

1980

1980-1981 Southern Illinois University Bulletin Carbondale Campus (School of Technical Careers Information)

Southern Illinois University Carbondale

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Southern Illinois University at Carbondale Bulletin

1980-1981
School of Technical Careers Information



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University Calendar

Spring Semester, 1980

Semester Classes Begin
Lincoln's Birthday Holiday
Spring Vacation

Good Friday Holiday
Final Examinations
Commencement

Monday, January 21, 8:00 A.M.
Monday, February 11
Saturday, March 15, 12:00 NOON—
Monday, March 24, 8:00 A.M.
Friday, April 4
Monday, May 12—Friday, May 16
Saturday, May 17

Summer Session, 1980

Eight Week Session Begins
Independence Day Holiday
Final Examinations
Commencement

Monday, June 9, 7:30 A.M.
Friday, July 4
Thursday and Friday, July 31—August 1
Saturday, August 2

Fall Semester, 1980

Semester Classes Begin
Labor Day Holiday
Thanksgiving Vacation

Final Examinations

Monday, August 25, 8:00 A.M.
Monday, September 1
Saturday, November 22, 12:00 NOON—
Monday, December 1, 8:00 A.M.
Monday, December 15—Friday,
December 19

Spring Semester, 1981

Semester Classes Begin
Lincoln's Birthday Holiday
Spring Vacation

Final Examinations
Commencement

Monday, January 19, 8:00 A.M.
Thursday, February 12
Saturday, March 14, 12:00 NOON—
Monday, March 23, 8:00 A.M.
Monday, May 11—Friday, May 15
Saturday, May 16

Southern Illinois University at Carbondale is in compliance with Title IX of the Education Amendments of 1972. In part, Title IX mandates that no person shall, on the basis of sex, be excluded from participation, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance. Inquiries concerning the application of Title IX regulations may be directed to Dr. Mary Helen Gasser or Mr. Richard Hayes, University Affirmative Action Office, Anthony Hall, Room 104, telephone 536-6618.



Southern Illinois University at Carbondale Bulletin

**1980-1981
School of Technical
Careers Information**

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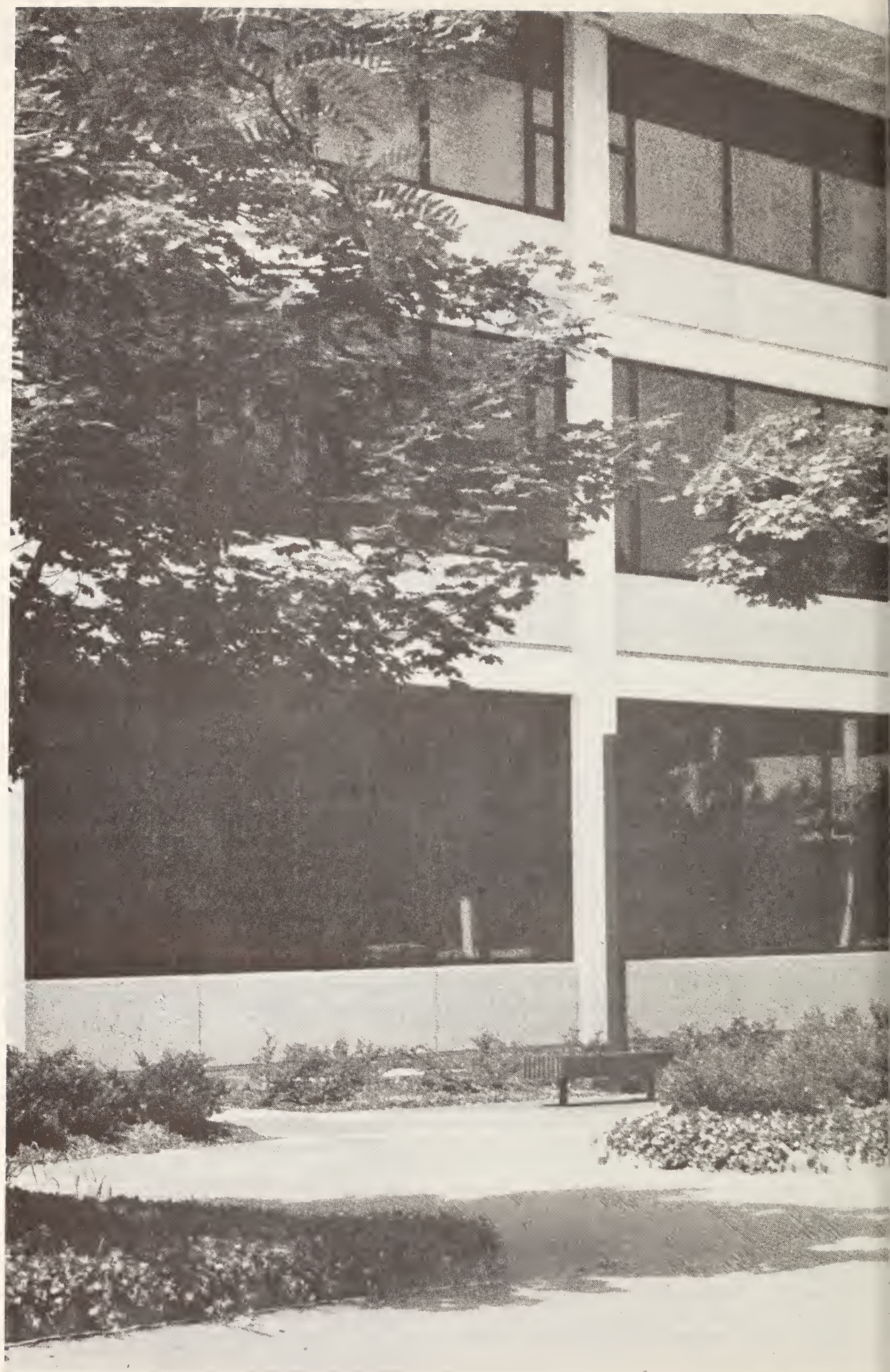
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School of Technical Careers

Programs, Specializations, and Options

Programs, specializations and related course groupings available for credit through the School of Technical Careers are listed here, with reference to the page on which a full description can be found. Programs leading to either the associate or baccalaureate degree are shown in **bold print**. Specializations and other course groupings which do not constitute a degree program are shown in *italic*.

Allied Health Careers Specialties. A program designed to prepare multi-competent technicians in the areas of clinical respiratory therapy, clinical medical laboratory technology, and clinical radiologic technology. Page 5.

Architectural Technology. Technician-level program leading to the A.A.S. degree. Approved by the American Institute of Architects. Schools of architecture do not generally accept full transfer of credit from this program toward professional degrees. Page 5.

Automotive Technology. Technician-level program leading to the A.A.S. degree. Allows the student to specialize in any of the various mechanical systems of the automobile. Does not include diesel mechanics or auto body repair. Page 6.

Aviation Technology. FAA-certified aircraft mechanics program with study in airframe and powerplant leading to the A.A.S. degree. *Helicopter Maintenance.* Third-year specialization available to those who have completed aviation technology. Page 7. *Flight Training.* May be taken by aviation technology students, but enrollment in aviation technology is not required of flight students. See separate listing on page 23.

Avionics Technology. Studies in aircraft electrical and communications systems leading to the A.A.S. degree. Page 8.

Bachelor of Science in Technical Careers. Individualized programs designed for those who have completed a career-oriented associate degree program. Page 25.

Biomedical Equipment Technology. A third-year specialization in installation and maintenance of electronic equipment used to diagnose, prevent and cure disease and illness. Designed for those who have completed an associate degree electronics technology program. Page 17.

Commercial Graphics—Design. Studies in commercial art, graphics and design leading to the A.A. degree. Page 10.

Commercial Graphics—Production. Studies in printing and publishing, with concentrations on management or production specialties leading to the A.A.S. degree. Page 10.

Construction Technology—Building. Studies in light building construction leading to the A.A.S. degree. Page 10.

Correctional Services. Studies in institutional and community-based correction of criminal offenders leading to the A.A. degree. Page 11.

Court and Conference Reporting. A specialization in secretarial and office specialties which prepares the graduate to take the Certified Shorthand Reporters Examination and the state proficiency examination. Page 22.

Dental Hygiene. A two-year program accredited by the Council on Dental Education and Commission on Accreditation of the American Dental Association which leads to the A.A. degree. Page 12.

Dental Laboratory Technology. A course of study in the fabrication of dental prostheses and related areas which leads to the A.A. degree. Fully accredited by the Council on Dental Education and Commission on Accreditation of the American Dental Association. Page 13.

Electronic Data Processing. Studies in computer programming and operation which lead to the A.A.S. degree. Page 13.

Electronics Technology. Studies in basic principals of electricity and electronics, communication systems, digital circuits, and industrial systems which lead to the

A.A.S. degree. *Bio-medical Equipment Technology* is a third-year specialization for those who have completed this or a comparable associate degree program. Page 16.

Fire Science Services. Offered at various off-campus locations; designed to provide holders of the A.A.S. degree with studies leading to the B.S. degree. Page 27.

Flight Training. A sequence of pilot training courses available to any SIUC student by which an individual can be licensed at any level from private to commercial pilot. Does not lead to a degree in and of itself, but may be included in some programs on the baccalaureate level. Pilot training is not part of the aviation technology program. Page 23.

Law Enforcement. Provides academic background essential to support police training academy skills. Leads to the A.A. degree. Page 18.

Military Programs. Bachelor of Science curricula in aviation management, electronic systems, and health care services offered on military bases throughout the U.S. Page 26.

Mortuary Science and Funeral Services. The only such program in a public

university in Illinois; leads to the A.A. degree. Page 18.

Nursing. A unique program, building upon practical nursing or its equivalent to prepare graduates to write the Illinois State Board Nursing Examination for registered nurse. Page 6.

Photographic and Audio-Visual Technology. Technical photography and photo lab finishing, with option in audio-visual equipment maintenance and operation. Leads to the A.A.S. degree. Page 19.

