fred, Professor, *Emeritus*, Ed.D., Virginia Polytechnic Institute and State University, 1979.

Rodgers, William L., Visiting Instructor, *Emeritus*, M.S., Southern Illinois University, 1982.

Shaw, Mari, Visiting Assistant Professor, *Emerita*, Ph.D., University of Minnesota, 1984.

Shields, Bill J., Assistant Professor, M.S. in Ed., Southern Illinois University, 1963.

Sidell, Charles, Visiting Assistant Professor, Ph.D., Southern Illinois University, 1999.

Sims, Cynthia, Assistant Professor, Ed.D., Northern Illinois University, 2004.

Stadt, Ronald W., Professor, *Emeritus*, Ed.D., University of Illinois, 1962.

Stitt, Thomas R., Professor, *Emeritus*, Ph.D., Ohio State University, 1967.

Sullivan, James A., Professor, *Emeritus*, Ed.D., West Virginia University, 1967.

Taylor, David, Visiting Professor, Ed.D., Alliant International University, 2004.

Washburn, John S., Professor, Ed.D., University of Illinois, 1977.

Waugh, C. Keith, Associate Professor and Chair, Ph.D., Virginia Polytechnic Institute and State University, 1996.

Westberry, Richard, Visiting Assistant Professor, Ph.D., University of South Florida, 2000.

Veterinary Medicine, Preprofessional Program

(SEE ANIMAL SCIENCE OR COLLEGE OF SCIENCE PRE-HEALTH PROFESSIONAL PROGRAMS)

Zoology (Department, Major, Minor, Faculty)

A major in zoology is an appropriate beginning for those planning a career that includes teaching and research in zoology, conservation, fisheries management and wildlife management, environmental sciences, or the practice of medicine, dentistry, and veterinary science.

Students majoring in zoology are required to develop an individualized curriculum by consulting with the director of undergraduate studies in zoology and an appropriate faculty member of the department.

In the field of zoology, a student may work toward either a Bachelor of Arts or Bachelor of Science degree. The Bachelor of Arts degree with a major in zoology permits a student to take 21-24 semester hours of courses in other areas of interest. Having obtained a Bachelor of Arts degree, students may continue their education toward a graduate degree in zoology or related field, although it may be necessary to absolve deficiencies in physics, organic chemistry and mathematics.

The Bachelor of Science degree with a major in zoology permits a student to take 8-13 semester hours of courses in other areas of interest. This degree requires additional courses in chemistry and/or physics and quantitative science (mathematics, statistics, or computer programming) and will normally be pursued by students desiring to do graduate work in zoology or other specialized training such as medicine, dentistry, or veterinary science.

The individualized curriculum for the Bachelor of Arts degree in zoology must include: (1) a year of chemistry with laboratory or a year of physics with laboratory (this requirement may be satisfied with Chemistry 200, 201, 210, 211 or Chemistry 200, 201, 340, 341 or Chemistry 140a,b or Physics 203a,b, 253a,b); (2) one course in mathematics beyond Mathematics 108 and 109 or 111 (this requirement may be satisfied with Mathematics 141, 150, 282, 283, Plant Biology 360 or Computer Science 202); (3) Biology 200a,b, 305 and 307; (4) Zoology 220a, 220b, 300 (or Biology 309), Zoology 482 and at least 18 (19 if Biology 309 is used) additional semester hours of electives in zoology. A minimum of 41 semester hours of biology and zoology must be completed for the major, and no more than 11 semester hours of courses (biology or zoology), which are used to satisfy degree requirements of another major may be used to meet the zoology requirements.

Bachelor of Science degree requirements include all requirements for a Bachelor of Arts degree in zoology, plus two additional courses selected from chemistry with laboratory and/or physics with laboratory, and one additional course in mathematics selected from calculus, computer programming or statistics.

Bachelor of Arts Degree in Zoology, College of Science

University Core Curriculum Requirements 41

College of Science Academic Requirements 7-11

Mathematics 108 and 109 or 111 or 141 (3) + 1-3¹

Supportive Skills: at least six credit hours chosen from Mathematics

282 or 283 or Plant Biology 360; Computer Science 200a or b, 201

or 202; English 290 or 291 or 491 or Applied Sciences and Arts 102;

any two-semester sequence of a foreign language (Chinese, French,

German, Japanese, Russian, Spanish)² 6-8

Requirements for Major in Zoology 46-47

Biology 200a,b (3) + 3¹

Biology 305, 307	6
Zoology 220a,b, and 482	7
Zoology 300 or Biology 309	3-4
Zoology electives from Individualized Curriculum	18-19
Chemistry and/or Physics (one year sequence with laboratory)	(3) + 5 ¹
A course in mathematics (beyond Mathematics 108 and 109 or 111), statistics and/or computer programming in an approved language	3-4
<i>Electives</i>	23-24
<i>Total</i>	120

Bachelor of Science Degree in Zoology, College of Science

<i>University Core Curriculum Requirements</i>	41
<i>College of Science Academic Requirements</i>	7-11
Mathematics 108 and 109 or 111 or 141	(3) + 1-3 ¹
Supportive Skills: at least six credit hours from Mathematics 282 or 283 or Plant Biology 360; Computer Science 200a or b, 201 or 202; English 290 or 291 or 491 or Applied Sciences and Arts 102; any two-semester sequence of a modern foreign language (Chinese, French, German, Japanese, Russian, Spanish) ²	6-8
<i>Requirements for Major in Zoology</i>	57-60
Biology 200a,b	(3) + 3 ¹
Biology 305, 307	6
Zoology 220a,b, and 482	7
Zoology 300 or Biology 309	3-4
Zoology electives from Individualized Curriculum	18-19
Chemistry and/or Physics (two years with laboratory)	(3) + 13-15 ¹
Two courses in mathematics (beyond Mathematics 108 and 109 or 111), statistics and/or computer programming in an approved language	6-7
<i>Electives</i>	10-13
<i>Total</i>	120

¹Numbers in parenthesis are hours which may be substituted for the University Core Curriculum requirement

²The foreign language requirement can also be met by one of the following: (a) by earning eight hours of 100-level credit in one language by proficiency examination; or, (b) completing three years of one language in high school with no grade lower than C.

³Courses used to satisfy the supportive skills requirement may not be used to satisfy the mathematics requirement. Only one of Mathematics 282, 283 and Plant Biology 360 may be counted towards the supportive skills or mathematics requirements.

Zoology Suggested Curricular Guide

FIRST YEAR	FALL	SPRING	SECOND YEAR	FALL	SPRING
ENGL 101, 102	3	3	BIOL 200a,b	3	3
Human Health, Fine Arts	2	3	CHEM 200, 201, Elective	4	2
MATH 108, 109	3	3	CHEM 210, 211	-	4
Social Science	3	3	MATH 141, ENGL 291	4	3
ZOOL 118, ZOOL 220b	4	3	SPCM 101, Humanities	3	3
<i>Total</i>	15	15	<i>Total</i>	14	15
THIRD YEAR	FALL	SPRING	FOURTH YEAR	FALL	SPRING
CHEM 340, 341, BIOL 307	5	3	BIOL 305, CS 201	3	3
CHEM 350	-	4	Interdisciplinary, Electives	3	5
Humanities, Multicultural	3	3	ZOOL 482	-	1
ZOOL 220a, PLB 360	3	3	ZOOL 300-level	4	-
ZOOL 400-level	3	3	ZOOL 400-level	6	6
<i>Total</i>	14	16	<i>Total</i>	16	15

Zoology Minor

A minor in zoology consists of 16 hours, including 220a,b, and 482. Zoology courses acceptable for majors as well as Biology 305, 306, 307, 308, and 309 may be used to complete the 16-hour minimum requirement; no University Core Curriculum courses can be included. Courses used to satisfy degree requirements for a major or another minor cannot be used for the minor in zoology.

Honors Program

An honors program is available to those juniors and seniors in zoology who maintain a grade point average of 3.25 or better, overall and in the major. To enroll in Zoology 493, the student must complete a departmental form that requires the project title; a description of the proposed project; and the signatures of the student, the faculty adviser, and the chair of the department. The student must complete six hours of 493 with a grade of *B* or better, file with the department a final report on the research, and present the results at a public seminar in order to graduate with departmental honors in zoology. At the time of graduation, an indication of participation in the program is made on the diploma and transcript for students who complete the requirements. Concurrent participation in the University Honors Program is encouraged. Students receiving credit for Zoology 493 may not apply Zoology 393 hours toward the major.

Courses (ZOOL)

Students enrolled in zoology courses may incur field or lab expenses of \$5 to \$25.

115-3 General Biology. (Same as Plant Biology 115.) (University Core Curriculum) [IAI Course: L1 900L] Introduction to fundamental biological concepts for non-life science majors interested in learning about interrelationships of human, plant and animal communities. Integrated lecture and laboratory cover topics that include structure and function of living systems, reproduction and inheritance, evolution, biological diversity and environmental biology. Laboratory applies scientific methods to the study of living systems. Laboratory/field trip fee: \$15.

118-4 Principles of Animal Biology. (Advanced University Core Curriculum course) [IAI Course: L1 902L] An introduction to the basic concepts of animal biology including chemical organization of protoplasm; organization of matter into cells, tissues, organs and organ systems; classification and distribution of animals; ecology; heredity and organic evolution; economic biology and conservation; and animal behavior. Credit may not be used toward a major in zoology. Three lectures and one two-hour laboratory per week. Laboratory/field trip fee: \$10. Prerequisite: high school biology. Satisfies University Core Curriculum Science Group II requirement in lieu of Plant Biology 115 or Zoology 115.

212-2 Birding. Bird watching for pleasure. Consideration of identification, songs and ecology of birds, information on bird organization, equipment, and techniques. Credit may not be used toward a major in zoology. Two lectures per week.

214-3 Human Heredity. [IAI Course: L1 906] Principles of heredity as related to humans, with emphasis on how the effects of environment affects biological inheritance. Credit may not be used toward a major in zoology.

220-6 (3,3) Diversity Animal Life-Invertebrates. (Advanced University Core Curriculum course) Diversity and its taxonomic treatment of animals, emphasizing structure, function, life cycles, behavior, and phylogeny. (a) Invertebrates, Laboratory/field trip fee: \$20. (b) Vertebrates. Two lectures and one two-hour laboratory per week. Need not be taken in a,b sequence. Laboratory/field trip fee: \$20. Prerequisite: 118 or Biology 200, or strong background in high school biology recommended. Both a and b satisfy University Core Curriculum Science Group II requirement in lieu of Plant Biology 115 or Zoology 115.

300-4 Vertebrate Embryology. Main features of embryonic and fetal development from fish to humans. Two lectures and two 2-hour laboratories per week. Laboratory /field trip fee: \$10. Prerequisite: 220b.

304-3 Evolution. (Advanced University Core Curriculum course) An introductory survey of evolutionary biology emphasizing basic principles, including the historical development of evolutionary theory, the genetic mechanisms of evolution, the processes of adaptation and diversification, and the origin and history of major groups of organisms. Prerequisite: 220a and 220b. Satisfies University Core Curriculum Interdisciplinary requirement in lieu of Plant Biology 303i.

305-2 Genetics Laboratory. Experimental methods in applying basic principles of genetics. Monogenic and digenic inheritance, sex linkage, gene interaction, linkage and chromosome mapping, mutation, artificial and natural selection, gene frequencies, and genetic drift. Two 2-hour laboratories per week. Laboratory/field trip fee: \$20. Prerequisite: Biology 305, or concurrent enrollment.

306-3 Fish Biology. Anatomy, physiology, sensory biology, functional morphology and ecology of fishes. Prerequisite: 220b.

309-3 Elementary Cell Biology. Introduction to structure, function, and natural history of major cell types. Two lectures and one 2-hour laboratory per week. Prerequisite: consent of instructor.

3121-3 Conservation of Natural Resources. (University Core Curriculum) [IAI Course: L1 905] This course adopts an interdisciplinary approach to the study of conservation of natural resources. It integrates environmental science and environmental economics. By examining the costs and benefits of resource consumption, we will attempt to determine the socially optimal level of resource utilization. We will look at ways in which governments attempt to achieve socially optimal resource use, and the effects of these government policies on the environment. Topics considered in the course include: solid waste, energy consumption, air pollution, agriculture and global environment change. Credit may not be used toward a major in zoology.

316-3 Insect Pests and Their Control. Classical and economic entomology including morphology, physiology, and taxonomy. Life history, damage, and control of principal injurious insects will be discussed. Two lectures and one 2-hour laboratory per week. Credit may not be used toward a major in zoology. Prerequisite: 118 or equivalent.

351-4 Ecological Methods. Basic ecological field techniques for analysis of community structure and functional relationships. Two 4-hour laboratories per week. Prerequisite: 220a,b and Biology 307.

390-1 to 12 Internship. Supervised off-campus training in a formalized internship program with a zoological institution or agency. May not be used for credit in zoology. Must submit letter from sponsoring agency and prospectus with duties and duration of internship to director of undergraduate studies. No more than three hours per semester may be taken if student is on-campus, or six hours if off-campus. Mandatory Pass/Fail. Prerequisite: major in zoology and prior approval by faculty supervisor.

393-1 to 3 Individual Research. Research on zoological problems. May not be used for minor in zoology. Some cost may be borne by student. Student must identify a zoology faculty supervisor to approve proposed research and evaluate performance. Approved proposal detailing research project and number of credit hours requested must be filed with director of undergraduate studies before the semester in which student is enrolled. Mandatory Pass/Fail. Prerequisite: minimum of 2.50 gpa ($A = 4.00$), senior standing, and prior approval by faculty supervisor.

400-3 Cell Biology of Development. Cellular molecular mechanisms of embryogenesis and differentiation. Examination of the cell as a component of interacting tissues constituting the developing organism. Prerequisite: 300 or Biology 309 or advanced standing in life sciences or consent of instructor.

401-3 Developmental Neurobiology. This course presents a survey of the basic principles that underlie the development of the nervous system, including an examination of the important questions and issues currently being studied by neuroembryologists. Prerequisite: advanced standing in biology/science or consent.

402-3 Natural History of Invertebrates. Introduction to ecology, intraspecies communication and interspecies relationships of invertebrate animals. Recommended for teacher preparation programs. Two lectures and one 2-hour laboratory per week. Laboratory/field trip fee: \$10. Prerequisite: 220a.

