Dr. Robert W. MacVicar, first and so far only chancellor of the Carbondale Campus, will leave SIU this summer to become president of Oregon State University.

MacVicar came to SIU in 1964 from Oklahoma State University, where he had served twenty-one years as a teacher, researcher, and administrator. Among other posts there, he had been graduate school dean and vice president for academic affairs. He initially held the latter title at SIU also.

With the reorganization of SIU’s administrative setup in 1968, MacVicar became chancellor of the Carbondale Campus and John S. Rendleman became Edwardsville chancellor. Both worked directly under President Delyte W. Morris—and seldom has there been a more competent triumvirate in the realm of higher education.

MacVicar has consistently said publicly that SIU, under the leadership of President Morris, is the “educational miracle” of the century. He has made it clear that he leaves with regret, but the challenge of the presidency of Oregon State is a privilege he cannot reject.

We wish Chancellor MacVicar the best in his new job. As President Morris has said, “To replace a man of Dr. MacVicar’s stature and abilities will be difficult indeed.” And as Gus Bode said, “Goodbye, Mac.”

—R. G. H.
Dear Alumni,

As many of you are aware, Dr. Robert W. MacVicar has announced his resignation as chancellor of the Carbondale Campus to accept the presidency of Oregon State University. The move is effective July 1.

Chancellor MacVicar will be sorely missed. The University now is faced with the formidable task of selecting a successor. Given the tenor of issues facing higher education today, it is particularly urgent that the new chancellor be the best possible choice for the post. Nothing less is acceptable.

It is important that the entire University family be involved in this decision. Accordingly, President Delyte W. Morris has created an advisory committee to be composed of representatives of the faculty, the non-academic employees of the University, the graduate and undergraduate students, and the alumni body. As your president, I have been asked to serve as alumni representative.

The committee, which is expected to be functioning by mid-March, welcomes your suggestions. Please send your ideas on the matter—including names and qualifications of potential candidates for the chancellorship—to the Alumni Office for channeling to the committee. Time is short, so act quickly.

We are grateful that alumni representation is included on the advisory group. Alumni opinion, we feel, is a very important concern in selection of a key administrator of the University. We believe that the alumni body will respond strongly to this need.

Andrew H. Marcec, president
SIU Alumni Association
Cover SIU's Centennial symbol is in its second year of use and is familiar to Alumnus readers. Each segment represents a division of the Centennial Period and is marked by a designated color. The segment now at the top represents 1970, emphasizing science and technology, while the shaded segment represents 1969, now history.

Deans Speak In separate interviews with Alumnus, deans Thomas Jefferson, Roger Beyler, and Laurence McAneny discuss science and technology at SIU. And each expresses concern for some of the challenging problems facing mankind today. Please turn to page 4.

Research Science and technology at SIU involve many things, not the least of which is research. Some of the University's most outstanding researchers are represented in a picture feature on that subject which stresses the people as well as their projects. It begins on page 14.

Scientist, Technologist, Humanist—SIU's Buckminster Fuller may be the greatest of them all.

'Bucky'

For the past several years, SIU students and alumni trying to impress others with the quality of their institution have nearly always fallen back eventually to one name: Buckminster Fuller.

Only trouble was, people weren't always impressed; sometimes they didn't know who Buckminster Fuller was. It has only been in more recent times that Fuller's public reputation has caught up to some extent with his accomplishments.

His accomplishments—and there are too many to list here—began a long time ago. In 1927, Fuller invented his Dymaxion house, a mast-hung dwelling with die-stamped components which Fortune magazine thought might revolutionize housing. Fuller offered the patent to the American Institute of Architects free of charge. The AIA not only turned it down, but also publicly dismissed the concept of prefabrication.

In the early thirties, Fuller developed a Dymaxion car—a three-wheeled vehicle capable of 120-miles-per-hour speed and able to turn completely around in its own radius. Like the Dymaxion house, however, it fell victim to the prejudices of an industry (and public) not yet up to Fuller's advanced thinking.

Fuller is most widely known today for developing the geodesic dome. Developed in the 1940's, the dome was more readily accepted than his earlier creations. Epitomizing his principle of "doing more with less," the dome met some pressing needs: The U.S. Marine Corps, for example, recognized its potential and made extensive use of it to solve a variety of housing problems. Fuller domes—he holds a patent on it and receives a royalty on every one built—are now in wide use around the world.

One of the grandest is that which housed the U.S. pavilion at the Montreal World's Fair, "Expo 67." The dome still stands in Montreal, and still is a major attraction there. Other well known Fuller domes include the Ford rotunda in Dearborn, Michigan, and the Honolulu concert auditorium built by Henry J. Kaiser.

Fuller's domes became so well known, in fact, that the AIA—which through the years since the Dymaxion house had largely ignored Fuller's work—eventually made Fuller an honorary life member.