Physical Therapist Assistant. Associate degree program, approved by the American Physical Therapy Association, to allow the graduate to work under the supervision of a physical therapist. Page 20.

Secretarial and Office Specialties. Associate degree program which provides specialized courses with core of secretarial skills. *Court and Conference Reporting* is one specialization leading to the associate degree. Page 21.

Tool and Manufacturing Technology (Numerical Control). Technician-level program in machine shop and fabrication which leads to the A.A.S. degree. Page 23.



The School

The School of Technical Careers (STC) is a unit unique to Southern Illinois University at Carbondale.

STC provides a full range of career-oriented programs, from the associate degree through post-associate specializations to individualized baccalaureate programs.

As one of the ten undergraduate units of Southern Illinois University at Carbondale, the School of Technical Careers offers both specialized training needed to meet career goals and the educational and cultural benefits of a major university to the more than 3,000 students enrolled in its various programs.

The broad scope of STC provides opportunities to its students that are not usually found in the vocational-technical setting; the added benefit of access to the variety of academic disciplines, physical facilities, and programs of Southern Illinois University at Carbondale (SIUC) gives STC students a collegiate experience unmatched at any similar school in the nation.

The School of Technical Careers is geared to serve the educational needs of its students in their pursuit of immediate and long-range goals. Its progressive levels of instruction accommodate students' needs for recurrent or "stop-in, stop-out" education, permitting the student to enter the work force after attaining the associate degree or specialization before or during pursuit of the bachelor's or higher degrees. Additional opportunities are available through the bachelor of science in technical careers, and through other programs at SIUC such as business education, industrial technology, occupational education, and administration of justice, and at other institutions of higher education.

New high school graduates, college transfer students, returning veterans, teachers seeking to keep abreast of advancement in their fields, adults who want to improve or re-direct their career preparation, military personnel applying their service training to academic credentials—all of these and more find a place in the School of Technical Careers.

Associate and post-associate career programs are offered in 23 fields. These are high-demand programs which are not readily available in community colleges, such as aviation technology, or programs

which draw from other resources of the university, such as physical therapist assistant. The school conducts the state's only public mortuary science and funeral service program. Law enforcement and correctional services programs have the benefit of cooperation with state and federal penal institutions and with the university's Center for the Study of Crime, Delinquency, and Corrections.

At the associate degree level, it is possible to design specialized programs for students whose career goals are so highly individualized that they cannot be met by structured programs. Advisers are available to assist students in the design of associate degree special majors.

Post-associate specializations, such as court and conference reporting and helicopter maintenance, give students the opportunity to build upon associate degree work with added studies necessary for licensure or to develop skills needed to meet the special requirements of a particular career field. These specializations usually consist of two semesters of concentrated study.

The baccalaureate degree program in technical careers is unique to this school. It is designed to meet the educational needs of the career oriented student which are not filled by existing programs. Many types of previous educational and occupational experiences may be applied to this program. The student, in consultation with advisers, develops a course of study designed to meet the individual's own career interests.

In addition to its on-campus offerings, the school conducts baccalaureate programs at nearly 20 military installations throughout the nation which give service personnel the opportunity to combine service training with academic studies, and cooperates with community colleges in Illinois in providing degree programs in fire science services for active fire department personnel.

The most vital resource of any school is its fund of knowledge, the faculty which imparts that knowledge, and the students who seek and use it, but physical facilities and equipment also are important.

A number of STC programs now occupy a new three-story laboratory-clinic-classroom building near the SIU Arena, the first of two structures especially planned and equipped for career-oriented programs.

The second planned structure, STC II, is designed to meet the needs of the so-called "heavy" technologies, such as



automotive, construction, and tool and manufacturing.

Aviation programs are conducted in facilities at the Southern Illinois Airport which also were designed especially for the educational function and house more than \$6 million in instructional equipment.

Other STC programs, even though housed in temporary facilities at various locations on the Carbondale campus and at the former Vocational-Technical Institute campus near Carterville, are equipped and staffed to give students the finest education available.

This booklet gives a brief description of

the School of Technical Careers, its programs, and the benefits available to its students as part of the educational community of Southern Illinois University at Carbondale.

Information on current admissions policies and procedures and tuition and fees can be found on page 30.

If you wish more specific information on the School of Technical Careers or any of its programs, consult the current Undergraduate Catalog of Southern Illinois University at Carbondale, or write to the coordinator listed with each program at the address shown inside the back cover.

Associate Degree Programs

Allied Health Careers Specialties

This program is especially designed to prepare specialists in combinations of two of the areas of clinical respiratory therapy, clinical medical laboratory technology, and clinical radiologic technology.

It is a highly individualized program which prepares graduates for service in medical facilities where they may be employed as single- or multi-competent technicians.

In general, students take a common core of coursework applicable to all three specialties. This includes courses such as Physiology, Human Anatomy, Chemistry, Technical Writing, Oral Reporting, College Algebra, and other specialty-related subjects.

Clinical studies in laboratory techniques, respiratory therapy, and radiologic technology are built upon this basic coursework. These studies will be done off-campus in hospital settings.

Students in the clinical portion of the program should expect to spend about \$60 per clinical specialty area for books and insurance in addition to tuition and fees.

For specific information on the program and its specialized application, contact:

Arch Lugeneel, Coordinator

Architectural Technology

This associate degree program is structured so that the graduate is immediately employable in an architectural office, yet has the solid basis for further development through education and experience.

The technically-trained individual is able to work in the area between the draftsman who simply produces another's ideas and the licensed architect who creates, and the graduate of this program will find a variety of positions available within the architectural profession.

The program is approved by the American Institute of Architects. Faculty members are architects who hold

professional degrees and have many years of professional and teaching experience.

During their two years of study, students gain an understanding of the architectural and design professions and other components of the building industry, the design and production process, and the historical, mathematical, and physical factors involved. The program covers building materials, systems, and construction, as well as preparation and interpretation of technical communications such as two- and three-dimensional models, charts, and architectural delineations. Currently, the curriculum includes:

First Semester

Architectural Drafting
Architectural Graphics
Architectural History
Technical Mathematics
English Composition

Second Semester

Architectural Drawings I
Architectural Design I
Public Speaking
Applied Physics
Technical Writing

Third Semester

Architectural Drawings II
Architectural Design II
Architectural Engineering
Architectural Systems
Architectural Surveying

Fourth Semester

Architectural Drawings III
Architectural Design III
Architectural Engineering II
Architectural Estimating
Architectural Specifications

Opportunities for the architectural technician in all phases of the industry are limited only by the individual's own talent and drive. Technicians may prepare architectural working drawings, write specifications, or prepare mechanical and electrical drawings. They may be inspectors or estimators, or may coordinate architectural, structural, mechanical, and electrical portions of the work. Talented individuals may be given responsibility for designing total projects and preparing presentation drawings or models.

Students spend about \$200 for equipment, supplies, and field trips.

For more specific information, contact:

Gene Trotter, Coordinator

Associate Degree Nursing

This program, offered through the Southern Illinois Collegiate Common Market, is developed as an open curriculum model and is designed to provide career mobility for persons who have completed a practical nursing program or its equivalency through formal or informal methods. Graduates are eligible to write the Illinois State Board Nursing Examination and become registered nurses.

A comprehensive testing program allows students the opportunity to validate past experiences. After assessment by the nursing faculty, an individualized prescriptive type educational program is developed for each student.

In addition to the prerequisite practical nursing curriculum or equivalent, the program normally requires two semesters and a summer term for completion of the associate in applied science degree in nursing. However, because nursing courses follow a unique calendar, the student's schedule will extend beyond normal semester periods.

In addition to gaining admission to the University, the practical nurse applicant must achieve satisfactory scores on the Psychological Corporation Pre-Entrance

Examination for Schools of Nursing and satisfy program criteria of health, personal references, and interviews.

Those individuals seeking admission as "equivalent to a practical nurse" must satisfy the above criteria as well as satisfactorily demonstrate nursing knowledge and clinical skills by both practical and written exams.

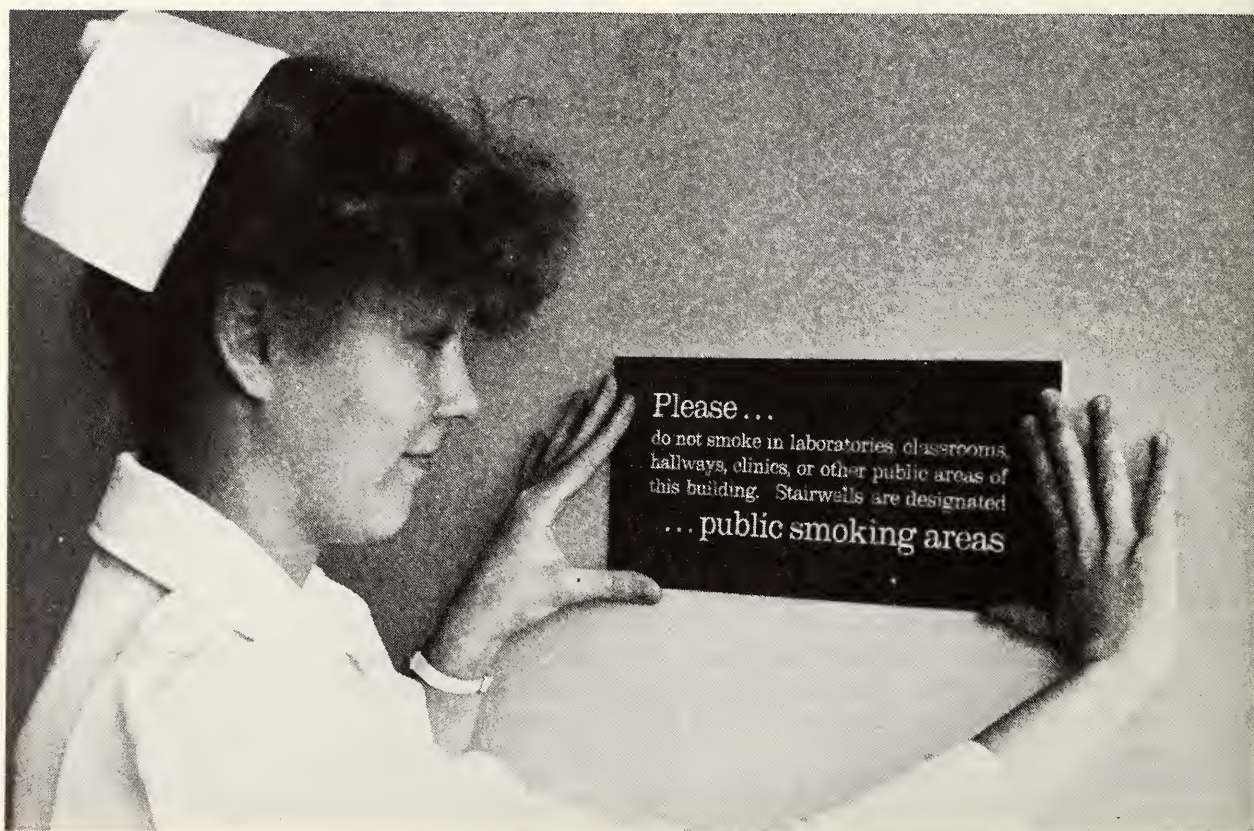
Additional expenses of approximately \$500 are required to cover textbooks, uniforms, pre-admission examinations, liability insurance, workshops, and other items. Since students travel to several hospitals for clinical experience, it is essential that they have access to private transportation.