403-3 Natural History of Vertebrates. Life histories, adaptations, and identification of fish, amphibians, reptiles, birds, and mammals, are emphasizing local species. Recommended for teacher preparation programs. One lecture and two 2-hour laboratories per week. Laboratory/field trip fee: \$10. Prerequisite: 220b or consent of instructor.

405-3 Systematic Zoology. Theory and procedure of classification; population taxonomy; variation and its analysis; zoogeography; rules of zoological nomenclature; taxonomic publication. Three one-hour lecture-discussion meetings per week. Prerequisite: 220a, b or consent of instructor.

407-4 Parasitology. Principles, collection, identification, morphology, life histories, and control measures. Two lectures and two 2-hour laboratories per week. Prerequisite: 220a.

408-3 Herpetology. Taxonomic groups, identification, morphology, and natural history of amphibians and reptiles. One lecture and two 2-hour laboratories per week. Laboratory/field trip fee: \$10. Prerequisite: 220b.

409-4 Vertebrate Histology. Microscopic structure of organs and tissues with emphasis on mammalian material. Two lectures and two 2-hour labs per week. Laboratory/field trip fee: \$10. Prerequisite: 10 to 12 semester hours of biological science.

410-3 Conservation Biology. An introduction to patterns of global biodiversity and threats to that diversity. Course emphasizes how principles from numerous biological disciplines are involved in conserving and managing biodiversity, and how social, economic, and political factors affect conservation strategies. Prerequisite: Biology 307.

411-3 Environmental Risk Assessment. Risk assessment can be defined as the process of assigning magnitudes and probabilities to the adverse effects of human activities or natural catastrophes. The risk assessment process involves issues such as global climate change, habitat loss, acid rain deposition, reduced biological diversity, and the ecological impacts of pesticides and toxic chemicals. It uses measurements, testing, and mathematical models to quantify the relationship between the initiating event and the effects of that event. This course will include an overview of the basic framework for conducting an Ecological Risk Assessment, and a general discussion of individual case studies involving several important environmental issues. This is a good introductory class for a student interested in assessing the effects of various stressors on environmental health. Prerequisite: Biology 307 and Chemistry 340 or equivalent or instructor's permission.

413-4 The Invertebrates. Structure, phylogeny, distinguishing features and habitats of the invertebrates. Two lectures and two 2-hour laboratories per week. Laboratory/field trip fee: \$10. Prerequisite: 220a.

414-4 Freshwater Invertebrates. Taxonomic groups, identification, distribution, and habitats of the North American freshwater invertebrate fauna. Two lectures, two 2-hour laboratories per week. Laboratory/field trip fee: \$10. Prerequisite: 220a.

415-3 Limnology. Lakes and inland waters; the organisms living in them, and the factors affecting these organisms. Two lectures per week and one 4-hour laboratory alternate weeks. Laboratory/field trip fee: \$10. Prerequisite: 220a.

418-5 Comparative Vertebrate Anatomy. The comparative structure and evolution of vertebrate organ systems. Two lectures and three 2-hour laboratories per week. Laboratory/field trip fee: \$20. Prerequisite: 220b.

421-4 Histological Techniques. Methods of preparing animal tissue for microscopic study and theories of staining and histochemistry. One lecture and two 3-hour laboratories per week. Prerequisite: 10 semester hours of biological science.

426-3 Comparative Endocrinology. Comparison of mechanisms in influencing hormone release, hormone biosynthesis, and the effects of hormones on target tissues. Include ablation and histology of glands and chemical and bio-assays with vertebrates and invertebrates. Two lectures and one 2-hour laboratory per week. Laboratory/field trip fee: \$10.

435-3 Plant-Insect Interaction. (Same as Plant Biology 435) Plants and insects have played major roles in influencing each other's evolutionary diversification. This course will be an evolutionary and ecological examination of the interactions between plants and insects. Topics will include herbivory, pollination relationships, ant-plant mutualisms, host plant choice, specialized vs. generalized relationships, seed and fruit dispersal, coevolution/cospeciation, and chemical ecology. Prerequisite: Biology 200a and b or equivalent; Biology 307 or equivalent.

458-3 Issues in Aquatic Ecology. With its primary focus on freshwater ecosystems, this course will cover important issues in aquatic ecology, including: surface water and groundwater quality, global warming, use of fish hatcheries, exotic species, genetically manipulated organisms, stream habitat degradation, dams, diversions, the Great Lakes and local issues. Prerequisite: Biology 307 or consent of instructor.

460-2 Upland Game Birds. Biological overview and identification of upland and shoreline game birds plus raptors and selectively managed species. One lecture and one 2-hour laboratory per week; there will be up to two Saturday field trips. Laboratory/field trip fee: \$5. Prerequisite: 220b or consent of instructor.

461-3 Mammalogy. Taxonomic characteristics, identification, and natural history of mammals. Two one-hour lectures and one 2-hour laboratory per week. Laboratory/field trip fee: \$5. Prerequisite: 220b.

462-3 Waterfowl. Identification, life history, ecology, and management. Two lectures and one 2-hour laboratory per week; there will be three or four Saturday field trips. Laboratory/field trip fee: \$5. Prerequisite: 220b or consent of instructor.

463-3 Game Mammals. Natural history and management. Two lectures and one 2-hour laboratory per week. Laboratory/field trip fee: \$5. Prerequisite: 220b or consent of instructor.

464-3 Wildlife Administration and Policy. Responsibilities of private, state, and federal natural resources management agencies. Legal and political processes in areas of wildlife and natural resources. Three lectures per week. Prerequisite: consent of instructor.

465-3 Ichthyology. Taxonomic groups, identification, and natural history of fishes. Two lectures and one 2-hour laboratory per week. Laboratory/field trip fee: \$5. Prerequisite: 220b.

466-3 Fish Management. Sampling, age and growth, dynamics, habitat improvement, manipulation of fish populations, and management of freshwater and marine fish stocks. Two lectures per week and one 4-hour laboratory alternate weeks. Prerequisite: 10 hours of biological science or consent of instructor.

467-3 Ornithology. Classification and recognition of birds and the study of their songs, nests, migratory habits, and other behavior. One lecture and one 4-hour laboratory per week. Laboratory/field trip fee: \$5. Prerequisite: 220b.

468-3 Wildlife Biology Principles. Basic concepts of wildlife ecology and management. Includes lectures on ecological physiology, population dynamics and wildlife management strategies. Prerequisite: Biology 307 and seven other semester hours of biological science.

469-3 Wildlife Techniques. Field-oriented course with instruction in techniques for management of wild species and their habitat. One 1 1/2-hour lecture and one 3-hour laboratory per week, two of which may be field trips on Saturdays. Laboratory/field trip fee: \$20. Prerequisite: 10 semester hours in biology and/or zoology or consent of instructor.

470-3 Interdisciplinary Approaches to Environmental Issues. (Same as Geography 470 and Agribusiness Economics 470) Application of concepts from the biological, physical, and social sciences, economics, humanities, and law, are used to understand the interdisciplinary complexities of environmental issues. Students will develop and demonstrate problem-solving skills as part of a team analyzing a regional environmental issue. Team-taught seminar style discussions. Credit may not be used for a major in zoology. Not for graduate credit. Prerequisite: Plant Biology 301i and admission to Environmental Studies minor program.

471-4 Entomology. Structure, classification, and life histories of insects. Two lectures and two 2-hour laboratories per week. Laboratory/field trip fee: \$5. Prerequisite: 220a.

473-4 Aquatic Entomology. Structure, classification, and biology of aquatic insects. Two lectures and two 2-hour laboratories per week. Laboratory/field trip fee: \$5. Prerequisite: 220a.

475-3 Advanced Cell Biology. (Same as Plant Biology 475.) Cell structure at molecular and cytological levels. Includes discussions of research methods, and plasma membrane, cell exterior and recognition, the endomembrane system and related organelles, self-replicating organelles, the cytoskeleton, nuclear structure and function in cell replication, cell differentiation and response, and eukaryotic cell evolution. Prerequisite: Biology 306 or equivalent.

476-2 Advanced Cell Biology Laboratory. (Same as Plant Biology 476.) Laboratory course to accompany 475. Light and electron microscopy, cell culturing, biochemical methods, and experimental protocols are used to study the structure of cell membranes, intracellular organelles, including the Golgi apparatus, ER, mitochondria, plastids, and lysosomes, the cytoskeleton and nucleus. Prerequisite: 475 or concurrent enrollment.

477-3 Aquaculture. Production of game, food and bait fishes. Design of facilities, chemical and biological variables, spawning techniques, diseases and nutrition. Two lectures per week and one four-hour laboratory alternate weeks. Prerequisite: ten hours of biological science or consent of instructor.

478-3 Animal Behavior. Biological basis of the behavior of animals. Two lectures and one 2-hour laboratory per week. Prerequisite: one year of biological science or permission of instructor.

480-3 to 4 Research Methods in Animal Behavior. Skills relevant to conducting research in animal behavior. Guided self-instructional format, with two 2.5-hour periods scheduled weekly, primarily as question/answer and evaluation sessions. Prerequisite: 478 and a course in statistics are recommended, or consent of instructor.

482-1 Zoology Seminar for Seniors. Each student reports on a selected topic, the class discusses using original scientific literature, and the report. One meeting per week. Not for graduate credit. Prerequisite: senior standing or 24 hours of life science completed. Mandatory Pass/Fail.

485-2 to 4 Special Topics in Zoology. Examination of topics of special interest not available in other departmental courses. Offered in response to student need and faculty availability. Prerequisite: consent.

493-1 to 6 Honors Research. Individual research for honors students in zoology. For undergraduate credit only. Prerequisite: approval of departmental chair and a faculty supervisor

496-2 to 4 Zoology Field Studies. A trip of four to eight weeks to acquaint students with animals in various environments and with methods of field study, collection, and preservation. Prerequisite: consent.

Zoology Faculty

Anderson, Frank E., Associate Professor, Ph.D., University of California, Santa Cruz, 1998.

Anthony, Terence R., Associate Professor, *Emeritus*, M.D., Ph.D., University of Chicago, 1968, 1975.

Beatty, Joseph A., Associate Professor, *Emeritus*, Ph.D., Harvard University, 1969.

Brandon, Ronald A., Professor, *Emeritus*, Ph.D., University of Illinois, 1962.

Burr, Brooks M., Professor, Ph.D., University of Illinois, 1977.

Dyer, William G., Professor, *Emeritus*, Ph.D., Colorado State University, 1965.

Eichholz, Michael W., Assistant Professor, Ph.D., University of Alaska, 2000.

Englert, DuWayne C., Professor, *Emeritus*, Ph.D., Purdue University, 1964.

Feldhamer, George A., Professor, Oregon State University, 1977.

Garvey, James E., Associate Professor, Ph.D., Ohio State University, 1997.

Halbrook, Richard S., Associate Professor, Ph.D., Virginia Polytechnic Institute and State University, 1990.

Heidinger, Roy C., Professor, *Emeritus*, Ph.D., Southern Illinois University, 1970.

Heist, Edward J., Associate Professor, Ph.D., College of William and Mary, 1994.

Hellgren, Eric C., Professor, Ph.D., Virginia Polytechnic Institute and State University, 1988.

Ibrahim, Kamal M., Assistant Professor, Ph.D., University of Cambridge, 1989.

Kelly, Anita M., Assistant Professor, Ph.D., Southern Illinois University, 1995.

King, David, Associate Professor, Ph.D., University of California at San Diego, 1975.

Kohler, Christopher C., Professor, Ph.D., Virginia Polytechnic Institute and State University, 1980.

Krajewski, Carey, Professor, Ph.D., University of Wisconsin, 1988.

Lips, Karen R., Associate Professor, Ph.D., University of Miami, 1995.

Lydy, Michael J., Associate Professor, Ph.D., Ohio State University, 1990.

McPherson, John E., Jr., Professor, Ph.D., Michigan State University, 1968.

Muhlach, William L., Associate Professor and *Chair*, Ph.D., University of Illinois at Chicago, 1986.

Reeve, John D., Associate Professor, Ph.D., University of California Santa Barbara, 1985.

Schauber, Eric M., Assistant Professor, Ph.D., University of Connecticut, 2000.

Sears, Michael W., Assistant Professor, Ph.D., University of Pennsylvania, 2001.

Shepherd, Benjamin A., Professor, *Emeritus*, Ph.D., Kansas State University, 1970.

Sparling, Donald W., Associate Professor, Ph.D., University of North Dakota, 1979.

Stahl, John B., Associate Professor, *Emeritus*, Ph.D., Indiana University, 1958.

Waring, George H., Professor, *Emeritus*, Ph.D., Colorado State University, 1966.

Whiles, Matt R., Associate Professor, Ph.D., University of Georgia, 1995.

Whitledge, Gregory W., Assistant Professor, Ph.D., University of Missouri, 2001

Wilhelm, Frank M., Assistant Professor, Ph.D., University of Alberta, 1999.

6 / Student Services



Enrollment Management

FINANCIAL AID

Financial Aid, located in Woody Hall, B-Wing, Third Floor, administers federal, state, and institutional financial aid programs for SIUC undergraduate, graduate and professional students. In Fiscal Year 2005, 19,990 students received \$189,034,207 in financial aid awards. Besides financial aid and scholarship processing, Financial Aid includes Veterans Educational Services and Student Employment Services. See additional financial aid information in Chapter One of this catalog.

NEW STUDENT PROGRAMS

New Student Programs is responsible for providing programs to assist all new students: freshman, transfer, and graduate students, and their families with their transition to all aspects of campus life. We offer a variety of programs described below to enhance this transition. Visit <<http://www.newstudent.siu.edu>>.

SOAR/Student Orientation Advisement Registration

Make a successful transition to University life by attending the SOAR program. SOAR is a requirement for all freshman students, and highly recommended for transfer students. Transfer students have the option of participating in our on-line transfer student orientation by visiting <www.soar.siu.edu>. Through SOAR, students and their family members will be:

- Assisted with their transition to SIUC life.

- Introduced to their academic advisor, who will assist them with course selection and registration.

- Educated about the many campus resources, academic expectations and involvement opportunities that integrate them into college life.

- Assisted with the completion of the "Saluki Checklist," which includes items involving: Bursar, Financial Aid, Information Technology, Parking, Immunizations, Student Health Insurance, Student ID, Textbooks, Housing, and much more.

Week of Welcome

Your Student Life Advisor (SLA) will welcome you and your family to Saluki Country, help you get moved in, encourage you to attend the Week of Welcome (WOW) events, and assist you in getting ready for the beginning of the fall semester. Participation in WOW is an expectation for all new students, as well as an important step toward student success.

Saluki Family Association

Membership in the Saluki Family Association has its rewards. Take advantage of our vast array of resources, business discounts, Saluki Family Weekend advanced information, and much more. Visit our website: <<http://www.salukifamily.siu.edu>>.

Student Life Advisor (SLA) Program

The SLA program provides opportunities for specially trained upper-class students to serve as peer advisors to help new students learn about the campus and its programs and services. Phone (618) 453-1000.

RECORDS AND REGISTRATION

The Office of Records and Registration provides administrative services and academic support to currently enrolled students and the campus community, as well as to prospective and former students. The primary goals of the Office of Records and Registration are to assist students in the registration process, evaluate trans-

fer credit, monitor students' academic progress, and determine eligibility for degree. The Office of Records and Registration also provides many specialized services such as transcript distribution, enrollment verification and withdrawal. For more information about the services provided by the Office of Records and Registration, visit our website at <http://www.registrar.siu.edu>.

Transitional Programs

Transitional Programs conducts exit interviews for all undergraduate students contemplating withdrawal from the University and reviews requests for credit/refund of tuition and fees. Students contemplating withdrawal from the University are encouraged to contact Transitional Programs prior to leaving the campus. Phone (618) 536-2338.

Student Absence notifications provide a method of notifying instructors of the reasons for student absences from class. This is only for emergency situations. Phone (618) 536-2338.

Transitional Programs serves as the official office of record regarding all student deaths, including those of former students, and provides special assistance to surviving parents or family members by notifying appropriate University offices so that institutional records may be adjusted to remove the name of the deceased student. Phone (618) 536-2338.

Powers of Attorney arranges to act for a student to negotiate a campus check to pay any outstanding bills owed to SIUC in cases where the student may be unable to be on campus to claim the check because of graduation, internship, practicum experiences, or student teaching assignment. Phone (618) 536-2338.

Student Affairs

CAREER SERVICES

From your arrival on campus through graduation, our goal is to assist your quest to shape an education that is both meaningful and marketable. Individual consultation appointments, professional development seminars, career entry tests, on-campus interviews, job listing and referral services, and career fairs are just a sampling of the activities we sponsor to assist you.

Career Services Specialists assist students and alumni in developing job search skills and strategies as well as introducing you to prospective employers. In our computer lab, peer advisors are available to assist you in electronically exploring your major, accessing occupational information; researching job search strategies, and locating job opportunities and internship.

Negotiating entry into college, specific majors, graduate school and even some professions can involve the taking of one or more standardized tests. As a regional testing center, Career Services is committed to providing opportunities for you to successfully complete your goals by offering undergraduate/graduate admission, placement, proficiency and other specialized tests.

Make your career a priority: stop in and visit with us often! Career Services is located in Woody Hall, B204, phone (618) 453-2391; <http://www.siu.edu/~ucs>.

COUNSELING CENTER

The Counseling Center is staffed by professional psychologists and is ready to help students deal with personal, academic, family and emotional problems or psychological difficulties. A staff of licensed professionals provides individual, group, career, and couples counseling. The Counseling Center's staff is committed to meeting the special needs of individuals from diverse backgrounds. The Counseling Center is located in the Student Health Center, Room 256, phone (618) 453-5371 or visit our website at: <http://www.siu.edu/offices/counsel/>.

DISABILITY SUPPORT SERVICES

The University is committed to making all services, programs, and activities equally accessible to students with disabilities in integrated settings. Services and programs include, but are not limited to, pre-admission information, pre-enrollment planning, orientation, transportation, recreational activities, adapted testing, alternate format textbooks and materials, equipment and computer access for visually, learning, mobility, and hearing impaired students, interpreters, print-to-text, and note takers for hearing impaired students, acting as a liaison with academic departments and service offices, as well as with agencies such as the Division of Rehabilitation Service. In addition, we offer adapted computer technology evaluation and training, a Summer Transition Camp (free), and a Fall Transition Project (fee-for-service).

The University Housing Office provides modified housing in the student and family housing areas. There are also special resources in the Computer Labs, Morris Library, Student Recreation Center, and Student Health Center. The campus overall is exceptionally accessible.

Persons with disabilities apply and are considered for admission in the same manner as non-disabled persons. The nature or severity of disability is not considered in the admission determination. Persons with disabilities interested in attending Southern Illinois University Carbondale are encouraged to visit the campus in order to discuss programs, services, and to tour the campus. Prospective students who have a disability are also encouraged to formally apply for admission as far in advance as possible to ensure sufficient time for planning support services after being admitted but before the starting date of the semester.

Further information may be obtained by contacting the Office of Undergraduate Admission or the Disability Support Services Office (DSS). DSS may be reached at <DSSSIU@SIU.edu> or by calling (618) 453-5738 (Voice), (618) 453-2293 (TDD), (618) 453-5700 (Fax).

INTERNATIONAL PROGRAMS AND SERVICES

International Programs and Services (IPS)

IPS is responsible for developing and supporting faculty, staff, and students in international education. The office administers International Students and Scholars, Study Abroad Programs, and International Development. Units of IPS are located in the Northwest Annex B. Phone (618) 536-7771.

International Students and Scholars

This division provides comprehensive programs and services for international students and scholars from pre-arrival correspondence to post-graduate concerns. These programs and services include processing of admission applications, serving as liaison with foreign governments and sponsoring agencies, providing certification for foreign currency exchange, and other needs. This office has been designated by the United States Citizenship and Immigration Services (USCIS) as having the official responsibility for interpretation and adherence to laws and regulations as they apply to non-immigrant students and faculty. Also, designated responsible officers administer proper compliance with the State Department's Exchange Visitor Program for the University. Assistance with regulations, forms, and procedures is provided to all non-immigrants related to University and broader community affairs.

Integral educative services include orientation programs, arrival and housing assistance, personal counseling and referral, a *Handbook for International Students and Faculty*, a newsletter *The International Dateline*, advisement of international student associations, and numerous workshops and seminars on topics of importance for students.

Special programs, which promote an international dimension of cross-cultural exchange to the broader community, are provided. An annual International Festi-

val and various national day celebrations are held. The Community Programs subdivision in cooperation with the International Friends Club coordinates a Host Family Program, International Speakers' Bureau, English in Action, Language Exchange, American and International Cooking Exchange, an International Spouses Group and a Loan Closet.

The International Students and Scholars division is located on the first floor of the Northwest Annex B. Phone (618) 453-5774.

International Development

This division provides University-wide leadership, coordination, and support for a wide variety of international activities. These activities include international recruitment and enrollment management, research and dissemination of information on external funding opportunities, maintenance of an international projects database and a resource library, development of grants and projects, administration of international projects, linkages and agreements, promotion of women in international development activities, sponsorship of international development forums, and assistance with international visitors and protocol. Assistance also is provided in the exploration of project ideas, identification of funding sources, development of proposals, negotiation of contracts, and administration of externally funded activities.

International Development is located in the Northwest Annex, Building B. Phone (618) 453-3070.

Study Abroad Programs

Coordinates overseas services for American students, including international grant programs, exchanges and study abroad programs. It is the central referral point for information on the student Fulbright program, National Security Education Program and The British Marshall Program. Graduate students may also participate in inter-university international exchange programs and in travel/study programs offered during the summer and intersession period under the auspices of this division. Study Abroad Programs is located on the second floor of Northwest Annex, Building B. Phone (618) 453-7670. New programs are developed regularly so please check our website <www.siu.edu/~studyabr>.

International Studies in Austria. Consists of one or two semesters of study in German, Austrian life and culture, political science, business, fine arts and communications at the SIUC program in cooperation with Salzburg College in Salzburg, Austria. All courses, except German, are taught in English and will vary from term to term. No prior German is required, although it is recommended.

International Studies in Japan. Consists of one semester of study in Japanese language, culture and society. This program gives the opportunity to live with Japanese students and to interact with members of the local community.

International Studies in Costa Rica. Consists of one month intensive Spanish modules up to a full semester. A variety of classes are offered depending on the term. No prior Spanish is required. The program is offered in cooperation with Universidad Veritas in San José, Costa Rica.

International Student Exchange Program. This exchange program is multilateral and involves one-year placements at 100 study sites worldwide. It is a one-for-one exchange plan under which students pay their normal tuition and fees, including room and board, and apply credit earned toward their degrees. There are study sites in Africa, Asia, Australia, the British Isles, Canada, Europe, and Latin America. Applicants must be mature, have a minimum grade point average of 2.75, and possess the appropriate foreign language skills. Acceptance into the program is considered an honor bestowed in lieu of a scholarship. Most forms of financial aid can be used for this program.

Travel/Study Program. Travel/Study courses are offered during intersession as

well as during the summer months. Students must register two to four months prior to the start of the course and may earn graduate or undergraduate credit depending upon the nature of the course. Approximately ten offerings are available during each academic year, ranging in length from one week to two months. Full-time faculty of Southern Illinois University teach the courses and most do not require a specialized foreign language background.

Utrecht Network. The University participates in an exchange program with a consortium of European Community universities coordinated by Utrecht University in the Netherlands. There are currently possible exchange sites in Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Malta, Netherlands, Norway, Portugal, Slovenia, Spain and Sweden.

Council on International Educational Exchange. The University is an institutional member of this organization, which sponsors study abroad programs around the world, and various work abroad programs.

BI-LATERAL EXCHANGE PROGRAM

Bi-Lateral Exchanges. The university offers a number of bi-lateral exchanges with individual universities around the world. These currently include options in Australia, Austria, France, Germany, Japan and Switzerland. Please contact Study Abroad Programs for the latest listing and further information.

INDIVIDUAL OPPORTUNITIES

Credit might be earned through (a) a department's independent study courses such as readings, individual research, practicum or related types of courses with prior departmental approval; or (b) a department or college's travel/study course where offered.

OTHER PROGRAMS

Southern Illinois University Carbondale may also grant credit for programs not sponsored by the University. A student may enroll in a travel/study program conducted by a regionally accredited United States institution and transfer the credit to this university. Credits earned in this manner will be evaluated as electives unless a department, program, or the Office of Records and Registration approved the courses in advance to apply toward specific requirements. Additional information may be obtained from the Study Abroad Programs.

A student may enroll in either a foreign institution or an independent location of a foreign institution. It is important that the student check with the International Admissions before registering since many foreign institutions are not accredited. Graduate students should check with the Graduate School. Credits earned in this manner will count as electives only unless a department or program approves them to apply toward specific requirements.

RECREATIONAL SPORTS AND SERVICES

The Office of Recreational Sports and Services, (618) 536-5531, enhances the educational experience for the SIUC community by providing recreational programs, services and facilities that promote the holistic development of participants.

Recreational Sports and Services offer students and their families a wide variety of recreation activities. The 214,000 square foot Student Recreational Center houses an Olympic-size swimming pool, two indoor tracks, six activity areas for basketball, volleyball, badminton and aerobics, one indoor recreational tennis court, one free weight room, one Nautilus room with thirty-four 2ST machines, a sports medicine office, two squash courts, twelve racquetball courts, and an indoor rock climbing practice wall.

The skateboard/in-line skate park located behind the Lesar Law Building has almost 9,000 square feet and several ramps, rails, and obstacles. SIUC is the only university in Illinois with such a facility.

Lake-on-the-Campus recreational facilities include a sandy beach with a bath-house and sunning raft, a jogging path, and a boat dock. More than 20 tennis courts are located at five convenient areas across campus.

A variety of programs are offered for everyone. There are programs for people with disabilities and youth, as well as special events for international students. Recreational Sports, (618) 453-1263, provides structured programs, including aerobic classes, for every skill level. Instruction for a wide variety of activities, including yoga, massage, weight training, martial arts, tennis, volleyball, racquetball, and swimming, is available. Intramural Sports, (618) 453-1271, offers over 40 intramural competitive sport activities ranging from basketball to wiffle ball. Youth programs offer instruction for children of all ages in activities for martial arts, tee ball, dance, and the climbing wall.

Over 30 sport clubs, (618) 453-1376, among them equestrian, rugby, soccer, water polo, outdoor adventure, ultimate frisbee, and volleyball, compete on-campus and at other universities.

The Adventure Resource Center, (618) 453-1285, provides outdoor recreational information and sponsors informative clinics on topics such as fishing, bike maintenance, and rock climbing. Camping and canoeing equipment can be rented from Base Camp, (618) 453-1287, for a minimal daily fee. Special trips are offered each year to places like the Grand Canyon and Yellowstone National Park. Canoeing, hiking, spelunking and rock climbing trips are offered in fall and spring semesters.

For more information about Recreational Sports and Services call (618) 536-5531 or check our web site: <<http://www.siu.edu/rss>>.

STUDENT CENTER

The Student Center covers over eight acres of floor space, however it is more than just a building. The programs and services offered provide for the social and academic development of our students. In addition, the Student Center serves as a unifying force, bringing together the campus and the community. It is an organization and a program, which work together to form a foundation for university life.

Four important missions guide the Student Center in providing services and programs for the University and the community. It provides support services, which compliment the academic mission of the University through the bookstore, information services, food service and meeting facilities. It is a laboratory for learning. The Student Center is an extension of the classroom allowing practicum students, graduate assistants and interns the opportunity to develop on-the-job experience in their fields of learning. It is a focal point to which alumni and students can relate when returning to campus.

The Student Center meets the needs of the students by providing services that are both convenient and practical, including multiple dining locations featuring name brand concepts like Subway, Taco Bell and Starbucks; ATM stations; Western Union receiving station; check cashing services; ID cards; Debit Dawg program; e-mail checking stations; wireless internet and much more. SIU apparel, textbooks, greeting cards and other items can be purchased at University Bookstore. Laptop computers can be checked out at the Information Station on the first floor of the Student Center. This service is available to all full-time students at no cost as long as the computer is not damaged, stolen or lost. The computers can be checked out for two-hour periods and are available on a first come – first served basis. Visitors can also send or receive domestic or international faxes at the Information Station. For more details, call or visit the Information Station.

As the center for arts and entertainment, the Student Center has something for everyone. Films, lectures, art exhibits and concerts are held in the facility. The Student Center also offers late night weekend entertainment options. In addition, a variety of recreation opportunities including a bowling alley, a billiard room and a video arcade are available. For those with an artistic interest, the Craft Shop

offers a chance to develop skills in clay pottery, stained glass, woodworking and more.