The program is designed to prepare graduates for the practice of nursing as defined in the Illinois Nurse Practice Act and meets the requirements for accredited schools in associate degree nursing in Illinois.

For more specific information, contact:
Alice Hees, Coordinator

Automotive Technology

This associate degree program is unique because instruction progresses through an orderly sequence of classroom and



laboratory experiences that emphasize "why" more than "how." Its basic objective is to provide students with a solid foundation of knowledge, experience, and skills that will assist in job entry and career advancement in many facets of automotive service and related industries.

The effectiveness of this method of teaching can be measured in part by the fact that STC students have twice claimed the national title in the Plymouth Trouble Shooting Contest.

Developments in the automotive industry and the trend to more fuel-efficient, less polluting motor vehicles require highly skilled service technicians who specialize in specific service areas. This program recognizes the various needs of the industry and the needs of its future technicians and offers the flexibility for the student to develop these required specialties, with the option of continuing past the associate degree to obtain further technical specialties.

During the first year, each student takes a series of core courses which provide the skills and technical information essential to all service technicians. During the second year the student may choose any four of seven possible specialties. In most cases, these will deal with advanced instruction in areas covered in the core courses.

Current requirements for the associate degree are:

First Semester

Automotive Engines and Fuel Systems
Lab
Automotive Engines and Fuel Systems
Theory
Brakes and Chassis Laboratory
Brakes and Chassis Theory
Related Shop Laboratory
English Composition

Second Semester

Engine Electrical Laboratory
Engine Electrical Theory
Drive Trains Laboratory
Drive Trains Theory
Technical Mathematics
Oral Reporting

Third Semester

Applied Physics
Courses in Areas of Specialization

Fourth Semester

Technical Writing
Courses in Areas of Specialization
Chemistry of Fuels and Lubricants

Specialization: with the aid of an adviser and subject to availability of courses, the student will choose any four (two per semester) lab and theory combination courses:

Automatic Transmissions
Automotive Power Accessories
Automotive Air Conditioning
Advanced Fuel and Emissions Systems
Advanced Brakes and Chassis
Advanced Engine
Advanced Electrical Systems

The student should expect to spend about \$300 for a basic tool kit of domestic and metric tools and supplies.

Upon completion of requirements for the associate degree, and at the option of the student, additional automotive studies may be continued for part or all of a third year in areas in which courses are available. This allows the student to develop additional skills and knowledge in the various areas of specialization offered.

Graduates of the program find a wide range of opportunities in service, sales, research, and manufacturing areas.

For more specific information, contact:
James White, Coordinator

Aviation Technology

Graduates of this program are qualified to obtain the Federal Aviation Agency airframe and powerplant certificate and are prepared to work as maintenance technicians in airlines or general aviation. The associate degree program can be completed in two academic years, or four semesters, but students wishing to qualify for the FAA A&P license must complete an additional eight-week summer term.

Helicopter maintenance is available as a third-year specialization to graduates of this or similar programs.

Aviation Technology is conducted in a combination hangar-laboratory-classroom facility at the Southern Illinois Airport between Carbondale and Murphysboro. It is offered as part of the most comprehensive aviation training program in an Illinois public university and is acclaimed by many in the aviation industry and government as the best program in the nation.

It is fully accredited by the FAA.

Equipment and training aids valued at more than \$6 million are used in teaching reciprocating and jet powerplants, hydraulics, fuel systems, ignition-starting systems, carburetion and lubricating systems, instruments, and powerplant

testing in a coordinated program of classroom and laboratory work. Students are prepared an animated training panels representing such modern jet aircraft as the Boeing 707, 727, 747, and Douglas DC9.

Current requirements for the associate degree are:

First Semester

English Composition
Technical Math
Material & Metal Processing
Aircraft Electricity
Aircraft Instruments and FAR

Second Semester

Technical Report Writing
Aircraft Structures
Aerodynamics and Weight and Balance
Aircraft Hydraulics
Cabin Environment and Jet Transport Systems

Third Semester

Introduction to Psychology
Airframe and Powerplant Electrical & Ignition Systems
Reciprocating Powerplant
Carburetion, Lubrication

Fourth Semester

Public Communications
Social Science Elective
Propellers
Powerplant Testing
Jet Propulsion Powerplant

Summer Session (Required for FAA A&P)

Aircraft Inspections
Powerplant Inspections

Helicopter Maintenance. This area is available as a third-year specialization and is made up of four specialized courses offered in two semesters:

First Semester

Helicopter Theory and General Maintenance Practices
Helicopter General Maintenance Laboratory

Second Semester

Helicopter Power Train and Inspection
Helicopter Power Train Laboratory

Students spend about \$275 for a tool kit and special study materials.

Graduates of the program in aviation

technology are in demand as skilled technicians throughout the rapidly-growing aviation industry.

Students in the aviation technology program may enroll also in flight training.

Enrollment in the program is limited by requirements of FAA accreditation. In recent years, admission has been closed well in advance of the Fall semester, and those interested in enrolling should apply early.

For more specific information, contact:
Joe Schafer, Coordinator

Avionics Technology

This associate degree program prepares graduates to work as skilled technicians in aviation electronics in the development, installation, and maintenance of sophisticated systems required for modern aviation.

Because STC has an excellent program in electronics technology, students are able to choose between two options in avionics. Option I is offered entirely through the aviation technology facilities.

Option II offers first-year courses through the program in electronics technology, providing for the student who already has or wishes a more extensive background in basic electronics. Students should consult with supervisors of electronics and avionics for specific differences before choosing an option.

The program offers basic AC and DC electricity, vacuum tubes, transistors and integrated circuits, aircraft integrated flight systems, airborne radar systems, aircraft flight controls and instrumentation systems, transmitters and receivers, aircraft communications and navigation systems, and pulse equipment, including D.M.E. and transponders.

Requirements for the associate degree can be completed in two academic years, or four semesters, but students who wish to meet strict federal and industry requirements should plan to take a group of courses offered in an additional summer term.

Current requirements for Option I are:

First Semester

English Composition
Technical Math
Material and Metal Processing
Aircraft Electricity
Aircraft Instruments & FAR
Applied Science



Second Semester

Aircraft Hydraulics
 Technical Report Writing
 Social Science Elective
 Aerodynamics and Weight & Balance
 Cabin Environment & Jet Transport
 Systems
 Aircraft Electrical & Structural Systems

Third Semester

Avionics Electronics Circuits
 Flight System Theory
 Avionics Laboratory III

Fourth Semester

Aircraft Communications and Navigation
 System Theory
 Avionics Laboratory II
 Avionics Logic Circuits and Pulse System
 Theory
 Avionics Laboratory IV

Summer Session

Avionics Radar System Theory
 Avionics Laboratory V
 FCC Regulations
 Public Communications

Requirements for Option II are:

First Semester

DC-AC Circuit Analysis
 Electronics Devices

DC-AC Circuit Lab

Technical Mathematics

Second Semester

Electronics Circuit Theory
 Propagation and Coupling
 Electronics Circuit Lab
 Applied Calculus
 English Composition

Third Semester

Aircraft Instruments and FAR
 Flight System Theory
 Avionics Laboratory III
 Social Science elective

Fourth Semester

Aircraft Communications and Navigation
 System Theory
 Avionics Laboratory II
 Avionics Logic Circuits and Pulse System
 Theory
 Avionics Laboratory IV

Summer Session

Same as Option I

Students should expect to purchase basic tool kits and study material at an approximate cost of \$90.

Graduates of the program are prepared to install, maintain, test, and repair airborne communications and navigation

systems and radar equipment. They find opportunities with airlines, in general aviation, and in aircraft manufacturing.

For more specific information, contact:
Larry Birkhead, Coordinator

Commercial Graphics—Design

The advertising business is a growing field, presenting ever-increasing opportunities for men and women who have creative and artistic ability. Trained people are needed to develop story illustrations, advertising layouts, billboard design, point-of-purchase displays, package designs, direct mail pieces, annual report designs, television commercials, finished lettering, fashion illustrations, airbrush and photo-retouching, and many others.

Students in this program develop multiple art skills so that they may qualify for initial positions in many different areas of advertising art and design. Each graduate has a base upon which to build a career according to individual interests and talents.

Each graduating design student is required to pass a vocabulary proficiency test and to have compiled a professionally acceptable portfolio of work.