The Student Center is part of the educational program of the University and serves as a laboratory of learning and leadership through participation in various boards and committees that provide campus-wide social, cultural, and recreational programs. Through the Student Center and Student Programming Council, non-majors can become actively involve in theatre, dance, and other performing arts activities.

Additional Student Center facilities include ballrooms, an auditorium and several private meeting and dining rooms. Offices in the Student Center include Alumni Association, Student Development, University Programming, Students' Legal Assistance, New Student Programs/SOAR Communication Center, and student organizations and student government offices.

Debit Dawg – The SIUC Debit Card Program

The Debit Dawg Account is the university's debit card program. It is a function of your ID card and is designed as a service to SIUC students, faculty and staff. There is no transaction or monthly fee to use the program. It is safer and easier than carrying cash. Simply deposit money into your account and you'll enjoy convenient purchasing power at many on and off campus locations including: University Bookstore, 710 Bookstore, Saluki Bookstore, Jimmy John's, Papa John's, Quizno's, Wise Guys Pizza, Common Grounds Coffee House, Student Health Center Front Desk and Dental Services, Student Health Center Pharmacy, Marion Eye Center, Derma Care, Blue Barrack Computer Lab, Parking Division, all University housing food service locations, University housing laundry facilities, Quigley computer lab, campus vending machines, copy machines and Student Center recreation and dining areas. Your remaining balance will be displayed after most transactions so you'll always know how much money is in your account.

Deposits to your Debit Dawg Account may be made in person at the Check Cashing windows located on the second floor of the Student Center, by Western Union wire transfer (addressed to SIUC), online using SalukiNet or by mail. Deposits may also be made in person at "Debit Dawg" cash machines located at Lentz, Trueblood, Grinnell, Morris Library, Law School, Faner CLC1 and CASA CLC2 and University Hall. Deposits may also be made in person or over the phone (453-3493) with Visa, MasterCard, Discover, or American Express. Please include the SIUC ID number and name of the account holder on the check (payable to SIUC) and mail to "Debit Dawg", Southern Illinois University Carbondale, Student Center ID Card Office, Mail Code 4407, Carbondale, IL 62901. A monthly statement of transactions will be sent to the account holder's e-mail account.

University Bookstore

The University Bookstore is conveniently located on the first floor of the Student Center and is an integral part of a student's academic success. New and used textbooks, school supplies, art supplies and engineering materials are all available at University Bookstore. In addition to textbooks, University Bookstore sells reference books and current best sellers.

Show your SIU spirit with imprinted apparel and souvenir items such as pennants, cups, mugs, umbrellas, diploma frames and more. Gifts, greeting cards and calling cards can also be found at University Bookstore.

Additionally, the University Bookstore provides many services to aid in a student's academic success. Book and thesis binding, class ring ordering, gift-wrapping, cap and gown rental, textbook buy back services and special order services for textbooks and supplies are offered. All major credit cards are accepted.

Transit Car Service

Transit Car Service provides evening transportation for currently enrolled, disabled students to and from campus for academic purposes on an on-call basis. A

similar Day Van Service is available to transport students with disabilities to and from campus for academic purposes on a scheduled basis. For rides, phone (618) 453-2004; for information, phone (618) 536-2338.

STUDENT DEVELOPMENT

Student Development facilitates student transition into and through the campus-learning environment, promotes student involvement, assists student organizations, provides leadership training and programming assistance, encourages campus and community service, emphasizes social responsibility, and coordinates a variety of programs and services designed to foster student learning.

Leadership and Involvement Programs

1. The U-Card promotes involvement in campus programs and activities by encouraging students to attend a minimum of eight "approved" events in five categories during the fall and spring semesters. Students who complete their cards receive a coupon booklet and are eligible to participate in the semester drawings for a chance to win free books for one semester. All undergraduate students are encouraged to request a U-Card and check the website <<http://www.siu.edu/~ucard>> for details. Phone (618) 453-5714.
2. Registered Student Organizations (RSOs) offer opportunities for students to participate in approximately 450 student organizations. Students interested in joining an existing RSO or creating a new one should contact Student Development. Phone (618) 453-5714.
3. Fraternal Education promotes the growth and development of students who are affiliated with the campus social fraternity and sorority community by emphasizing student learning, leadership, education and development, involvement in campus and community activities, and social and civic responsibility. Phone (618) 453-5714.
4. Leadership Awards Program honors students for their outstanding leadership achievements and service activities. Programs include an annual recognition program and presentation of special awards. Phone (618) 453-5714.
5. Leadership Council provides opportunities for students through facilitation of a series of cultural, social, civic, leadership and educational programs for eligible first-year students (by invitation only). Phone (618) 453-5714.

Multicultural Programs and Services

Multicultural Programs and Services sponsor workshops, seminars, and special event programs designed to promote and enhance student-learning experiences within the context of the culturally pluralistic campus community. Programs include new student orientation sessions designed to meet the needs of multi-ethnic students, multi-ethnic student peer training and mentoring programs, multicultural awareness programs, multi-ethnic student involvement programs, special interest group workshops and seminars, and advisement assistance to multi-ethnic RSOs. Phone (618) 453-5714.

1. Multi-Ethnic Student Excellence Program honors the multi-ethnic student for excellence in scholastic achievement. Eligible students include those who maintain a minimum 3.0 semester grade point average and who have been on the Dean's List for a minimum of two consecutive semesters. Phone (618) 453-5714.

2. Historical Commemorations and Celebrations sponsors a series of historical commemorations: Latino Heritage Month (September 15 – October 15), GLBT History Month (October), Native American Heritage Month (November), Black History Month (February), Women's History Month (March) and Asian American Awareness Month (April). Phone (618) 453-5714.

Student Volunteerism and Community Service-Learning

1. Saluki Volunteer Corps (SVC) promotes social and civic responsibility by encouraging students to volunteer to participate in a minimum of 30 community service hours each academic year of their enrollment in response to the State of Illinois mandate focusing on the student as a citizen-scholar, and by serving as the University's Clearinghouse for student volunteer requests. Phone (618) 453-5714.
2. AmeriCorps provides opportunities for students "to earn while serving" through participation in the Land of Lincoln AmeriCorps (LLA) program, a member of the Corporation for National Service. Members receive a monthly stipend, in addition to a monetary education award upon successful completion of service. Phone (618) 453-5714.

Services for Non-Traditional Students

Services for Non-Traditional students assists non-traditional students with their transition into and through the campus learning environment by serving as a campus and community resource referral agency for all enrolled students who may define themselves as non-traditional, serving as a clearinghouse for non-traditional student concerns, and promoting campus awareness of and response to non-traditional students, their spouses and family members. Phone (618) 453-5714.

Emergency Locator System

Emergency locator system provides emergency contact information for enrolled students who may need to be reached in cases of emergency related to their children or other family members. Students need only to file their campus class/work schedules with Student Development. Phone (618) 453-5714.

SPOUSE/DOMESTIC PARTNER CARD

The card provides opportunities for the spouse or domestic partners of enrolled students to participate in designated campus programs and activities. Phone (618) 453-5714.

RAINBOW'S END CHILD DEVELOPMENT CENTER

Provides a comprehensive child development program for the children, ages 6 weeks to 12 years, of University students, faculty and staff members. The center is accredited by the National Association for the Education of Young Children, is licensed by the State of Illinois Department of Children and Family Services, and is a participant in the State of Illinois Child Care Food Program. Special features of Rainbow's End include full and part time day care options, the assessment of tuition and fees based upon the selected enrollment option, and reduced tuition for student parents. Rainbow's End is open from 7:30 a.m. to 5:30 p.m. each day. University classes are in session. Break hours are 8:00 a.m. to 5:00 p.m. Phone (618) 453-6358. Call for placement on the waiting list.

STUDENT HEALTH CENTER

Student Health Center supports the academic mission of the University with a broad range of health care services that help reduce financial, emotional, and physical health barriers to achieving academic success. Available services include: primary healthcare, dental services, pharmacy, immunizations, mental health

care, wellness services, sports medicine, physical therapy. medical insurance and after-hours Dial-a-Nurse.

Eligibility and Fees

Any student enrolled at Southern Illinois University Carbondale who has been assessed the Student Medical Benefit Primary Care Fee is eligible for all on-campus services. The Student Medical Benefit Extended Care Fee is assessed each semester and funds the insurance benefits for emergency room, ambulance, specialty care, hospitalization, outpatient surgery, in-patient mental health care and accidental death and dismemberment. Students who have paid the Student Medical Benefit Extended Care fee spring semester are also covered during the summer semester. Spouses of students are eligible to purchase the on-campus primary care benefits for each semester that the sponsoring student is enrolled.

Available Services

On-Campus Medical Clinic: (618) 453-3311

The Student Health Center (SHC) provides the same primary care services offered by most private general physicians. The SHC clinic is staffed by physicians, a psychiatrist, physician assistants, registered nurses, psychologists, counselors and support staff. The Student Medical Benefit Primary Care Fee paid by SIUC students includes all routine office care and a wide range of diagnostic tests including laboratory and x-ray for only \$6 per visit. Appointments may be scheduled from 7:30 a.m. to 4:30 p.m. Monday through Friday at (618) 453-3331. TDD number for the hearing impaired is (618) 453-3384.

Dial-A-Nurse: (618) 536-5585

After hours and weekends, a nurse is available by phone for medical care consultation and information when the Student Health Center is closed. Dial-A-Nurse hours are 4:30 p.m. to 10:30 p.m. Monday through Friday and weekends, 2:30 p.m. to 10:30 p.m. during the fall and spring semesters.

Immunization Compliance: (618) 453-3311

Illinois law requires proof of immunity for Tetanus, Diphtheria, Measles, Mumps and Rubella for all persons entering a four-year public or private institution of higher education before registering for a second semester. A non-refundable late compliance fee is assessed all students who fail to provide proof of immunity or have not begun to receive the necessary series of immunizations by the end of the seventh week of the semester.

Pharmacy: (618) 453-4417

Prescriptions, over-the-counter drugs, and other items are available at the pharmacy. Prescriptions from any physician may be filled. Pharmacy items may be purchased by cash, check, credit card, or billed to a student's Bursar account. Pharmacy and prescription drug cards may not be used at the pharmacy.

Sports Medicine and Physical Therapy: (618) 453-1292

This Office provides a variety of health, fitness and wellness services including evaluation and rehabilitation of activity-related injuries. Fitness testing and information about nutrition or other fitness related concerns are also available. Hours are 8:00 a.m. to 4:30 p.m. Monday through Friday.

Student Emergency Dental Service: (618) 536-2421

Dental care is available to resolve emergency dental disorders, to answer dental care questions and provide limited routine fee-for-service procedures.

Wellness Center: (618) 536-4441

The Wellness Center assists students in making healthy lifestyle choices about stress management, nutrition, sexuality, and alcohol, tobacco and other drug use. Individual consultations, group experiences, skill building and support for issues impacting student health are key to the Wellness philosophy. A nurse consulta-

tion office is available at the Student Health Assessment Center in the Student Center for walk-in health information.

STUDENT JUDICIAL AFFAIRS (SJA)

Assists in the maintenance of an orderly environment conducive for learning, free expression, free inquiry, intellectual honesty, respect for others, and participation in constructive change through the development of ethically sensitive and responsible persons. It is each student's responsibility to know and comply with the SIUC Student Conduct Code. Students interested in serving as a member of a student judicial board may apply by calling (618) 536-2338.

STUDENTS' LEGAL ASSISTANCE OFFICE

The services of the Students' Legal Assistance Office are available without charge to all fee-paying undergraduate and graduate students. Students must pay any court costs or fees incurred outside of this office. The two lawyers and second and third year law students advise clients, and in certain situations, will represent them in court. The office may not handle criminal cases, contested domestic cases, bankruptcy and other fee-generating cases. The lawyers may not draft wills or represent clients in probate, real estate or business matters. Additionally, they may not represent one student against another student, against the State of Illinois, or against SIUC. The office is located on the third floor of the Student Center. Students should call (618) 536-6677 to make an appointment between the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday. Visit the Students' Legal Assistance website: <<http://www.siu.edu/~sla/>>.

SUPPLEMENTAL INSTRUCTION

Supplemental Instruction (SI) is one of many programs offered by SIUC to enhance the student-learning environment and to promote the academic success of students. SI is currently offered in a select number of Core Curriculum courses. The study sessions are free of charge, and many students find them fun as well as productive. Because this assistance is provided directly through the course, students need to attend class to be in contact with the SI leaders and to find out the specifics of when and where the SI sessions are offered. SI is not a substitute for class attendance—students are strongly encouraged to attend class regularly.

Assistance begins the first week of the term. During the first class session, the SI leader (an undergraduate student who previously has been successful in the same course) surveys the class to establish a schedule of three or more SI sessions per week. The SI leader attends class just as regularly enrolled students do, so he/she knows exactly where students are in the course material. During the SI session, students work with one another as they learn study strategies that will promote their success in the course. For best results, students are encouraged to attend at least one study session per week throughout the entire semester. Special study sessions are offered prior to exam days in each course.

SI is an internationally known and respected program. With over 25 years of research data, SI has been shown to help students increase their grades in difficult college courses by one-half to one full letter grade. For information contact the coordinator at (618) 453-2422.

UNIVERSITY HOUSING

With over 1700 academic programs and activities, University Housing is the foundation of student success. To underline the importance of creating a positive transition from home to school, all single freshmen students under the age of 21, who are not residing with their parents or legal guardian, are required to live in University Housing.

University Housing offers four residential areas, made up of residence halls, and four apartment areas. Residence halls are open to single undergraduate and

graduate students and include Brush Towers, Thompson Point, University Park and University Hall. Bathrooms are either suite-style or community style. Each residence hall is furnished and air-conditioned. Apartment housing eligibility varies between each apartment area. Eligibility ranges from single undergraduate students to married students, parents and domestic partners. For a complete listing of apartments and eligibility or for more information regarding on-campus living, visit the University Housing website at <www.housing.siu.edu>, email <housing@siu.edu> or call (618) 453-2301.

CAMPUS SERVICES

BURSAR

The office of the Bursar is committed to excellence in providing financial services to students and the Southern Illinois University community. We are responsible for billing, collecting, refunding, and accounting of students' tuition and loan accounts, as well as other institutional receivables, and also provide the means to help understand basic aspects of an account with Southern Illinois University. Our mission is to provide these services in the most efficient, friendly, effective and customer-oriented fashion possible. Please contact us by telephone (618) 453-2221, e-mail <bursar@siu.edu>, visit our website <<http://www.siu.edu/~bursar/>>, or stop by our offices in Woody Hall-B6. Additional student information is also available through SalukiNet <<http://salukinet.siu.edu>>.

SIUC ARENA

The SIU Arena hosts a variety of athletic events, meetings, musical programs, stage performances and similar activities that demand an indoor participant area or a facility capable of accommodating large audiences. The SIU Arena is the site of the University's largest commencement ceremonies, graduating a total of 4,450 graduates in 1999. The staff of the SIU Arena is available to assist in achieving the goals of the educational programs of various University departments, in scheduling the facility for a number of indoor sporting events and practices for the Department of Intercollegiate Athletics, and in providing equipment and facilities for various University student groups. Finally, the SIU Arena presents a popular entertainment series that helps to fulfill the educational, cultural and entertainment needs of the University and its surrounding communities.

SHRYOCK AUDITORIUM

Located on the old campus of Southern Illinois University Carbondale, Shryock Auditorium stands as the finest performing arts center in southern Illinois.

Constructed in 1917 and named after University president Henry William Shryock, the facility was renovated in 1970 at a cost of 1.5 million dollars. Upon re-opening in January 1971, guests were pleased and surprised to find a new decor of opulent grand opera splendor, while the original motif of the building had been retained.

As the largest auditorium on campus, seating over 1,200, Shryock Auditorium is well equipped to handle almost any type of event, from the performing arts on a grand scale to large group meetings and conferences. Facilities include dressing rooms capable of accommodating up to 70 performers, modern stage rigging, lighting and sound systems, and air conditioning throughout the audience areas.

Shryock Auditorium annually presents the finest in touring musicals, plays, ballet, modern dance, opera, international entertainment, and big bands. In addition, the Auditorium is utilized by recognized student organizations, and by non-student on-campus groups when the event is of educational, cultural, or social significance.

The beautiful decor and appointments of Shryock Auditorium, with the nostalgic memories surrounding this old campus landmark, make it one of the places to

which students and alumni return and proudly show campus visitors year after year. For more information, visit <www.siu.edu/shryock>.

UNIVERSITY MUSEUM

The University Museum, now located in Faner Hall, has been a repository of artifacts since its first director, Dr. Cyrus Thomas, was commissioned to begin collecting for a museum by the Board of Trustees of Southern Illinois Normal University some time before 1871. The museum formally opened to the public in 1874. Today, the University Museum, with 75,000 artifacts, is the largest encyclopedic museum in Southern Illinois. The Museum provides leadership and assistance for museums throughout Southern Illinois. The American Association of Museums has accredited the University Museum since 1977.

The University Museum, a public steward and educational resource, serves the University and the larger community by collecting, preserving, researching, and exhibiting an encyclopedic range of artifacts illuminating the arts, humanities, and sciences. Changing exhibits include regular series of shows by undergraduate and graduate students, faculty and others beyond the campus. As a teaching institution, the museum offers in-depth, practicum classes and opportunities in the practice of Museology through its undergraduate degree minor. 400- and 500-level courses in museum studies are offered through the Department of Anthropology, Department of History, Department of Political Science, and the School of Art and Design.

CAMPUS COMMUNICATIONS MEDIA

SIUC Broadcasting Service, WSIU Public Broadcasting

The SIUC Broadcasting Service, WSIU Public Broadcasting, operates public television stations WSIU-TV 8 and WSIU-DTV 40 in Carbondale and WUSI-TV 16 and WUSI-DTV 19 in Olney, and public radio stations WSIU-FM 91.9 in Carbondale, WUSI-FM 90.3 in Olney, and WWSI-FM 88.9 in Mt. Vernon, and an interactive website: <<http://www.wsiu.org>>. Students are provided opportunities to get hands-on experience in a wide range of radio production, television production, broadcasting journalism, engineering and other technical support, education and outreach, sales, public relations and marketing specialties. The Broadcasting Service, WSIU Public Broadcasting, encourages active student volunteer participation in all areas of its operations. Students are able to work with modern equipment in actual on-the-air situations. They can become involved in the creation of radio, television, and Internet programming, and they can compete for paid student staff positions.

The stations of the SIUC Broadcasting Service are affiliated with a variety of national organizations such as National Public Radio and the Public Broadcasting Service. Students who work at the stations have learning experiences available to them, which are extremely valuable upon entering the job market. Southern Illinois University Carbondale is known nationally and admired for the practical experience it provides its students through participation in radio and television station activities.

Newspaper

The Daily Egyptian, campus newspaper, is published when the University is in session Mondays through Fridays, spring and fall semesters and Tuesday through Fridays during the summer session, and serves as a morning daily newspaper for the University community. *The Daily Egyptian* is produced under professional supervision, using student editors and staff. About 100 students work at news-gathering, editing and layout, production, advertising and distribution. The circulation is about 20,500. Students do not have to be enrolled in journalism to be employed in the newspaper departments of news, photography, camera, paste-up, typesetting, advertising, business, printing, and circulation. The newspaper is

published and printed in a plant equipped with electronic facilities to produce a daily newspaper on a web offset press.

INTERCOLLEGIATE ATHLETICS

Excellence on the field of competition and in the classroom remains the standard for Southern Illinois University Carbondale's athletics program, which provides 18 sports for men and women. All intercollegiate sports compete at the NCAA Division I level, with football competing in I-AA.

Sports are offered in basketball, baseball, cross country, football, golf, softball, swimming and diving, tennis, track and field, and volleyball. All Saluki sports compete within the Missouri Valley Conference (MVC), except for football, which belongs to the Gateway Football Conference. The proud Saluki tradition includes many former professional and Olympic athletes as well as recent NCAA post-season appearance by men's basketball, football, softball, men's swimming and diving and men's and women's track and field.

SIUC student-athletes routinely gain high marks in the classroom. During the 2004-05 academic year, at least fifty percent of the University's varsity sports participants earned a term grade-point average of 3.0 or above (4.0 scale). Almost nine of every ten student-athletes who complete their athletic eligibility at SIU earn their Baccalaureate degrees.

CAMPUS MINISTRIES

The Campus Ministries for SIUC believe in and affirm the presence of God working among us as a people. With an awareness of the diverse religious and cultural traditions existing among us, we are committed to all efforts unifying the people of God with loving concern for one another. We celebrate this diversity in unity because it reflects the rich variety of God's revelation throughout history.

We see the University as a unique and varied setting for the development of personal growth and religious commitment. We feel called to share with all participants in the University Community in a joint search for truth and spiritual meaning in life. Twelve individual ministries, Jewish and Christian, constitute the Campus Ministries organization. For a current brochure containing more detailed information about their worship, programs, and fellowship offerings, telephone (618) 529-3311 or write Campus Ministries, 715 Washington Street, Carbondale, IL 62901 or visit our website at <<http://www.siu.edu/~siucmin>>.

OFFICE OF THE UNIVERSITY OMBUDSMAN

The Office of the University Ombudsman is an impartial and confidential resource, which assists individuals in resolving problems that arise within the University. The Ombudsman Office is an independent, neutral office reporting directly to the Chancellor. The office acts on complaints or suggestions from students, faculty, and staff in an attempt to ensure that members of the University community receive fair and equitable treatment within the University system. The Ombudsman Office also brings to the attention of those in authority any inadequacies in existing University procedures that might jeopardize the human rights and civil liberties of members of the University community.

The Ombudsman Office helps individuals resolve a broad range of problems, including academic matters, employment matters, and matters regarding University services. Such assistance may include: advising individuals on steps to take so that their claims may be heard or their questions answered; making referrals to other offices; investigating claims of unfair treatment or erroneous procedures; engaging in mediation; and assisting with accessing and understanding University grievance mechanisms when informal methods are unsuccessful.

As an informal conflict resolution resource, the Ombudsman Office maintains no institutional records. Contact with the Ombudsman Office does not constitute notice to the University; however, the office can assist complainants in providing

such notice to the proper administrators. The ombudsman has the authority to access official files as required to fulfill the functions of the office. However, names of persons requesting help cannot be used in the investigation of a case without permission. The Ombudsman is not an attorney and does not give legal advice or participate in any legal or formal administrative process. The University Ombudsman Office adheres to the profession's code of ethics and standards of practice. All ombudsman records, contacts and communications are confidential.

The University Ombudsman Office is located in Woody Hall C302; hours are 8:00 a.m. to 4:30 p.m. Monday through Friday, and the telephone number is (618) 453-2411. More information about the office may be found at: <<http://www.ombuds.siu.edu>>.

CLINICAL CENTER

Faculty and supervised student clinicians provide a variety of services to SIUC students as well as faculty, staff and the general public. Services offered include: (1) Counseling (individual, family, marriage, group and child as well as parenting training); (2) Psychological evaluations (academic, neuropsychological, intellectual and personality evaluations); and (3) Speech-language evaluations and therapy in areas of speech and language, language processing, delayed language, fluency, accent reduction, and voice.

The Clinical Center also includes the Achieve Program, an academic support program for learning-disabled SIUC students. Please contact the Achieve Program for information concerning application procedures and required fees. For more information visit our web site at: <<http://www.siu.edu/offices/clinical/>>.

Achieve Program

The Clinical Center Achieve Program is an academic support program for students with learning disabilities and attention deficit disorder (ADD) who are enrolled at SIUC. The program is self-supportive and participation is voluntary and confidential.

Students in the Achieve Program are included in the regular college curricula and campus life. The academic support provided by the Achieve Program is three-fold—tutorial, compensatory, and remedial.

1. Achieve members are matched to tutors on the basis of mutual academic strengths/weaknesses and individual course selection.
2. Achieve members whose disability is in the area of reading are provided with taped textbooks from Recordings for the Blind and Dyslexic and with readers hired by the program. They are also given the opportunity to take their exams with a proctor at the Achieve office. Proctored exams may be orally administered or simply untimed, depending on the needs of the individual student. The Achieve Program hires and assigns note-takers to go into classes and take notes for members who demonstrate deficits in this area. Each member is assigned to a graduate student/supervisor who monitors progress and intervenes/counsels when problems arise. Beginning in the 2003 fall semester, Achieve began an organization support group that targeted the needs of its members with ADD/ADHD. The support group taught strategies for improving organization, time management and study skills to this subgroup of Achieve members.
3. Remedial courses are available for those wishing to improve their deficit areas. These include developmental writing assistance that is mandatory for students needing remedial work in composition; reading comprehension strategies; note-taking/listening skills; organization and time management assistance, and math remediation. Need is assessed on the results of the Achieve evaluation, and participation in remediation is not mandatory for all members each semester. Participation may vary from semester to semester, depending on the student's schedule and course load.

Those wishing to participate in the Achieve Program must apply to SIUC as well as to the Achieve Program. Students should make application early (junior year in high school) to assure a place in the program. However, applications from high school seniors and transfer students are always processed and considered if space is available.

Requests for information/applications should be addressed to: Clinical Center Achieve Program, Northwest Annex Wing C, SIUC, Carbondale, IL 62901-6832. Requests can also be made by calling (618) 453-2369.

The following fees for new (1st year) members are based on the 2006–2007 academic year and are subject to change.

Application fee for Clinical Center:

\$ 50.00 (one time fee/non-refundable)

Diagnostic fee:

\$1000.00 (one time fee/non-refundable)

\$1050.00 Total

Fees for academic support *:

\$2800.00 (2006 fall semester 2007)

\$2800.00 (2007 spring semester 2008)

\$5600.00 Total

* Half-time support is available following the first year of participation if students are in good academic standing. Half-time support includes all services, although members must choose either note-takers or tutors. Fees for half-time support are half the amount of full-time membership.

ALUMNI SERVICES

Founded in 1896, the Southern Illinois University Alumni Association provides services and support to alumni and students of the University. The Association publishes the quarterly *Southern Alumni* magazine and the *Saluki Pride Newsletter* for alumni members. The association sponsors alumni chapters, college alumni societies, reunions, Homecoming activities, and a number of special events throughout the year. Ongoing services to students include externships, opportunities for juniors and seniors to serve career internships with alumni; Chapter Scholarships, Super Student scholarships; 25 most distinguished seniors; student/alumni membership; and the Student Alumni Council, a registered student organization that links current students with alumni. The SIU Alumni Association is funded by alumni memberships. To join, phone: (618) 453-2408.



7 / University Policies



Determination of Residency Status

[The following has been re-organized and edited for undergraduate students. The full text appears as SIU Board of Trustees 3 Policies A.]

Establishment of Residency

Southern Illinois University Carbondale Board of Trustee policy requires students to establish residency in Illinois six consecutive months immediately preceding the term registration.

Bona Fide Residence

For tuition purposes a *bona fide residence* is a domicile of an individual, which is the true, fixed, and permanent home, and place of habitation. It is the place to which, whenever absent, the individual has the intention of returning.

Criteria to determine this intention include but are not limited to year around residence, voter registration, place of filing tax returns (home state indicated on federal tax return for purposes of revenue sharing), property ownership, driver's license, car registration, vacations, and employment.

Except for those exceptions clearly indicated in these regulations, in all cases where records establish that the person does not meet the requirements for resident status as defined in these regulations, the non-resident status shall be assigned.

Procedure for Review of Residency Status or Tuition Assessment

A student who takes exception to the residency status assigned or tuition assessed shall pay the tuition assessed but may file an application with the Admissions Office for a reconsideration of residency status and an adjustment of the tuition assessed.

The application and supporting documents must be filed within thirty (30) school days from the date of assessment of tuition or the date designated in the official university calendar as that upon which instruction begins for the academic period for which the tuition is payable, whichever is later, or the student loses all rights to a change of status and adjustment of the tuition assessed for the term in question.

If the student is dissatisfied with the ruling in response to the application made within said period, the student may appeal the ruling to the chancellor's designee by filing a written request with that official within twenty (20) days of the notice of the ruling.

Definitions of Terminology

To the extent that the terms *bona fide residence*, *independent*, *dependent*, and *emancipation*, are not defined in these regulations, definitions shall be determined by according due consideration to all of the facts pertinent and material to the question and to the applicable laws and court decisions of the State of Illinois.

The term *the State* means the State of Illinois.