Current requirements for the associate in art degree include:

First Semester

Art Appreciation (History)
Artistic Anatomy and Color Perception I
Technical Drawing for Graphic Design
Graphic Layout and Typography I
English

Second Semester

Artistic Anatomy and Color Perception II
Airbrush and Photo-Retouching
Copyfitting
Graphic Layout and Typography II
Individual Study—Photography
Psychology
Public Speaking

Third Semester

Advertising Graphics
Publication Graphics
Technical Writing

Fourth Semester

Graphic Design and Advertising
Illustration
Dimensional Design
Job Orientation

Faculty members are professionals in the field, and the program is served by an advisory committee whose members are active in the advertising and graphic design profession.

This is an extremely high demand program; those wishing to enroll should apply early.

The student should expect to spend approximately \$800 to \$1000 for supplies, equipment, and materials over a two-year period.

For more specific information, contact:
John L. Yack, Coordinator

Commercial Graphics—Production

The growing printing and publishing industry offers many career opportunities for trained production specialists and persons with mechanical skills and abilities in management areas.

This associate degree program is designed to allow each student an individualized program which will permit concentration on management and production coordination or upon specialties within production such as lithographic stripping and plate-making.

Limited numbers of students are admitted to this program and all are advised in the development of a coordinated program of coursework on an individual basis.

Those who wish to prepare for a career in management, for example, will study such subjects as business law, office management and supervision, accounting, and other related subjects.

Production students gain experience in the most up-to-date printing methods in a fully equipped shop. The student learns production and press procedures, lithographic photography, stripping and platemaking, offset presswork, estimating and cost, and production and finishing processes.

For specific information on this program, contact:

H. R. Soderstrom, Coordinator

Construction Technology—Building

This curriculum is designed to meet the needs of the individual who is entering the construction industry on the technician level.

The technician must be able to talk the language of the industry and interpret instructions. The technician also must be capable of working in the area between the architect and the contractor who is expected to carry out the mandates of the design.

Sufficient theory and laboratory work is included in this program to allow the graduate to perform in areas of material testing, drafting, construction methods, estimating, and surveying.

Current requirements for the associate in applied science degree include:

First Semester

Drafting
Construction Materials
Basic Construction I
Technical Mathematics

Second Semester

Building Construction Surveying
Basic Construction II
Statics and Strength of Materials
Applied Physics

Third Semester

Statics and Strength of Materials
Construction Materials
Advanced Construction I
English Composition

Fourth Semester

Construction Cost Estimating
Advanced Construction II
Technical Writing
Applied Accounting I
Elective (Social Science or Humanities)

Students should expect to spend about \$50 for instruments and supplies.

The curriculum is designed to accept both beginning freshmen and transfer students. Those entering with industrial experience or courses taken in the military may earn credit by proficiency or transcript evaluation.

Graduates may find employment as construction engineering aids, assistants to a contractor supervisor, building materials salespersons, inspectors, and estimators.

For more specific information, contact:
Harold W. Osborn, Coordinator

Correctional Services

Individuals who are interested in the broad field of corrections will find that this associate degree program offers a general background of understanding as well as specific knowledge and skills that will prepare them for the area in which they wish to work.



The demand for people trained in all phases of correctional services—from institutional custodial and counseling personnel to probation and parole officers—is growing with the increasing concern of society with dealing with the problems of crime.

The individual who is interested in a career that provides satisfaction through helping others will find a wide range of opportunities in this field. Both men and women are needed to work with juveniles and adults, in institutions and in the community.

This program is designed to provide educational opportunity for the individual who is entering the field and to assist those who are already employed and wish to upgrade their abilities. It combines classroom work with field study and a period of internship in which the student works with a correctional agency or in a social service agency.

Students learn various counseling theories and methods through classroom and group participation. In order to gain a working knowledge of these methods, students have an opportunity to demonstrate in actual therapeutic settings the skills they have gained.

Emphasis is placed upon supervision and administration of institutions, probation, parole, and social service agencies. Individual intrapersonal as well as organizational skills can be gained which will be an asset to the individual inside or outside the criminal justice system.

Current requirements for the associate degree include:

First Semester

Introduction to Criminal Justice
Treatment Methods in Criminal Justice
Interpersonal Relations in Criminal Justice
Supervision in Criminal Justice
English Composition

Second Semester

Treatment Practicum
Correctional Administration
Probation, Parole, and Community-Based Corrections
American Government and Politics
Technical Report Writing

Third Semester

Criminal Behavior
Criminal Law I
The Sociological Perspective
Public Communication
Introduction to Psychology

Fourth Semester

Criminal Law II
Internship in Criminal Justice Practice
Elective

Persons already employed in the correctional field may enroll in the program on a part-time basis. The faculty will work with these individuals in arranging schedules compatibly with their duty schedules.

For more specific information, write:
James Hendricks, Coordinator

Dental Hygiene

The dental hygienist is an important member of the dental health team and is the only one other than the dentist who is permitted by law to work directly in the mouth of the patient. All states require the dental hygienist to be licensed and to work under the supervision of a licensed dentist.

The hygienist's area of responsibility includes oral prophylaxis, chairside assisting, x-ray examinations, laboratory techniques, office and administrative procedures, dental health education, and other areas of preventive dentistry.

This program is fully accredited by the Council on Dental Education and Commission on Accreditation of the American Dental Association.

First-year enrollment is restricted by availability of facilities. In addition to university application procedures, there is a separate admissions packet for the program. There are several important deadline dates in the application process.

Persons wishing to enroll in the Fall 1980 semester must have taken the Dental Hygiene Aptitude Test no later than November 1979, and must have completed the admissions process by January 15, 1980.

Applicants for the Fall 1981 semester must take the aptitude test no later than November 1980, and must complete the admissions process by January 15, 1981.

The aptitude test is sponsored by the American Dental Hygiene Assn., 211 E. Chicago Ave., Chicago, IL 60611, and information on testing sites and dates is available from that organization.

Current requirements for the associate in art degree include four semesters and an eight-week summer session:

First Semester

English Composition

Public Communication
Survey of Chemistry
Anatomy of the Head and Neck
Pre-Clinical Dental Hygiene
Ethics, Jurisprudence, and Office
Management

Second Semester

Survey of Chemistry
Survey of Human Anatomy
Principles of Physiology
Histology and Embryology
Pre-Clinical Dental Hygiene
Dental Radiology

Summer Session

Microbiology
Nutrition
Clinical Dental Hygiene
Dental Radiology

Third Semester

Pathology
Community Dentistry
Dental Materials and Assisting
Clinical Dental Hygiene and Radiology
Dental Pharmacology and Anesthesia
Advanced Periodontology

Fourth Semester

Introduction to Psychology
Social Perspectives
Community Dentistry
Clinical Dental Hygiene and Radiology
Seminar

The dental hygiene student has expenses of about \$2200 in addition to University tuition and fees. This covers the cost of instruments, uniforms, liability insurance, and a basic professional library.

For more specific information, contact:

Mary K. Edwards, Coordinator

Dental Laboratory Technology

Dental laboratory technology is concerned with the construction of replacements for natural teeth which have been lost by disease or accident. The relationship of the dental technician to the dentist is similar to that of the pharmacist to the physician or the optician to the eye specialist. The technician is an important member of the dental health team.

The School of Technical Careers has been a pioneer in approved education for dental technicians. The curriculum and staff are fully accredited by the Council on Dental Education and Commission on

Accreditation of the American Dental Association.

Applicants to this program must be admitted both to the university and to the program through two separate application procedures.

Each student must purchase a kit of instruments, to be retained after graduation, at a cost of approximately \$225 each year.

Current requirements for the associate degree program are:

First Semester

Tooth Anatomy
Complete Dentures
Advanced Complete Dentures
Orientation to Dental Technology
English Composition
Inorganic Chemistry

Second Semester

Removable Partial Dentures
Advanced Removable Partial Dentures
Dental Orthodontics and Pedodontics
Oral Anatomy
Science of Dental Materials
Introduction to Physiology

Third Semester

Dental Occlusion
Beginning Crown and Bridge
Advanced Crown and Bridge
Professional Ethics
Science of Dental Materials
Technical Writing

Fourth Semester

Dental Ceramics
Advanced Dental Ceramics
Dental Lab Specialty
Public Communication
Applied Accounting

A number of these courses are conducted in five-week modules.

Career opportunities for graduates are excellent. The trained dental technician not only has a wide choice of geographic location, but can select from a variety of employment situations, such as dental offices, commercial laboratories, or the dental supply industry. Many are self-employed.

For more specific information on the program, contact:

Dennis Laake, Coordinator

Electronic Data Processing

The growth of electronic data processing in both the expansion of installations and