Residency Determination

Evidence for determination of residence status of each applicant for admission to the university shall be submitted to the Admissions Office at the time of application for admission. A student may be reclassified at any time by the university upon the basis of additional or changed information. However, if the university has erroneously classified the student as a resident, the change in tuition shall be applicable beginning with the term following the reclassification; if the university has erroneously classified the student as a nonresident, the change in tuition shall be applicable to the term in which the reclassification occurs, provided the student has filed a written request for review in accordance with these regula-

tions. If the university has classified a student as a resident based on false or falsified documents, the reclassification to nonresident status shall be retroactive to the first term during which residency status was based on the false or falsified documents.

Adult Student

For the purpose of these regulations an *adult* is considered to be a student 18 years of age or over; a *minor* student is a student under 18 years of age. An adult, to be considered a resident, must have been a *bona fide* resident of the State for a period of at least six consecutive months immediately preceding the beginning of any term for which the individual registers at the university; and must continue to maintain a *bona fide* residence in the State, except that an adult student whose parents (or one of them if one parent is living or the parents are separated or divorced) have established and are maintaining a *bona fide* residence in the State and who resides with them (or the one residing in the State) or elsewhere in the State will be regarded as a resident student.

Minor Student

The residence of a minor shall be considered to be and to change with and follow:

1. that of the parents, if they are living together, or living parent, if one is dead; or
2. if the parents are separated or divorced, that of the parent to whom the custody of the person has been awarded by court decree or order or, in the absence of a court decree or order, that of the parent with which the person has continuously resided for a period of at least six consecutive months immediately preceding registration at the university; or
3. that of the adoptive parents, if the person has been legally adopted and, in the event the adoptive parents become divorced or separated, that of the adoptive parent whose residence would govern under the foregoing rules if that parent had been a natural parent; or
4. that of the legally appointed guardian of the person; or
5. that of the *natural* guardian, such as a grandparent, adult brother or adult sister, adult uncle or aunt, or other adult relative with whom the person has resided and by whom the student has been supported for a period of at least six consecutive months immediately preceding registration at the university for any term, if the person's parents are dead or have abandoned said person and if no legal guardian of the person has been appointed and qualified.

Parent or Guardian

No parent or legal or natural guardian will be considered a resident of the State unless said person

1. maintains a *bona fide* and permanent place of abode within the State, and
2. lives, except when temporarily absent from the State with no intention of changing the legal residence to some other State or country, within the State.

Emancipated Minor

If a minor has been emancipated, is completely self-supporting, and actually resides in the State, the minor shall be considered to be a resident even though the parents or guardian may reside outside the State. An emancipated minor who is completely self-supporting shall be considered to *actually reside in the State of Illinois* if a dwelling place has been maintained within the State uninterrupted for a period of at least six consecutive months immediately preceding term registration at the university. Marriage or active military service shall be regarded as effecting the emancipation of minors, whether male or female, for the purposes of this regulation. An emancipated minor whose parents (or one if only one parent is living or the parents are separated or divorced) have established and are main-

taining a bona fide residence in the State and who resides with them (or the one residing in the State) or elsewhere in the State will be regarded as a resident student.

Married Student

A nonresident student, whether male or female, or a minor or adult, or a citizen or non-citizen of the United States, who is married to a resident of the State, may be classified as a resident so long as the individual continues to reside in the State; however, a spouse through which a student claims residency must demonstrate residency in compliance with the requirements applicable to students seeking resident status.

Persons Without United States Citizenship

A person who is not a citizen of the United States America who meets and complies with all of the other applicable requirements of these regulations may establish residence status; unless the person holds a visa, which on its face precludes intent to reside in the United States.

Armed Forces Personnel

A person who is actively serving in one of the Armed Forces of the United States and who is stationed and present in the State in connection with that service and submits evidence of such service and station, shall be treated as a resident as long as the person remains stationed and present in Illinois.

If the spouse or dependent children of such member of the Armed Forces also live in the State, similar treatment shall be granted to them.

A person who is actively serving in one of the Armed Forces of the United States and who is stationed outside the State may be considered a resident only if the individual was a resident of the State at the time of entry into military service, except as otherwise specified by board policy.

A person who is separated from active military service will be considered a resident of Illinois immediately upon separation providing this person:

1. was a resident of the State at the time of enlistment in the military service; became treated as a resident while in the military by attending school at SIU while stationed in the State; or
2. has resided within the State for a period of six months after separation.

State and Federal Penitentiary

A person who is incarcerated in a State or Federal place of detention within the State of Illinois will be treated as a resident for tuition assessment purposes as long as said person remains in that place of detention. If bona fide residence is established in Illinois upon release from detention, the duration of residence shall be deemed to include the prior period of detention.

Minor Children of Parents Transferred Outside the United States

The minor children of persons who have resided in the State for at least six consecutive months immediately prior to a transfer by their employers to some location outside the United States shall be considered residents. However, this shall apply only when the minor children of such parents enroll in the university within 5 years from the time their parents are transferred by their employer to some location outside the United States.

Dependents of University Employees

For purposes of tuition assessment, all faculty, staff (including civil service employees), and graduate assistants, as well as their spouses and dependent children, shall be considered as resident students. The non-resident portion of tuition is waived for the spouses and dependent children of fellows, assistants and train-

ees who are appointed as fellows, assistants and trainees to the fullest extent permitted by their appointment.

Contractual Agreements

The chancellors, with the approval of the president, may enter into agreements with other institutions in or out of state under the terms of which students at the other institutions are defined as residents of the State of Illinois.

Policy on the Release of Student Information and Access to Student Records at Southern Illinois University Carbondale

I. Purpose

Southern Illinois University Carbondale, hereinafter referred to as the University, maintains individual records and information about students for the purpose of providing educational, vocational, and personal services to the student. For the purpose of complying with federal regulations regarding the maintenance of confidentiality of student educational records, as required by the Family Educational Rights and Privacy Act of 1974, the following policy has been enacted.

II. Definitions

- A. Student is defined as a person who is or has been enrolled at Southern Illinois University Carbondale in a course of study either on campus or off campus. Solely for purpose of this policy, any student attending Southern Illinois University Carbondale will be considered to be an adult and to have sole control over the release of their information except as provided in this policy. The term *enrolled* is defined as having registered and paid fees into a course of study.
- B. Education records means those records, which are directly related to a student, and are maintained by Southern Illinois University Carbondale or any subunit or by any party acting for Southern Illinois University Carbondale. The term does *not* include:
 1. Personal records have instructional, supervisory, and administrative personnel, which are not revealed to other individuals.
 2. Records of a law enforcement unit of an educational institution which are (a) maintained apart from the education records, (b) maintained solely for law enforcement purposes, and are not disclosed to individuals other than law enforcement officials of the same jurisdiction. For purposes of this policy, the Southern Illinois University Carbondale Public Safety Office will be treated as an outside agency and will therefore be required to comply with all regulations relating to the disclosure of information from students' educational records, as set forth in the policy.
 3. Employment records, so long as they are maintained separately from any educational record.
 4. Records of a physician, psychologist, or other recognized professional or paraprofessional acting in his or her professional capacity which are used only in connection with treatment and are not disclosed to individuals other than those providing the treatment; Provided that these records can be personally reviewed by a physician or other appropriate professional of the student's choice.
 5. Records, which contain only information relating to a person after that person was no longer, a student at Southern Illinois University Carbondale, such as alumni files.

- C. Student Information means any information contained in an educational record as defined in II. B.
- D. Personally identifiable information includes
 - 1. The name of a student, the student's parents, student's spouse, or other family member.
 - 2. The address of the student.
 - 3. A personal identifier such as the student's social security number or student number.
 - 4. A list of personal characteristics, which would make the student's identity easily traceable.
 - 5. Information that would make the student's identity easily traceable.
- E. Directory information includes
 - 1. Student name.
 - 2. Student local address and telephone number.
 - 3. Student home address and telephone number.
 - 4. Student e-mail address
 - 5. Current and past term status (full-time, part-time)
 - 6. Classification (freshman, sophomore, etc.)
 - 7. Academic unit.
 - 8. Major.
 - 9. Dates of attendance.
 - 10. Degrees and honors earned and dates.
 - 11. The most previous educational agency or institution attended prior to enrollment at Southern Illinois University.
 - 12. Participation in officially recognized activity or sport.
 - 13. Weight, height, and pictures of members of athletic teams.
 - 14. Date of birth.
 - 15. Picture.

III. Basic Policy Regarding Disclosure of Information from Educational Records

- A. Disclosure not requiring prior consent:
 - 1. The appropriate recordkeeping office shall obtain the written consent of the student before disclosing personally identifiable information from the records of a student, except in the case of directory information or disclosures to:
 - a. The student himself/herself.
 - b. University personnel who have a legitimate educational need to permit their functioning or research. The sufficiency of the need will be determined by the head of the unit from which the records are sought.

Student information supplied to any Southern Illinois University Carbondale personnel or unit is provided on the basis that it is needed to permit their necessary functioning. All members of the faculty, administration, and clerical staff must respect confidential information about students they require in the course of their work. They are bound by the conditions outlined in this policy statement relative to the release of student information. All institutional personnel should be alert to refer promptly to the appropriate office requests for transcripts, certifications, or other information, which that office typically provides. They should restrict their responses to acknowledging, when appropriate, the receipt of requests for student information germane to their sphere of responsibility.

- c. Officials of other schools or school systems in which the student seeks or intends to enroll, if there is a legitimate need. The suf-

iciency of the need will be determined by the head of the unit from which the records are sought. A copy of any information sent will be provided to the student upon request.

- d. Faculty or students conducting student characteristic research providing the research project has written approval of the academic unit executive officer sponsoring the research and providing guarantees are made that no personally identifiable information will be published or released.
 - e. Certain state and federal representatives specified by law for the sole purpose of the evaluation and auditing of governmentally funded programs in which the University participates, with the guarantee that the identity of the students will be protected.
 - f. State and local officials as directed by the State Statute adopted prior to November 19, 1974, as approved by University Legal Counsel.
 - g. Organizations conducting studies for, or on behalf of, state or federal educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction, with the guarantee that the identity of the student shall be protected.
 - h. In connection with financial aid for which the student has applied or received.
 - i. Accrediting organizations to carry out their accrediting function, with guarantee that the identity of the student shall be protected.
 - j. Appropriate persons in connection with an emergency, if knowledge of such information is necessary to protect the health or safety of a student or other persons.
 - k. Comply with a judicial order or subpoena, but the University should make a reasonable effort to notify the student first. The Office of the General Counsel will determine the sufficiency of the order or subpoena and that office shall send the required notice to the student.
- B. Disclosure Requiring Prior Consent
1. Except as listed in III. A. above, all requests for student information other than directory information must be accompanied by a written consent of the student.
 2. The written consent required by this section must be signed and dated by the student giving the consent and shall include (a) a specification of the records to be disclosed, and (b) the party or parties to whom the disclosure may be made.
 3. When the disclosure is made pursuant to this section, the appropriate recordkeeping office shall, upon request, provide a copy of the records, which are disclosed, to the student.
 4. Student information will not be released to parents of students without the student's permission.
- C. Disclosure of Directory Information
- Directory information pertaining to students may be released by the University at any time provided that it publish the definition at least once each academic year in the campus student newspaper or other designated publication with wide circulation, and the individual student is given a reasonable period of time to inform the University in writing, through Records and Registration, that they do not wish such information about themselves be released without their prior consent.

Records and Registration will be responsible for identifying or deleting all information which the student desires not to be released outside the University and for informing all University recipients of that information that such information is not to be released. The student must request deletion of information each year.

The procedural requirements of this section do not apply to the disclosure of directory information from the educational records of an individual who is no longer in attendance at the University. Thus, the University (or appropriate recordkeeping office) is not required to give public notice of the above to former students.

All recipients of student information will be bound by this policy. Lists of student information are never knowingly provided to any requesting party for a commercial or political purpose. If a student directory is published, it shall be equally available to all.

D. Records of Disclosure Made

Records of disclosure are not required to be kept in the record of a student when the students initiate the disclosure themselves.

The University may disclose personally identifiable information from the education records of a student only on the condition that the party to whom the disclosure is made will not further disclose the information without the student's written consent, except in the case of disclosure of directory information.

The University shall, except for the disclosure of directory information, inform the party to whom disclosure is made of the obligation to receive the student's consent before further disclosure to other parties.

E. Waiver of Right to Inspect and Review Education Records

1. The student may waive their right to inspect and review education records. The waiver, in order to be valid, must be in writing and signed by the student. The University (or each appropriate recordkeeping office) may not require a waiver of rights but it may request such a waiver.
2. If a student has waived their right to see confidential letters of recommendation placed in their record after January 1, 1975, the waiver will be effective only if (a) the applicant or student is, upon request, notified of the names of all individuals providing the letters or statements; (b) the letters or statements are used only for the purpose for which they were originally intended, and (c) such waiver is not required by the University as a condition of admission to or receipt of any other service or benefit from the University.
3. A waiver may be revoked, but the revocation must be in writing and signed by the student. Revocation of waiver will affect only documents received after its execution.

IV. Identification and Description of Student Information

A. Academic Records

Records and Registration retains the official academic record of a student. It is a cumulative history of a student's admission, registration, and academic participation and performance. Certain biographic and demographic information is also kept for identification for enrollment and research-related purposes. For information concerning these records contact the director of Records and Registration.

Academic records may also be maintained in academic units, departments, and divisions. For information concerning these records contact the head of the academic unit, department, or division in question. Institutional Research and Studies also maintains some academic records.

B. Financial Records

Offices within the Business area maintain certain financial records, which relate to payment and accounting of tuition, fees, and other charges. They also maintain records, which record student loans and grants. For information concerning these records, contact the Bursar's Office.

For billing purposes, Records and Registration maintains a record of financial aid received and tuition and fees paid. For information concerning these records, contact the director of Records and Registration.

Financial Aid maintains records of student receiving loans, grants, and aid along with scholarship information and some academic information. It also maintains records pertinent to student employment including the family financial statement. For information concerning these records, contact the director of Financial Aid.

Housing maintains records of housing accounts. For information concerning these records, contact the director of Housing.

C. Medical/Counseling/Clinical Center Records

The Health Service Clinic maintains medical records of students who have required medical assistance through Student Health Programs. Only information pertinent to the health of the individual is contained therein. For information concerning these records, contact either the director of Student Health Programs or the medical chief of staff of the Health Service Clinic.

The Counseling Center maintains records pertinent to services rendered by that office. For information concerning these records, contact the coordinator of the Counseling Center.

The Clinical Center maintains records pertinent to services rendered by that office. For information concerning these records, contact the director of the Clinical Center.

D. Disciplinary Records

Student Affairs maintains records of disciplinary action, which has been taken against a student with documentation pertaining thereto. That office also maintains only the academic information necessary to permit it's functioning. For information concerning these records, contact the Office of Judicial Affairs.

E. Placement Records

The University Career Services creates a record for those persons who wish to avail themselves of its services, with student's voluntary participation. This information is distributed to potential employers. It consists of self-completed resumes and various personal references. For information concerning these records, contact the director of the University Career Services.

V. Access to Records**A. Right to Inspect or Review Educational Records**

1. The student has the right to physically review his/her records in the presence of a designated University representative.
2. Requests for review may be required to be submitted in writing to the appropriate office.
3. That office shall comply with the request within a reasonable time, but in any case, compliance shall be no more than thirty (30) days after the receipt of the request.
4. Where necessary, interpretation of the record shall be provided by qualified University personnel.
5. Original records cannot be removed from University premises. A copy will be provided if requested, but only if not providing a copy would preclude review of the educational records by the student.

6. Copies of transcripts from other educational institutions will be provided only if the original source of those transcripts is no longer available or going to the original source would cause undue hardship as determined by this University.
- B. Limitations on Right to Inspect or Review
 1. The student may not inspect the following records:
 - a. Financial records and statements of their parents.
 - b. Confidential letters or materials placed in records before January 1, 1975 so long as they were solicited with an understanding of confidentiality and are used only for the purpose for which they were written.
 - c. Confidential letters of recommendation and confidential statements of recommendation placed in the education records of the student after January 1, 1975, are subject to the student's right to inspect and review unless the student has signed a written waiver.
 2. Reports that involve two or more persons may be censored to protect the identity of the other person(s).
- C. Administrative Hold on University Records

On occasion it is necessary for a University to place an administrative hold on a student's ability to request a transcript, to register for a subsequent term, to reenter the University after a period of attendance interruption, or to be officially graduated.

In cases where an administrative hold has been placed on a student's record, the student may view such records but will not be able to obtain a copy of said record until the administrative hold is removed through the appropriate University channels.

VI. Challenging Contents of a Student's Educational Record

- A. Purpose

A student has the right to challenge the content of a record on the ground that they believe it is inaccurate, misleading, or otherwise in violation of their privacy or other rights and to have inserted in the record their written explanation of its contents. Academic grade review procedures are covered in the University Catalog and/or such particular academic unit, department or division and not by this policy.
- B. Procedure

To initiate such a challenge, the student shall, within sixty (60) days after they have inspected and reviewed the record in question for the first time, file with the University office responsible for maintaining such record a written request for correction, on a form specified by the University. Within thirty (30) days following receipt of such request, the head of such office, or their representative, shall review the record in question with the student and either order the correction or deletion of such alleged inaccurate, misleading, or otherwise inappropriate data as specified in the request or notify the student of the right to a hearing at which the student and other persons directly involved in the establishment of the record shall have an opportunity to present evidence to support or refute the contention that the data specified in the request are inaccurate, misleading, or otherwise inappropriate.
- C. Hearing

The student shall be given written notice sent to their last known address of the time and place of such hearing not less than ten (10) days in advance. A University representative who does not have a direct interest in the outcome will conduct the hearing. The student

might well challenge the hearing officer. Any disagreement regarding the hearing officer will be resolved by the appropriate Vice Chancellor.

The student shall have the right to attend the hearing, to be advised by an individual of their choice at their own expense, including an attorney, and to call witnesses in their behalf. The student shall be notified in writing of the decision within ten (10) days following the hearing or within five (5) days of a decision without a hearing. Such decision is final. The decision reached shall be based solely upon the evidence presented at the hearing and shall include a summary of the evidence and reasons for the decision.

(Note: A hearing may not be requested by a student to contest the assignment of a grade; however, a hearing may be requested to contest whether or not the assigned grade was recorded accurately in the education records of the student.)

VII. Destruction of Records

The University may destroy education records when they are no longer necessary, with the following limitations:

1. Education records may not be destroyed if there is an outstanding request to inspect and review them.
2. Explanations placed in the record by the student and the record of disclosure of information must be maintained as long as the education record to which it pertains is maintained.

VIII. Right to File Complaints

- A. If the student thinks his or her rights have been violated, he or she should first file a complaint with the head of the office, which maintains the records, in question.
- B. After exhausting all the internal remedies available within the University, if the student still thinks his or her rights have been violated, written complaints can be filed with

The Family Educational Rights and Privacy Act Office
Department of Education
330 Independence Avenue S.W.
Washington, D.C. 20201

The office shall notify the complainant and the University of the receipt of the complaint and an investigation will follow.

Policy Accommodating Religious Observances of Students

Admissions/Registration

The University's admissions process provides ample opportunity for admission and registration activities without conflicting with religious holidays and observances. However, students may receive another appointment when an appointment for admission counseling, or an appointment for academic advisement, or an appointment for registration for classes falls on a date or at a time that would conflict with the student's observances of major religious holidays. The individual student must notify in writing the appropriate admissions officer or academic adviser of the conflict with the student's observance of the religious holiday. That notification shall be made immediately after the student's receipt of the appointment or at least five work days prior to the appointment time, whichever is later.

Class Attendance

Students absent from classes because of observances of major religious holidays will be excused. Students *must notify the instructor at least three regular class*

periods in advance of an absence from class for a religious holiday and must take the responsibility for making up work missed.

Examinations

Instructors are requested not to schedule class examinations on dates that would conflict with major religious holidays. In the event an examination must be scheduled on a date that conflicts with a student's required observance of a religious holiday, the student should be given reasonable opportunity to make up the examination. It is the student's responsibility to notify the instructor of the class when the examination will be missed. That notification must occur at least three regular class meeting periods in advance of the absence or at the time the announcement of the examination is made, whichever is later.

Grievance Procedure

A student who believes he or she has been unreasonably denied an educational benefit due to his or her religious belief or practices may petition in writing as follows:

Cases involving class attendance or class examinations that are unresolved at the class instructor level may be appealed by the student by filing a petition in writing, within thirty (30) calendar days of the incident being appealed, to the chair or coordinator of the department or program in which the course is offered. In the event the case is not resolved to the student's satisfaction at the department/program level within five (5) working days after the chair's receipt of the petition, the student may petition in writing to the dean of the school or college to which that teaching department or program reports. The student's petition to the school or college level must be filed with the dean within five (5) working days of the decision at the department level. Should the case not be resolved to the student's satisfaction at the school or college level within five (5) working days of the petition filing at that level, the student may petition the Provost. If the student is still not satisfied at that level within the five (5) working day time period, he or she may petition to the Chancellor within another five (5) working days. Decisions of the Chancellor may be appealed to the President, and to the Board of Trustees if necessary, in accordance with Bylaws of the Board of Trustees.

In cases involving admissions, *the grievance process should follow the time frames described above*, with the initial petition being filed with the Director of Admissions, which is the only filing point prior to the Provost.





Index

A

- Abbreviations, degree, 7
- Absence report, student, 537
- Academic
 - Progress, 15
 - Advisement, 28
 - Honors, 50
 - Load, 42
 - Programs, 101
 - Success, 101
- Academic requirements
 - Liberal arts, 92
 - College of science, 96
- Access to student records, 557, 561
- Accountancy, 107
- Accounting, 108
- Accreditations, 4
- Achieve program, 550
- ACT scores, 18
- Acting, 514
- Adding classes, 28
- Additional fees, 33
- Address, 38
- Administration
 - Central, vi
 - SIUC, vi
- Administration of justice, 110
- Admission
 - Applying for, 18
 - To programs requiring additional material or screening, 18
 - Policies, 18
 - Reentry students, 24
 - Second chance, 24
 - Special categories of students, 23
- Admission of
 - Former students, 24
 - Freshman, 19
 - High school, 27
 - International students, 23
 - Transfer students, 20
 - Transient students, 27
 - Unclassified students, 26
 - Veterans, 26
- Admission policy, college of education, 86
- Adult education courses, 25, 102
- Advanced placement (AP), 43
- Advanced technical studies (see Technical Resource Management), 114
- Advertising/integrated marketing
 - Communications specialization, 360
- Advisement, 27
 - Academic, 28
 - Pre-major, 101
- Advisement center, pre-major, 101
- Aerospace studies, 114
- Affirmative action policy, iii
- African studies minor, 117
- Agribusiness
 - Economics, 117
 - Management, 117
- Agricultural
 - Courses, 126
 - Finance, 120
 - Marketing, 119
 - Production specialization, 123
 - Sales, 122
 - Sciences, 122
 - Systems, 123
 - Technologies specialization, 124
- Agricultural sciences
 - College of, 78
- Agronomy, 78, 443
- Air Force ROTC, 114
- Air traffic control, 173
- Aircraft maintenance specialization, 179
- Aircraft product support minor, 181
- Airport management and planning
 - minor, 175
- AmeriCorps, 544
- Anatomy [Sciences and Medicine]
- Animal science, 130
- Anthropology, 134
- AP (advanced placement program), 43
- Application fee
 - Non-refundable, 24
 - Graduation, 34
- Application fee, 18, 24, 27, 51
- Applied economics, 125, 140
- Applied sciences and arts - 140
 - College, 79
 - Courses, 140
- Applying for financial aid, 14
- Aquatics, minor, 366
- Archaeology, 134
- Architectural studies, 141
- Army military science, 146
- Army ROTC, 147
- Art and design, 148
- Art education specialization, 150
- Art history specialization, 155
- Asian studies, 165
- Associate degree, 48
 - Requirements, 48
- Astronomy, 61, 439
- Athletics, 549
- Atmospheric and hydrological processes, 317
- Attorney, student, 33

- Audiology, 510
- Audit, 38
- Auditorium, 547
- Australia exchange program, 539
- Austria, international studies, 539
- Automotive technology, 165
- Average requirements, 48
- Aviation - 169
 - Courses, 171-184
 - Aircraft maintenance specialization, 179
 - Electronics specialization, 180
 - Faculty, 172, 177, 178, 184, 190
 - Flight, 169
 - Maintenance technology, 172
 - Management, 173
 - Technologies, 178
- B**
- Baccalaureate degree
 - Average requirements, 48
 - Hour requirements, 48
 - Requirements, 48
 - Residence requirements, 48
 - Three year, 49
- Bachelor degree, 47
 - Second degree, 49
- Band, 414, 418, 419
- Biochemistry
 - Courses, 184
- Biological sciences - 185
 - Pre-dental
 - Pre-medicine
 - Pre-optometry
 - Pre-physical therapy
 - Pre-podiatry
- Black American studies, 187
- Bookstore, University, 542
- Botany, 78, 229
- Broadcasting service, 548
- Bursar, office of, 31, 34, 38, 536, 561
- Business and administration
 - Courses, 189
 - College, 81
 - Major and Minor, 190
- Business economics, 191
- Business education specialization, 224
- C**
- Campus
 - Communications media, 548
 - Living, 11
 - Ministries, 549
 - Visitors, 11
- Cancellation waiver, 36
- Capstone
 - Option, 68
 - Applying, 69
- Description, 68
- Requirements, 69
- Career preparation program, 101
- Career services, 537
- Catalog year, ii
- Climate change, 320
- Climatology, 317
- Celebrations, historical
 - commemorations, 544
- Center for academic success, 101
- Central administration, vi
- Ceramics specialization, 150
- Certification, plant and soil science, 448
- Changing
 - Academic units, 28
 - Grades, 39
 - Majors, 28
- Chapter reference guide, vii
- Chemistry and Biochemistry, 192
- Chinese
 - Courses, 300
 - Minor, 292
- Cinema and Photography, 197
- Civil and Environmental Engineering, 205
- Civil engineering, 89
- Class standing, 42
- Classes, dropping, 30
- Classics
 - Courses, 301
 - Requirements, 292
- CLEP, college level examination program, 43, 45
- Clinical center, 550
- Coaching, 211
 - Minor, 366
- College level examination program (CLEP), 43, 45
- College of Agricultural Sciences, 78
- College of Liberal Arts, 92
- Commodity futures, 117
- Commodity prices, 211
- Communication disorders and sciences, 211
- Community health education specialization, 331
- Computer and electrical engineering dual degree, 90, 245
- Computer Engineering, 214
- Computer engineering specialization, 247
- Computer Science, 214
- Concurrent enrollment, 27
- Conservation, 220
- Construction, 220
- Continuing education, 102
- Correspondence credit, 42

Council on international educational exchange, 540
 Counseling center, 537
 Course
 Attendance, 29
 Drops, 30
 Fees, 106
 High school pattern requirements, 19
 Load, 42
 Numbering system, 106
 Registration, 27, 28
 Requirements, 49
 Sequence, 90
 Withdrawal, 27, 29
 Creative writing
 Specialization, 266, 267
 Minor, 267
 Credit
 For military, 104
 Military experience, 22, 43
 For work experience, 47
 Units, 42
 Credit-free activities, 102
 Criminal justice
 (see administration of justice), 232
 Crop science, 220
 Curricula and Faculty, 106
 Curriculum and instruction, 220

D

Daily Egyptian, 548
 Dantes, 22, 43
 Deadline for withdrawal, 30
 Dean's list, 50
 Death notice, student, 536
 Debit card program, 542
 Debit dawg, 542
 Deferment of tuition and fees, 32
 Degree
 Abbreviations, 7
 Requirements, 48
 Degrees offered, 47
 Dental
 Hygiene, 232
 Technology, 236
 Departmental honors, 50
 Design, 238
 Determination of residency status, 556
 Dial-a-nurse, 545
 Dietetics specialization, 283
 Directory information, 558
 Disability support services, 538
 Disciplinary studies, 59
 Disclosure of academic records, 557
 Discontinued program, ii
 Division of continuing education, 102