STC Programs and Their Locations

School of Technical Careers Building

Administration

Allied Health Careers Specialties

Architectural Technology

Associate Degree Nursing

Baccalaureate Studies

Dental Hygiene

Dental Laboratory Technology

Electronics Technology

Mortuary Science and Funeral Service

Secretarial and Office Specialties

Temporary Classrooms

Commercial Graphics—Design

Photographic and Audio Visual Technology

Faner Hall

Correctional Services and Law Enforcement

Electronic Data Processing

Wham Education Building

Physical Therapist Assistant

Southern Illinois Airport

Aviation Technology

Avionics Technology

Helicopter Maintenance

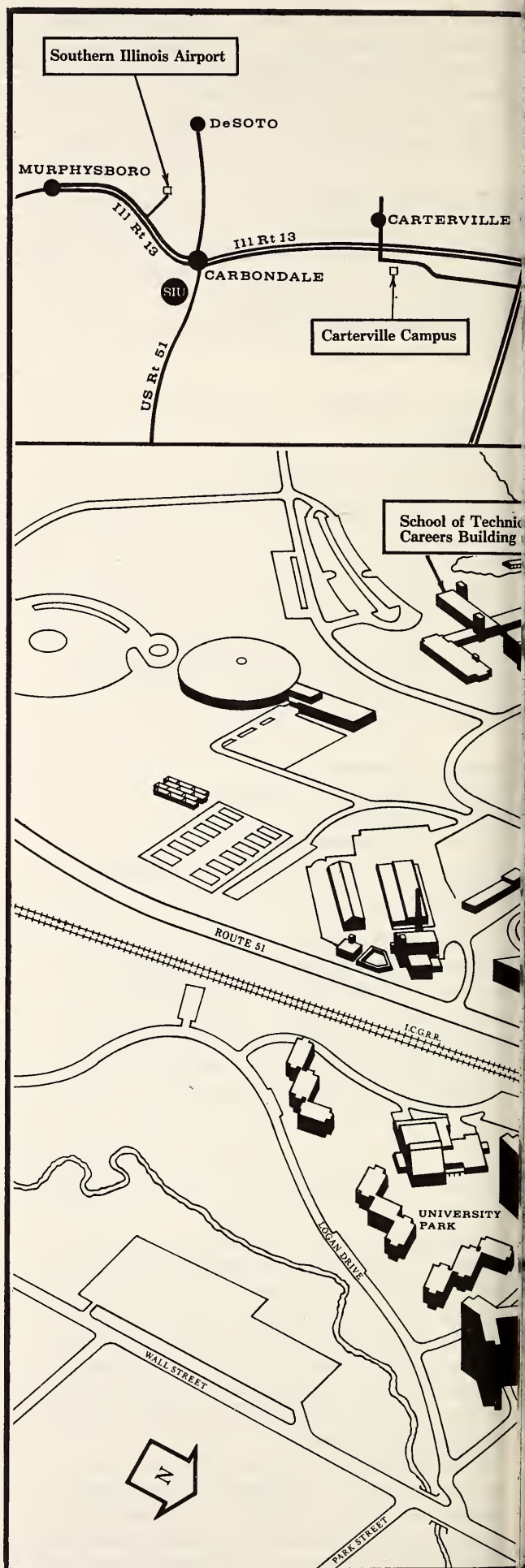
Flight Training

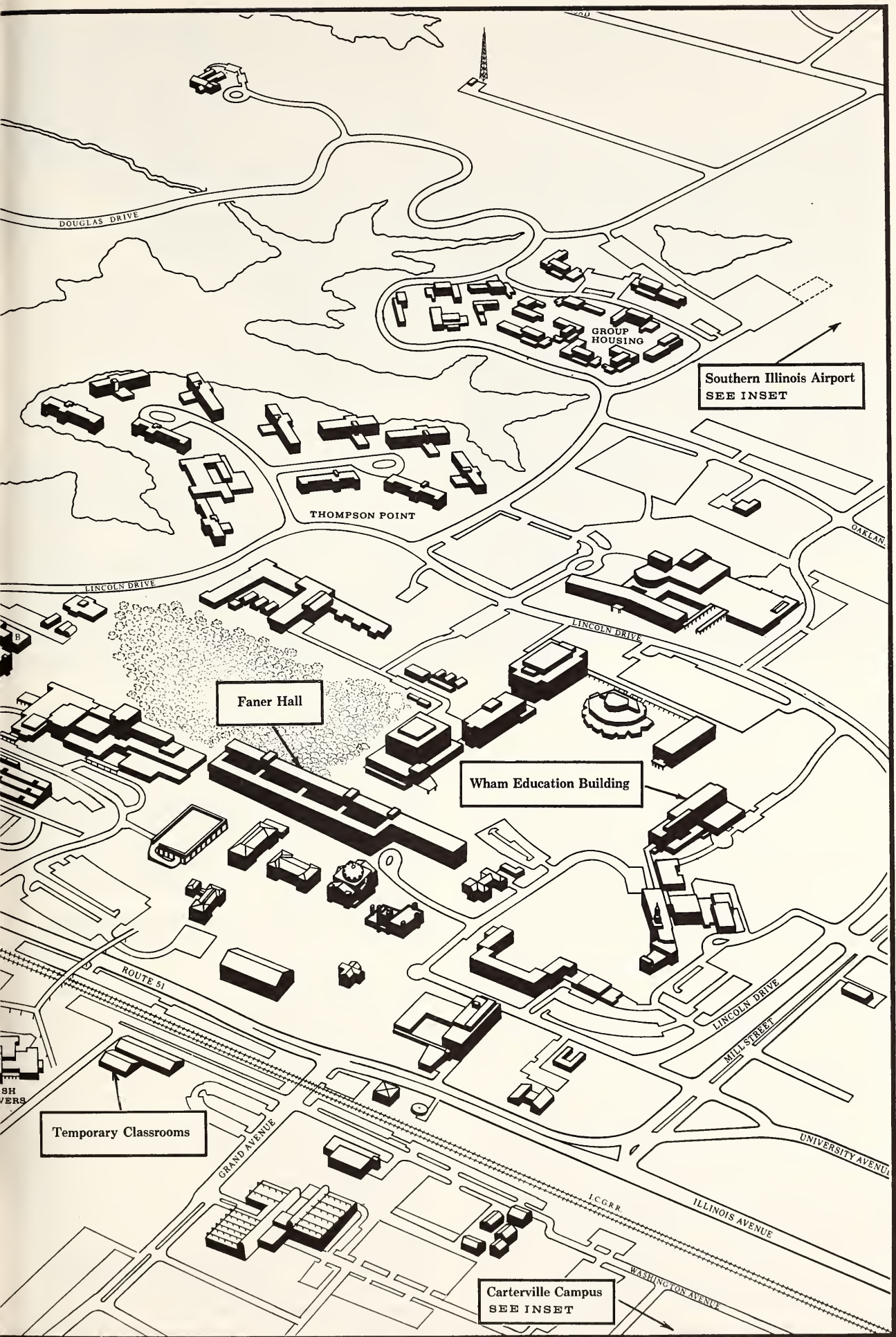
Carterville Campus

Automotive Technology

Construction Technology

Tool and Manufacturing Technology (Numerical Control)





in the complexity of hardware and software has increased the need for competent computer programmers and systems analysts. Accurate and effective information processing is essential in any organization or institution.

Even though there are more computer programmers working today than ever before, data processing is still a growing, challenging field. The task of persons who design data processing application is becoming more complex with the increasing power of computers and related information processing equipment.

This associate degree program is offered in a well-equipped center, with a curriculum designed to give the student much more than a good general working knowledge of a programming language. Graduates should have a sufficient depth of understanding to grow with new demands placed upon them.

Current requirements of the program include:

First Semester

Introduction to Data Processing
Applied Accounting I
Business Mathematics
English Composition
Elective

Second Semester

Data Processing Applications
Assembler Language Programming
Business Statistics
Applied Accounting II
Technical Writing

Third Semester

Job Control Language and Utilities
Cobol Programming
Systems Design and Development
Oral Communication
Approved Technical Elective

Fourth Semester

RPG Programming
Data Processing Project
Approved Social Elective
Approved Technical Elective

An outstanding feature of the program is the availability of an IBM 370 computer for student use. The hardware and software configuration is representative of large computer installations in industry. The data center is accessible for approximately 100 hours per week.

Graduates are qualified to apply currently available programming techniques to a defined problem with a minimum of supervision, program any

particular computer with a minimum of orientation, understand and master special techniques as the point of need occurs, and communicate properly documented programming decisions to other personnel concerned.

For more specific information, contact:
Byron Johnson, Coordinator

Electronics Technology

Electronics is one of the most rapidly developing and expanding of the modern technologies. Less expensive electronics components have opened new horizons in electronics applications. This rapid development has created a great demand for technicians. Those capable of working as part of the team in the design and application of the technology have a challenging future where chances for advancement are excellent and salaries compare excellently with those in other skilled occupations.

Classroom and laboratory experience in electronics and general education have been combined in a carefully balanced course of study for this associate degree program in which students gain the knowledge and manual skills necessary to take their place on the technical team.

Each student spends at least two hours in the laboratory every day throughout the curriculum, developing the ability to apply classroom theory to real life situations. Students see the application of general studies such as math, physics, and English by solving problems connected with laboratory equipment and reporting these problems in data sheets, graphs, and technical reports.

Currently, the program includes these studies:

First Semester

Electronics Devices
DC AC Circuit Analysis Theory
DC AC Circuit Analysis Lab
Technical Math

Second Semester

Electronics Circuit Theory
Electronics Circuit Lab
Public Speaking
English Composition

Third Semester

Telemetry and Industrial Circuits Theory
Telemetry and Industrial Circuits Lab
Electronic Systems Analysis
Physics



Fourth Semester
 Digital Circuits Theory
 Digital Circuits Lab
 Computer Programming
 Propagation and Coupling
 or
 FCC Test Preparation
 Technical Writing

Workbooks and supplies required for laboratory courses cost approximately \$150.

Two indicators of the quality of the program are student performance in competition and placement of graduates. STC students regularly sweep the field in the digital electronics portion of the annual trouble shooting contest conducted by the Illinois Association of Electricity and Electronics Educators. Graduates are employed in indirect and direct support positions by such concerns as Bell Labs, Argonne Labs, International Business Machines, Univac, and Los Alamos Labs.

For more specific information, write to:
 Paul Harre, Coordinator

Biomedical Equipment Technology. This sequence of courses is offered as a third-

year specialization beyond the associate in applied science in electronics technology.

The biomedical equipment technician is among the newest of the specialists working in the electronics field. The job has developed with the creation of complex electronic equipment used to diagnose, prevent, and cure disease and illness.

The technician is called upon to install, maintain, calibrate and repair biomedical equipment. This includes the heart pacemaker, electro-cardiograph, heart-lung machine, artificial kidney, chemical analyzer, radiation meter and spectrophotometer.

Applicants for this specialization should have completed either the associate degree program in the School of Technical Careers or its equivalent. An equivalent program is one which has included study in the fundamentals of electricity, electronics, electro-mechanics, digital electronics, and industrial instrumentation.

Those who have not completed such a program may be admitted to the specialization with the understanding that they will take the required basic courses in addition to those required for the

specialization. In this case, it will take longer than the normal two semesters to complete the necessary course work. Evaluation of previous work is done by the faculty.

Current requirements for the specialization include:

First Semester

Introduction to Electronic Biomedical Instrumentation
Electronic Biomedical Instrumentation Lab
Physiology
Internship

Second Semester

Biomedical Internship
Courses related to specialization selected from recommended list

For more specific information on this specialization, write to:

Paul Harre, Coordinator

Law Enforcement

Law enforcement officers in modern society must deal with situations undreamed of a generation ago, and use methods of crime prevention and detection that are the result of new technologies.

It is no longer sufficient for the law enforcement officer merely to be expert in the use of firearms, personal defense, or crowd control; the police officer must be a mature individual who knows a great deal about people and understands their motivations and is able to handle a diversity of problems.

This is the need that this associate degree program is designed to meet. It does not include the purely police skills which are offered in police academies, but emphasizes the broad range of knowledge upon which these skills are based.

Courses are designed to prepare students as practitioners in the law enforcement field on the local, state, and federal level. The program provides the student with both theoretical and practical course work in all aspects of law enforcement.

Currently, the program consists of these courses:

First Semester

Introduction to Criminal Justice
Criminal Behavior
Supervision in Criminal Justice

Interpersonal Relations in Criminal Justice
English Composition

Second Semester

Criminal Investigation
Police Administration
Probation, Parole, and Community Based Corrections
Technical Report Writing
American Government and Politics

Third Semester

Criminal Law I
Introduction to Psychology
The Sociological Perspective
Public Communication
Elective

Fourth Semester

Criminal Law II
Internship in Criminal Justice Practice
Elective

Both men and women are enrolled in this program. All students serve an internship in which they work under supervision with a police agency.

Provision is made to accommodate both the individuals who plan to attend full time and complete the course of study in two academic years and police officers who wish to attend part-time.

For more specific information, contact:
James E. Hendricks, Coordinator

Mortuary Science and Funeral Service

The only mortuary science and funeral service program in a public university in Illinois, this associate degree course of study is fully accredited by the American Board of Funeral Service Education and by many individual state boards.

Those wishing to enroll must complete a mortuary science admissions packet as well as filing for admission to Southern Illinois University at Carbondale.

The curriculum is divided into two concentrations. One is funeral service education, or funeral directing, which involves counseling the family on a variety of matters including insurance, social security, and veterans' benefits, as well as all aspects of managing a funeral home. The other is mortuary arts and sciences, or embalming, which involves the disinfection, preservation and restoration of human remains for funeral ceremonies.

Preprofessional and professional courses have been combined to provide a carefully balanced course of study in four semesters of classroom and laboratory work and one summer internship.

Current requirements are:

First Semester

Orientation to Funeral Service
Restorative Art
English Composition
General Psychology
Biological Science

Second Semester

Funeral Service Psychology
Public Communication
Accounting
Business Law
English Option
Health Education Elective

Third Semester

Embalming Chemistry
Mortuary Management
Embalming Theory and Practice
Mortuary Anatomy

Fourth Semester

Mortuary Management
Embalming Theory and Practice
Pathology
Microbiology

Summer Session

Management and Embalming Internships
Seminar

Graduates of this program have satisfied requirements for the trainee license and are eligible to write the state board examinations in embalming and funeral directing.

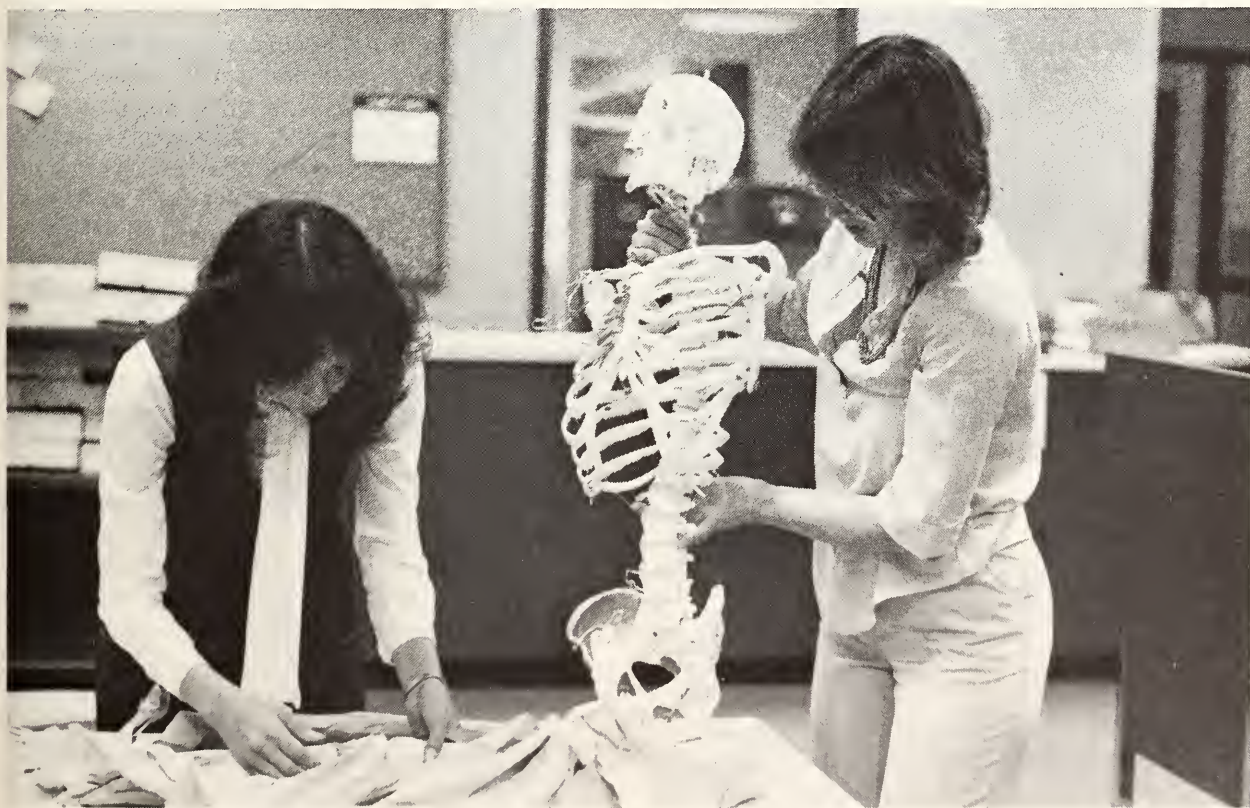
Licensing and qualification requirements vary from state to state since laws governing the profession are enacted at a state level. Licensure in one state does not assume automatic qualification in another, but most state boards have some reciprocal agreements with other states. Prospective students should contact the licensing body of the state in which they decide to attempt licensure.

This program is the home of Alpha Chapter of Sigma Pi Sigma, mortuary science fraternity.

For more specific information, contact:
Donald Hertz, Coordinator

**Photographic and Audio-Visual
Technology**

This program provides all students a first year of core courses, with provisions in second-year studies for specialization in



technical photographic laboratory curriculum or technical audio-visual curriculum.

Technical photographic courses are designed to prepare students as photographic laboratory technicians or photo finishers in industrial and commercial photographic processing agencies. Emphasis is placed on quality black and white and color photographic processes and materials. Students learn still photographic techniques in lecture/laboratory sessions and tour industrial and commercial photographic processing agencies to obtain practical understanding of commercial systems.

Students should expect to invest approximately \$400 in the production of a portfolio and the purchase of special photo chemicals and supplies. Second year students are required to provide their own fully adjustable cameras.

This program sponsors the annual Illinois High School Photo Contest, which draws thousands of entries from throughout the state.

Audio-visual courses are designed to prepare students to work with industrial and educational audio-visual delivery systems. Graphic production courses enable students to develop technical skills essential to the production of basic graphics for audio-visual systems. Students should expect to invest approximately \$300 for test equipment, tools, and graphic supplies.

Current requirements for the technical photographic option are:

First Semester

Photo Processing I
Photo Processing II
Audio-Visual Equipment Operation
Chemistry

Second Semester

Graphics I
Photo Processing III
Fundamentals of Math
Typing

Third Semester

Photo Processing IV
Photo Processing V
English Composition
Oral Reporting

Fourth Semester

Photo Lab Management
Technical Writing
Practicum

Second-year requirements for the technical audio-visual option include:

Third Semester

Maintenance and Repair of Audio-Visual Equipment
Graphics II
English Composition
Oral Reporting

Fourth Semester

Production of Multi-Media Materials
Practicum
Technical Writing
Individual Study

Graduates of the program are limited only by their own talent, motivation, and willingness to move to where jobs are available. Pay is commensurate with the technician's ability, resourcefulness, and drive.

For more specific information, contact:
Robert White, Coordinator

Physical Therapist Assistant

This program is designed to prepare graduates to work under the direction of a licensed physical therapist to treat disabilities resulting from birth defects, disease, or injury. Under the direction of a physical therapist, the assistant helps the patient to develop strength, mobility, and coordination, and provides relief from pain.

The program has been accredited by the American Physical Therapy Association. The physical therapist assistant program's ethical standards in education are planned in accordance and are consistent with the ethical guidelines recommended by the American Physical Therapy Association's Committee on Accreditation in Education. The program's ethical standards include the provision of an educational experience which will ensure that the graduates will become qualified physical therapist assistants, fairness in academic credit and tuition, accurateness in advertising, and responsible, nondiscriminatory recruitment practice.

In addition to University admission, prospective students must complete an admission packet for the program. Enrollment is limited by size of faculty and physical facilities.

Admission is limited to the fall semester.

Prospective students should make early application.

Students should plan to spend

approximately \$100 for uniforms and insurance, as well as make provision for spending 12 weeks away from campus while serving internships in two separate hospitals.

All credit earned in completion of a physical therapist assistant program may not be applicable to further studies in a physical therapy program at another institution.