Drawing specialization, 151
 Dropping classes, 30
 Dual degree, 49

E

Early childhood
 Certificate, 220
 Early childhood, 221, 238
 East Asian
 Civilization, 238
 Civilization minor, 292
 Courses, 302
 Economics, 238
 Education and human services
 College of, 84
 Courses, 243
 Educational Psychology
 Courses, 244
 Egyptian, daily, 548
 Electrical and computer engineering, 245
 Electrical engineering, 90, 245
 Electrical engineering
 Technology specialization, 256, 262
 Electronic systems technologies, 253
 Electronic management specialization, 256
 Elementary education, 223, 261
 Emancipated minor, 555
 Emergency locator system, 544
 Engineering
 Computer, 214, 245
 Industrial technology, 89, 91
 Mechanical, 395
 Mining, 89, 403
 College, 89
 Geological, 404
 Courses, 261
 Electrical, 89, 245
 Technology, 261
 English
 Major, 265
 Minor, 267
 Enrollment management, 536
 Entrepreneurship, 376
 Environmental
 Studies, 272
 Minor, 272
 Chemistry specialization, 193
 Economics, 272
 Policy, 317
 Resources, 317
 Science, 272
 Sciences, 448
 Studies, 78, 272, 316, 447
 Specialization, 447
 Equine
 Science specialization, 130, 273

- Studies, minor, 132
- Equine science, 273
- Evaluation of transfer credit, 22
- Evening and weekend program, 103
- Examination, proficiency, 46
- Examinations, AP and CLEP, 43
- Exchange programs, 539
- Exercise science and physical fitness specialization, 366
- Extension credit, 42
- F**
- Faculty, 7
- Failure to disclose, 23
- Family educational rights and privacy act (FERPA), 557, 563
- Farm management, 273
- Fashion design and merchandising, 273
- Fee
 - Application, 18
- Fees and tuition, 32
- Farm management, 273
- Fibers/weaving specialization, 274
- Finance, 278
- Financial
 - Institutions specialization, 278
 - Management, 281
 - Management specialization, 279
- Financial aid - 14
 - Application, 14
 - Office, 14
 - Opportunities, 14
 - Programs, 14
- Fire service management, 281
- Fisheries management, 529
- Flight, 169
- Focus statement, 4
- Food and nutrition, 283
- Food policy, 287
- Foreign language and international trade, 287
- Foreign languages and literatures
 - Courses, 299
 - Department, 289
- Forensic chemistry specialization, 193, 194
- Forest resources management specialization, 310
- Forestry, 308
- Forgiveness policy, 48
- Former students, admission of, 24
- Foundation courses, 59
- France exchange program, 540
- Fraternal education, 543
- French
 - Courses, 303
 - Major, 289, 293

- Minor, 293
- Freshman
 - Admission, 19
 - Standing, 42
- Full-time attendance, 42
- Funeral service, 408
- Future scholars program, 101
- Futures markets, 316
- G**
- GED (general educational diploma), 18
- General agriculture, 123, 316
- General design specialization, 157
- General information, 1
- General studio specialization, 155
- General/graduate school specialization in english, 265
- Geographic information science (GIS), 317
- Geography and environmental resources, 316
- Geological engineering, 404
- Geology, 321
- German studies, 289, 295, 304
 - Minor, 295
- Germany exchange program, 539
- Geographic visualization, 317
- Glass specialization, 151
- Government, 459
- Grade
 - Regulation, 38
 - Changes, 39
 - Points, 41
- Grading system explanation, 38
- Graduate school, 97
- Graduate school waiver, 37
- Graduation
 - Attendance, 52
 - Appeals, 52
 - Application, 51
 - Fee, 51
 - Procedures, 51
 - Requirements, 51
- Grain merchandising, 119, 327
- Grants, 14
- Greek minor, 292
- Group visits, 11
- Guardian, 555
- Guitar, 414
- H**
- Harpichord, 414
- Health care management, 327
- Health education, 330
- Helicopter specialization, 181
- High school advanced placement program, 43
- High school student admission, 27

Historical commemorations and celebrations, 544
 History, 335
 History of the University, 2
 Honors, 50, 517
 Horse management, 342
 Horticulture, 317, 447
 Hospitality, 342
 Hospitality and tourism specialization, 78, 284
 Hotel management, 342

I

ID's, 29
 Identification numbers for students, 29
 Information Systems - 346
 Illinois articulation initiative, 72
 General education core courses, 73
 Major course listings, 72
 Effective date, 72
 Immunization compliance, 545
 Individualized learning, 103, 459, 461
 Individualized two plus two program, 101
 Industrial design specialization, 151
 Industrial technology, 89, 342
 Information systems and applied technologies, 346
 Information systems technologies, 349
 Information technology, 353
 Installment payment plan, 35
 Integrative studies, 54, 62
 Intercollegiate athletics, 549
 Intercultural communication specialization, 505
 Interdisciplinary courses, 64
 Interior design, 354
 International
 Development, 539
 Studies, 539
 Programs and Service, 538
 Public service specialization, 291
 Student admission, 23
 Trade, 358
 Internships in Washington, 102
 Interpersonal communication specialization, 505

J

Japan
 Exchange program, 539
 International studies, 539
 Japanese
 Courses, 305
 Minor, 297
 Joint certification, 502
 Journalism, 358
 Junior standing, 42

K

Keyboard, 414
 Kinesiology, 364

L

Landscape horticulture, 371, 447
 Late registration fee, 33
 Latin minor, 292
 Law school, 99
 Leadership awards program, 543
 Leadership council, 543
 Lean manufacturing, 345
 Learning disabilities teaching certification, 501
 Legal assistance office, students, 546
 Leisure services management, 84, 485
 Liberal arts, college 92
 Courses, 371
 Library affairs, 98
 Linguistics, 372
 Listener's permit program, 103
 Loans, 14

M

Magnetic resonance imaging/computed tomography option, 480
 Majors, 7, 28
 Management, 376
 Management information systems, 376
 Manufacturing technology specialization, 89, 343
 Marketing, 380
 Mass communication and media arts
 College, 95
 Courses, 383
 Master's Degree, 97
 Mathematics, 384
 Mechanical engineering, 90, 395
 Medical biochemistry, 184
 Medical diagnostic sonography option, 480
 Medicine, school, 100
 MEDPREP, 400
 Meeting university core curriculum requirements, 56
 Mental retardation teaching certification, 502
 Metalsmithing specialization, 151
 Microbiology, 401
 Military experience credit, 22, 43, 104
 Military programs, 104
 Mining and mineral resources engineering, 403
 Mining engineering, 90, 403
 Courses, 407
 Minors, 7
 Mission statement, 3

Molecular biology, 184
 Mortuary science and funeral service, 408
 Multicultural applied experience
 Courses, 67
 Option, 67
 Multicultural programs and services, 543
 Multi-ethnic student excellence program, 543
 Museum studies minor, 411
 Music, 412
 Music specializations, 414
 Music theory / composition, 415

N

Natural resource economics, 424
 Nature and society, 316
 Netherlands exchange program, 540
 New student programs, 536
 News-editorial specialization, 360
 Newspaper, 548
 Night safety transit, 542
 Natural disaster preparedness, 317
 Negative quality points, 41
 Non-traditional student, 544
 Nursery management, 424

O

Off-campus credit, 102
 Ombudsman, 549
 Open houses, 11
 Open studies specialization, music, 416
 Operations management, 377
 Option, capstone, 68
 Orchestra, 414
 Organ, 414
 Organizational communication specialization, 506
 Outdoor recreation, 424
 Resources management specialization, 311

P

Painting specialization, 152
 Paralegal studies, 424
 Parent, 543, 547, 550, 555
 Park management, 428
 Parking on campus, 13
 Pass/fail grading system, 38-39
 Payment of tuition and fees, 34
 Pedagogy, piano specialization, 414
 Performance specialization, music, 414
 Performance studies specialization, 506
 Persuasive communication specialization, 506
 Pharmacy, 545
 Philosophy, 428

Photography, 197
 Photojournalism specialization, 360
 Physical education, 364, 432
 Physical therapist assistant, 432
 Physician assistant, 435
 Physics, 437
 Physiology - 440
 Pre-dental
 Pre-medicine
 Pre-optometry
 Pre-physical therapy
 Pre-podiatry
 Piano, 414
 Plant and soil science, 443
 Plant biology, 453
 Policy analysis, 459
 Political science, 459
 Positive and negative quality points, 41
 Powers of attorney, 536
 PR grade, 39
 Pre-dentistry - 97
 Pre-health professions - 97
 Pre-law, college of liberal arts, 94
 Pre-major advisement, 101
 Pre-medicine - 97
 Pre-optometry - 97
 Pre-pharmacy - 97
 Pre-physical therapy - 97
 Pre-physician assistant, 466
 Pre-podiatry - 97
 Preprofessional programs, 49
 Preprofessional specialization
 Minor, 267
 Pre-veterinary
 Science, Animal 78, 130, 131
 Specialization, 131
 Previews, SIUC, 11
 Printmaking specialization, 151
 Probation, scholastic, 40
 Production specialization, animal science, 131
 Professional business core, college of business and administration, 84
 Professional development series, 103
 Professional education experiences, 466
 Professional education sequence, 88
 Proficiency examination, 46
 Program achieve, 550
 Program changes, 28
 Program eligibility requirements, 25
 Programs
 Academic, 77
 International, 24, 538
 Pro-rata refund schedule, 31
 Psychology, 469
 Public relations specialization, 506

Q**Quality**

- Hours, 42
- Points, 42

R

- Radiation therapy option, 480
 - Radio-Television, 474
 - Courses 476
 - Radiologic sciences, 479
 - Rainbow's end development center, 544
 - Reading course numbers, 106
 - Readmission policy
 - Engineering, 91
 - Former students, 24
 - Records and registration, office of, 536
 - Records, student access and release, 557
 - Recreation faculty, 484
 - Recreational sports and services, 540
 - Reentry students, 24, 72
 - Reference guide, vii
 - Refund of fees, 30, 31
 - Refund
 - of tuition, 36
 - Registered student organizations, 543
 - Registration, 27, 28
 - fee, 33
 - Rehabilitation services, 487
 - Release of student information, 557
 - Religious observances of students, 563
 - Remote sensing, 318, 326
 - Residency
 - Determination of, 554
 - Requirements, 554
 - Status, 554
 - Respiratory therapy technology, 490
 - Restaurant management, 493
 - Retention policy, education, 86, 192, 215
 - ROTC
 - Army, 147
 - Rural appraisal, 493
 - Rural development, 493
 - Russian courses, 297, 306
- S**
- Saluki volunteer corps, 544
 - Salukinet, 15, 52
 - SAT scores, 18
 - Scholarships, 14
 - Scholastic
 - Achievement, 50
 - Honors day, 50
 - Probation and suspension system, 40, 41
 - Standing, 40
 - School health education specialization, 331
 - School of Allied Health, 129
 - School of Law, 99
 - School of Medicine, 100
 - Courses, 493
 - Science and pre-veterinary specialization, 78, 131
 - Science, college of, 95
 - Courses, 493
 - Sculpture specialization, 152
 - Second bachelor's degree - 49
 - Second bachelor's degree
 - Engineering, 250
 - Second chance program, 24
 - Secondary school teaching, 224
 - Senior citizen courses act, 15
 - Senior hours, 48
 - Senior standing, 42
 - Services - 547
 - Achieve program, 550
 - Seven year rule, ii
 - Shryock auditorium, 547
 - Simon, The Paul, Public Policy Inst. 104
 - SIUC arena, 547
 - SIUC broadcasting service, 548
 - Six sigma, 345
 - Small business management, 377, 379
 - SOAR/student orientation advisement registration, 536
 - Social security number, 29, 558
 - Social studies, 494
 - Social work, 494
 - Sociology, 496
 - Sonography, 480
 - Sophomore standing, 42
 - Southern Illinois regional career preparation program, 101
 - Southern Illinois University, 2
 - Spanish, Major, 298
 - Courses, 306
 - Special education, 501
 - Speech communication, 504
 - Speech pathology, 510
 - Speech pathology and audiology, 510
 - Sports medicine, 545
 - Spouse/domestic partner card, 544
 - Standard elementary certificate, 220, 223
 - Statistics (see mathematics), 384, 385
 - Student
 - Adult, 555
 - Employment, 14
 - Exchange program, 539
 - Identification numbers, 29
 - International, 54, 83
 - Minor, 555

- Records, access to, 561
- Release of information, 561
- Support services, 102
- Teacher placement, 467
- Teaching, 466
- Withdrawal, 27, 29
- Student affairs, 537
- Student center, 541
- Student conduct code, 546
- Student development, 543
- Student health center, 544
- Student life advisor, 536
- Student organizations, 94, 543
- Student recreational center, 540
- Students' legal assistance office, 546
- Study abroad programs, 539
- Submission of transcripts, 23
- Supplemental instruction, 546
- Supportive skills, 98
- Suspension, 40
- Switzerland exchange program, 538, 540

T

- Table of contents, v
- Teacher certification
 - Degree requirements, 87
- Teaching English to speakers of other languages, 375
- Technical Resource Management, 510
- Technology, 513
- Television, 474, 548
- TESOL, 372
- Theater, 513
- Theater, music specialization, 417
- Therapeutic recreation specialization, 484
- Three-year baccalaureate degree program, 49
- TOEFL examination, 23
- Tourism, 517
- Transcript
 - Submission, 23
- Transfer
 - Admission, 20
 - Credit, 22
 - Engineering, 207
 - Requirements, 21
 - Students and university core, 70
- Transferring from one major to another, 28
- Transient students, admission, 27
- Transit car service, 542
- Travel/study program, 540
- Trustees, board of, vi
- Tuition and fee refund, 36
- Tuition and fees, 32
- Tuition waiver, 37
- Turfgrass, 517

U

- U-card, 543
- Ultrasound, 480
- Undergraduate curricula and faculty, 106
- Unit of credit, 42
- University, 517
 - Bookstore, 542
 - Career services, 537
 - History of, 2
 - Honors program, 50, 517
 - Ombudsman office, 549
 - Studies, 519
 - Studies degree program, 93
- University core curriculum
 - Meeting, 56
- University core curriculum
 - Courses, 58
- University honors program, 517
- University housing, 12, 546
- University museum, 548
- Upward bound, 101
- Urban forestry, 520
- Utrecht network, 540

V

- Veterans, admission of, 26
- Veterinary medicine, pre-professional program, 529
- Visual communication specialization, 95, 149, 360
- Vocational teacher development specialization, 522
- Voice, 414

W

- Washington, internship in, 102
- Watershed management, 520
- Wellness center, 545
- Wildlife management, 529
- Withdrawal - 27
 - from courses, 29, 30
 - from the University, 29, 30
- Withdrawals, Debit Dawg, 542
- Women: Evening Transit Car Service, 542
- Work experience credit, 47
- Workforce education and development, 522
- World literature specialization, English minor, 267
- Writing center, 102
- WSIU/WUSI public broadcasting, 548
- Women's studies, 520

Z

- Zoology, 529