Current requirements of the program include:

First Semester

Chemistry for Non-Science Majors
English Composition
Zoology
Physical Therapy Orientation
Therapeutic Modalities I
Massage

Second Semester

Principles of Physiology
Physiology Laboratory
Introduction to Psychology
Interpersonal Communications
Human Anatomy
Physical Rehabilitation Techniques
Physical Therapist Assistant Practicum I

Third Semester

HiFi Sound-Laser Beams
First Aid
Kinesiology of Normal and Pathological Conditions
Therapeutic Exercise I
Pathology
Therapeutic Modalities II

Fourth Semester

Physiological Bases-Human Movement
Training Room Techniques
Psychology
Physical Therapy Science
Therapeutic Exercise II
Physical Therapist Assistant Practicum II

Summer Session

Clinical Internship
Clinical Seminar

The Health Careers Council of Illinois reports that the field of physical therapy is one of the five most critical areas in which a manpower shortage exists. There are growing demands for physical therapy services in hospitals, extended care and nursing home facilities, and in private practices.

More specific information on the program is available from:

Ted Okita, Coordinator

Secretarial and Office Specialties

Current developments in office systems and related technology have resulted in many opportunities for information support personnel with special interests and extensive, specialized skills. Both men and women find rewarding careers in administrative support, information systems, and court reporting fields.

Students in this program are not forced into a mold. They gain shorthand and typing proficiency and other office skills through a core of basic courses, and then draw from a variety of allied health, technical, and business programs to specialize.

Students who have an excellent background in office skills are eligible for the Program of Advanced Curriculum Entry (PACE) which allows students to complete an associate degree in one summer and one year.

Associate degree programs are available in a variety of specialties. Individualized specialties may be devised for students with career goals which do not fit available programs.

Most instruction is individualized. In addition to classroom meeting times, most courses require the student to spend individual study time in the secretarial learning center.

The purchase of cassette tapes and supply packets is mandatory for students enrolled in learning center courses. A list of the requirements for all learning center courses will be sent upon request. Over a two-year period this would amount to \$20 to \$60 per student.

Basic requirements of the program, which are to be met during the first and second semesters or through advanced placement, proficiency testing, or transfer credit, include:

Keyboarding
Gregg Shorthand
Introductory Machine Transcription
Reprographs
Filing
Calculating Machines
Applied Accounting I
English Composition
Interpersonal Communication
or
Public Communication
Business Communication

Specialty requirements are met during the third and fourth semesters or filled by advanced placement, proficiency testing, or transfer credit.



Currently available specialties include administrative assistant, insurance administrative assistant, and legal/government administrative assistant.

All specialties include a minimum of 225 hours of on-the-job experience as part of the academic program.

Court and Conference Reporter, Reporting Stenographer, Notereader, Specialized Reporter. These specialties require a summer session in addition to the four semesters of the associate degree program. The court and conference reporter specialty includes a minimum of 40 hours of courtroom experience.

Students entering court reporting must be able to type 30 words per minute. In addition, good language skills are recommended. Court and conference reporting may be pursued as a specialization within the associate degree program, and also is offered as a post-associate specialization for those who have completed an associate degree in a related field at a community college or other post-secondary institution.

Students enrolled in court reporting are required to purchase a shorthand machine at the end of their first year at a cost of approximately \$300.

Basic requirements of the reporting specialties, to be met during the first and second semesters, include:

- Keyboarding
- Machine Shorthand
- Introductory Machine Transcription
- Applied Accounting I
- English Composition
- Public Communication
- Business Communication

Specialty requirements are met during the third and fourth semesters and a summer session.

Those completing the post-associate specialty are qualified to take the Certified Shorthand Reporters Association test.

Specific information on the program is available from:

F. Eugene Vaughn

Tool and Manufacturing Technology

Students in this program are trained on a variety of modern machines and testing equipment by faculty members who have broad experience in education and industry.

Extensive experience in a well-equipped machine shop provides students with the training necessary to build basic jigs and fixtures, to set up and operate production machines such as the turret lathe, to build various forms of shop tooling, and to build metal stamping dies and casting dies. Hands-on experience on advanced forms of machinery such as numerical controlled machines and electrical discharge machines is a vital part of the student's experience. Courses in welding and fabrication are offered as an option for those wishing this training.

Electronic data processing facilities are used to prepare tool and manufacturing technology students for work with computer assisted programming of numerical controlled machines. They learn to design and test industrial types of electric, hydraulic, and pneumatic power circuits; to read blueprints and make shop sketches; and to alter existing machines for structural changes.

Students spend about \$75 for tools, instruments and supplies.

Current requirements for the Associate in Applied Science degree are:

First Semester

Basic Tool and Manufacturing Lab
Introduction to Machine Tools
Technical Drawing
Hydraulics and Pneumatic Control
Technical Math

Second Semester

Milling Machine and Grinding Lab
Machinability of Metals
Technical Drawing
American Government and Politics
or
Introduction to Psychology
English Composition

Third Semester

Numerical Control, Electrical Discharge Machining, Tool and Die
Numerical Control, Inspection Practice, and Electrical Discharge Machining
Metallurgy
Numerical Control Programming
Applied Physics

Fourth Semester

Advanced Numerical Control, Tool and Die, Production Machining
Tool and Die, Production Machining, Process Planning
Metallurgy
Oral Communication of Ideas
or

Technical Report Writing
Manufacturing Processes

A student chapter of the Society of Manufacturing Engineers gives its members an early start in the development of their careers.

A successful graduate of the program may work as a tool and manufacturing technician, who functions in the industrial area between the mechanical and manufacturing engineering and the skilled tool maker. The technician has the technical background required to work with engineers in research, development, and testing, plus the skills in metal cutting and fabrication that give him the abilities of a tool maker.

The technician may run tests on experimental equipment and material, alter and fabricate pilot models of equipment, build jigs, fixtures, and dies, or operate and supervise operation of machine tools.

For more specific information, contact:
H. R. Soderstrom, Coordinator

Flight Training

Any student enrolled in Southern Illinois University at Carbondale may take flight courses from private pilot through airline transport pilot for up to 18 hours of credit. Many are interested in learning to fly for personal reasons and complete only the private pilot courses.

Students who wish to apply this training to degrees in aviation may do so through the bachelor of science in technical careers program.

As explained elsewhere in this booklet, a special bachelor's degree curriculum can be designed to prepare the graduate for virtually any aviation-related career, such as aviation management, fixed base operations, or commuter airline operations. The possibilities are limited only by career opportunities and student determination and imagination.

Some students want to earn credit in flight courses to complement or supplement a major course of study in the

University. These include students enrolled in the highly regarded associate degree programs in aviation technology and avionics technology in the School of Technical Careers. Students need not be enrolled in an aviation-related program, or even in the School of Technical Careers, however. Pilot training courses may just as well be taken by students in agriculture, physical education, or liberal arts, for example.

Pilot training courses are conducted at the Southern Illinois Airport, where a full range of modern, fully flight instrument equipped and superbly maintained aircraft is available for student use.

All full-time flight faculty hold the ATP as well as the full range of flight instructor credentials. There are more than 20 part-time instructors. Through all its years of providing top quality college credit flight courses, the flight training program has maintained a perfect safety record.

Ground school courses are held in small classroom groups as well as one-to-one in

more casual settings. All airborne instruction is schedule at the student's convenience, on weekends as well as during the week.

Fees for flight training are assessed in addition to regular tuition and fees paid by the student.

At the time of publication, costs for private pilot training totaled \$1,395. Instrument commercial pilot training costs were an additional \$4,541. Various other ratings through airline transport pilot are available. Flight training fees are subject to change; the current schedule is available from the supervisor.

Individuals who wish to incorporate flight training into a degree program in the School of Technical Careers should contact an adviser in either the baccalaureate or associate degree division.

For more specific information on flight training, contact:

Elliott Ketrang, Chief Pilot and Supervisor



Bachelor Degree Programs

Bachelor of Science in Technical Careers

The Bachelor of Science degree in technical careers offered by Southern Illinois University at Carbondale is unique.

It is designed for individuals, college age or older, who are following a career path for which there is no existing program leading to the bachelor's degree. More specifically, it is designed for students who have completed an occupational associate degree (or its equivalent) and who would like to add to or broaden their career preparation. It allows the career-oriented student to design an individualized course of study that exactly fits the individual's educational needs.

This degree is not for everyone, however. It is not accredited for professional fields such as architecture, for example. And those who wish to be certified elementary or secondary school teachers should look at the programs offered by the College of Education. This is not the proper program if there is an existing program in any unit of SIUC or another college which accommodates the student's career goals.

Unlike conventional programs, the STC baccalaureate studies program has no established curriculum or required courses. With the help of an STC baccalaureate faculty member, each student designs a program of study to give the preparation needed for advancing in a particular field.

In preparing a program of study, a student may choose courses from any of the undergraduate colleges and schools at SIUC. For example, a student with an associate degree in automotive technology who wishes to work in automotive service management may include courses in small business management, business law, management and supervision, personnel psychology, and applied accounting. A student with an associate degree in commercial graphics who wishes to be a writer and illustrator of children's books may design a curriculum which includes courses in art, children's literature, creative writing, and child psychology.

In addition to admission to SIUC, the

student must meet these requirements in order to be admitted to the individualized baccalaureate studies program:

- Have completed at least two terms of post-secondary education
- Have an approved learning contract on file with the program

- Special approval if more than 90 semester hours of post-secondary education have been accomplished

Requirements for the Bachelor of Science degree in technical careers include:

- Complete two years of study (approximately 60 hours) beyond the occupational associate degree, including all SIUC baccalaureate degree requirements

- Complete the course requirements listed in the learning contract

- Obtain credit for approved work experience or internship

- Be enrolled in the baccalaureate studies program for at least two terms

The learning contract is the heart of the program. It is an agreement which sets forth the specific courses which will be taken by a student to complete the Bachelor of Science degree in technical careers. It covers these points:

- A title for the individual program or course of study. This is discussed with the adviser before acceptance.

- A career goal statement, which is a description in the student's own words of the career being prepared for, why it was chosen, and how the student intends to prepare for it. The complete statement has three major paragraphs, covering these points:

- What career.* In what type of business or industry the student intends to work, specific kind of position sought, and the knowledge and skills needed.

- Why the career was selected.* Previous work experience, and relevant technical training the student has; an outline of post-secondary academic history to this point, including schools attended, major, minor, degrees received; and an explanation if there is a change of major.

- How the student plans to prepare.* Why the School of Technical Careers was chosen over other options; the areas of intended study to complete the B.S. degree, including a major and a proposed secondary area of concentration; and the relationship of the courses chosen to the career goal.

- A program of study listing the courses already taken and future courses planned in order to complete all the

requirements for the Bachelor of Science degree in technical careers. It consists of a primary concentration (usually an occupational associate degree), an individualized secondary concentration (composed of courses taken beyond the associate degree and related to the career goal), and credit for approved work experience or internship.

In addition to being able to design individualized courses of study, it also is possible for students to receive credit for previous civilian and military work experience as well as for military schools. This experience, of course, must be related to the career goal.

Admission to the STC baccalaureate studies program does not imply admission to any STC associate degree program. Students who wish to take courses in an associate degree program, must also apply for admission to that program.

Because the STC baccalaureate program takes a limited number of students, early application is advisable. Those who have specific questions about the program which this booklet does not answer should write:

Director
Division of Baccalaureate Studies

Off-Campus Programs

The School of Technical Careers conducts programs on nearly two dozen military installations throughout the United States which give service personnel the opportunity to apply service training and other educational experience to an academic program leading to the Bachelor of Science degree in technical careers.

Currently, the school offers aviation management, electronic systems, health care services, and fire science services.

These curricula are designed to provide classwork in concentrated week-end sessions, with scheduling to accommodate military duty assignments. At each installation where the program is available, a representative of the school is assigned to provide advisement and counseling as well as to instruct courses in his particular field. Other courses are taught by faculty members who travel from the campus to the installation.

Every effort is made to accommodate the special needs of military personnel in these programs. Most can be completed in one normal tour of duty.

Course work provided by the school

consists of upper division studies which build upon military technical training and general education acquired by the student through completion of courses at any accredited institution of higher education or by credit received through CLEP, USAFI, DANTES, or by proficiency examination.

Specific information is available through the base education office or from the representative of the School of Technical Careers at installations where the programs are offered.

Courses of study now available on military installations include:

Aviation Management. This curriculum coincides with many Army, Navy, Marine Corps, and Air Force career specialties such as ground equipment, electrical systems, general flight line maintenance, pneudraulic systems, powerplant, propeller, environmental and ejection systems, communications, navigation, avionics instruments, radar, and others included in the aviation career specialty listings.

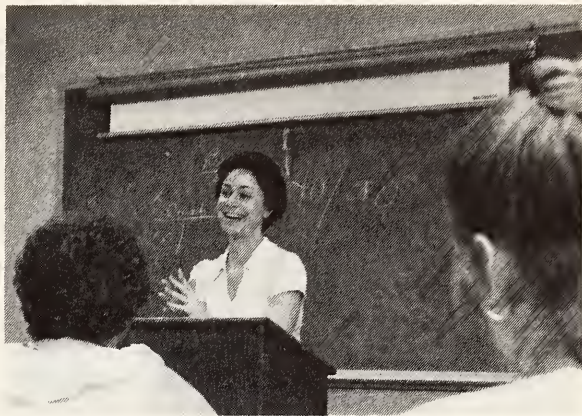
Courses provided by the school include:

Airport Planning
Regulation of Air Transportation
Airport Management
Airline Management
Technical Writing
Systems Design and Development
Labor/Management Problems
Fiscal Aspects of Aviation
Management
Pre-Professional Seminar
Maintenance
Production and Inventory Control
Occupational Safety and Health
Standards
Internship
Technical Careers Subjects

Electronic Systems. This curriculum coincides with military career specialties such as ground equipment electronic systems, communications, navigation, avionics instruments, radar, and others listed in the aviation career specialty listings.

Courses provided by the school include:

Telemetry and Industrial Circuits
Digital Circuits
Advanced Solid State Devices
Introduction to Electronic
Biomedical Instrumentation
Technical Writing
Labor/Management Problems
Fiscal Aspects of Electronic
Management



Pre-Professional Seminar
 Production and Inventory Control
 Occupational Safety and Health
 Standards
 Systems Design and Development

Health Care Services. This curriculum coincides with military career specialties of medical corps, medical service corps, hospital corpsman, dental technician, and similar health care specialties.

Courses provided by the school include:
 Legal Aspects of Health Care
 Health Economics
 Consumer Health
 Community Health
 Introduction to Vital Statistics

Internship
 Technical Careers Subjects
 Systems Design and Development
 Current Health Care Problems
 Health Care Management
 Health Facilities and Equipment
 Management
 Fiscal Aspects of Health Facilities
 Pre-Professional Seminar
 Community Health Administration
 Military personnel can take advantage of a variety of financial assistance programs while enrolled in these studies.

Fire Science Services. This course of study leads to the Bachelor of Science degree in technical careers and is designed especially

for individuals who hold the Associate in Applied Science degree or its equivalent in a fire science related field from a community college or technical institute.

The curriculum consists of upper division fire science service courses offered at designated off-campus sites for civilians, and for military personnel at selected bases. It is not available to students on the Carbondale campus.

Class schedules are arranged to accommodate the unique work schedules of fire personnel. A total of three formal classroom courses and an independent study project are required each semester for four semesters.

Required Fire Science Services coursework includes:

- Applied Specialty Law-Fire Services
- Fire Insurance Rating and Grading
- Purchasing and Inventory Management
- Occupational Safety and Health Act
- Industrial Safety
- Fiscal Aspects of Fire Science

- Fire Prevention and Inspection
- Municipal Hydraulics
- Independent Study Project
- Labor-Management Problems
- Collective Bargaining and Dispute Settlement

- Public Financial Administration
- Introduction to Public Administration
- Technical Careers Subjects

While this curriculum is designed primarily for those who have the associate degree, provision is made for those who have not yet completed work on the degree.

Specific information on admission procedures, evaluation of previous training and educational experience, course requirements and other aspects of the program are available from the School of Technical Careers representative on the location where the program is offered, or from:

John R. Sutton, Director of Off-Campus Programs



General Information

Admission

Students seeking admission to associate degree programs in the School of Technical Careers can qualify for admission any semester if they rank in the upper two-thirds of their graduating class or achieve a minimum ACT composite score of 15 or higher (SAT 690). Students who do not qualify for admission under these requirements may be granted conditional admission for the spring semester, provided the program to which they are applying allows spring admission.

Because of their sequential nature, programs in commercial graphics—design, dental hygiene, dental laboratory technology, mortuary science and funeral service, and physical therapist assistant admit students only in the fall semester.

Students may be admitted in any term to architectural technology, construction technology, electronic data processing, and electronics technology, but may begin studies in the major only in the fall semester. Those who choose to enter these programs other than in the fall may need more than four semesters to complete the associate degree.

All other programs in the School of Technical Careers admit students in any term.

Students seeking admission to dental hygiene, dental laboratory technology, mortuary science and funeral service, nursing, or physical therapist assistant programs must meet requirements of the specific program as well as university entrance requirements. All students applying for admission to one of these programs will be sent additional information on admissions by the program supervisor.

Transfer students applying for admission to the STC Division of Baccalaureate Studies who have an overall C average as determined by SIU grading procedures in all college work and at least 26 semester (39 quarter) hours are eligible for admission any term. Transfer students who have at least a C overall average but fewer than 26 semester (39 quarter) hours must also meet freshman requirements.

Veterans are admitted regardless of their previous academic record provided no additional education has been attempted since separation from active duty, or such credit attempted must amount to C average or higher. Previous educational records will determine the scholastic status of entering veterans. Veterans considering enrollment are encouraged to contact the Office of Veteran Affairs.

All inquiries regarding admission procedures and requests for admission materials should be directed to:

*Office of Admissions and Records,
Southern Illinois University at Carbondale,
Carbondale, IL 62901.*

Housing

All freshmen and sophomores under the age of 21 who do not live with parents or guardians must live in University-owned and operated housing or University-approved off-campus housing. Juniors, seniors, graduates, married students, veterans, or those students over 21 years of age may live where they choose.

All University-owned housing is located on the Carbondale campus; free bus service is provided for students who attend classes on the former VTI campus or at the Southern Illinois Airport.

Costs

Tuition and fees for an Illinois resident enrolled as a full-time student currently total \$428.90 per semester or \$857.80 per academic year. Out-of-state residents pay \$1,002.90 per semester or \$2,005.80 per academic year for full-time enrollment.

Room and board in university residence halls is \$778 per semester or \$1,556 per academic year. Housing available for married students ranges from \$135 to \$184 per month, depending upon type.

Tuition and fees and other costs are those which are in effect as determined by the Board of Trustees at the time of the student's enrollment. Career programs of the School of Technical Careers require also the purchase of tools, uniforms, insurance, supplies, or books as determined by the nature of the individual program.



Information Request

Please Send

☐ Application for Admission

I plan to enroll in:

☐ Information on campus visit

☐ Other

Clip and Mail to:
Office of Admissions and Records
Southern Illinois University
at Carbondale
Carbondale, IL 62901

(Please Print)

☐ MR. ☐ MISS ☐ MRS. NAME

ADDRESS

CITY

STATE

If coupon has been used

For further information about programs
of the School of Technical Careers,
write to the coordinator of the program
at:

School of Technical Careers
Douglas Drive
Southern Illinois University
at Carbondale
Carbondale, IL 62901

Telephone 618-536-6682

For further information about Southern
Illinois University at Carbondale or for
admission information or material,
write:

Office of Admissions and Records
STC Information
Southern Illinois University
at Carbondale
Carbondale, IL 62901

Telephone toll free (Illinois residents
only) 800-642-3531
Others may call 618-453-4381