In 1968, Fuller won both Britain's Royal Gold Medal for Architecture and the U.S. Gold Medal for Architecture awarded by the National Institute of Arts and Letters. Presentation in June of the AIA's 1970 Gold Medal will complete for him what might be called the "Triple Crown" of awards in architecture.

But Fuller's honors have by no means been limited to architecture. He was named "Humanist of the Year" last year by the American Humanist Association, for example, and last December was named one of five Master Designers of 1969 by Products Engineering magazine.

In receiving the latter title, Fuller was cited as a "master of social design." Specific reference was made to his Dymaxion house, the geodesic dome, and Fuller's most recent and perhaps most far-reaching project, the "World Game."

The Game—utilizing design concepts from Fuller's lifetime of experience—involves use of "gaming theory" to display world resources data on a map projection, then to redistribute natural and technological resources "for the benefit of mankind."

The Game is under development at Carbondale, with satellite research teams involved in related planning and design programs at other campuses in the U.S. Plans for a first-stage version of the Game, which would be "played" by government officials, businessmen, and scholars, call for a $16-million computer installation. The Illinois legislature has promised $4-million for the project if the rest can be raised from outside sources.

Fuller is a man of grand ideas—and has the genius to see his ideas through. He can be called a scientist or a technologist, because he is both. He believes there is plenty of everything on earth for everyone, and that it's man's mis-use of what he has which has led to problems.

After nearly three-quarters of a century among us, Buckminster Fuller believes that mankind must make far better use of what we have. And, at last, mankind seems to be listening.
"I think this kind of education is quite relevant. It gives one a chance to try to make a contribution, to alleviate some of our problems."

JEFFERSON

"I think we are quite definitely in danger as a species, and if we lose that battle... all of these others have become not very important at all."

MCANENY
Among all the animals, man is unique in that he can plan and direct his own evolution. Yet man exists in a world in which many believe his future survival is peril. In a world with unparalleled capacity for production of material goods, children die every day of hunger and malnutrition. The water we drink is befouled, the very air we breathe is polluted and corrupt. Yet this generation, through science and technology, is in a position to control and direct the future of mankind to a greater extent than ever was true before. The challenge is immediate.

Appropriately, Southern Illinois University, in its Centennial Years observance, has set aside 1970 to emphasize science and technology. In carrying out the Centennial theme, Alumnus interviewed Dean Thomas Jefferson of the School of Technology and Dean Roger Beyler of the College of Liberal Arts and Sciences, both at Carbondale, and Dean Laurence McAneny of the Science and Technology Division, Edwardsville. Their commentary, which begins on the following page, provides a revealing look at what's happening in science and technology at SIU today.

"I think there's no question that this generation is concerned about problems of society, not so much from the standpoint of technical problems but rather human-to-human problems."
Dean Roger Beyler, College of Liberal Arts and Sciences:

EDITOR: Where are we today in the sciences?
DEAN BEYLER: We have come a long way in providing for the material needs. Now it's time we stop and take note of some of the problems that perhaps have been created by science. By and large, material well-being has been to man's advantage. But sometimes these same conveniences serve to disadvantage people, in terms of the way they live, how close together they are, and in circumstances wherein their lives are altered in adverse ways.

EDITOR: Are scientists becoming more aware of these things?
DEAN BEYLER: Yes, I think definitely there is more awareness of these problems by scientists today.

EDITOR: It seems technologists are blamed more than scientists. Is this true, or is there a reasonable distinction?
DEAN BEYLER: I suppose it's true to a certain extent, in that the technologist who applies the findings of the basic scientist is the one closest to a product—whether that product be a new insecticide or an engine that produces more horsepower and also more pollution. The technologist is the last person before the product, whereas the basic scientist may deal with more theoretical aspects.

EDITOR: I think people also tend to think of advances in technology without thinking of advances in science. Must not science be one step ahead of technology?
DEAN BEYLER: Yes. The applied scientist or technologist needs something on which to base his application, and that's the basic, fundamental research done by the scientist. In the regular chronology of events, the basic finding is then transferred into the practical application.

EDITOR: Is there a changing relationship between the physical and biological sciences and the social sciences? Does the science student take more social sciences today?
DEAN BEYLER: I think there is still room for improvement there. That is, the curriculum for physical sciences is still a fairly tight one, especially for the individual who wants to go on to graduate work. He hasn't much flexibility to take courses very far out of his major. As the scientific knowledge has increased, it's been very difficult to know what to leave out. Very often we have a couple of courses that have so many things in them and so many courses that have to be taken that the student doesn't have much of an opportunity for breadth.

EDITOR: It's just by sheer volume of material to be covered?
DEAN BEYLER: Yes. And I think some people are beginning to recognize this and want to do something about it.

EDITOR: What can be done?
DEAN BEYLER: Well, I suppose the only thing you can do is recognize that not everything can be taught to a physicist or a chemist and therefore you have to try to give him sufficient background but not all that might be optimum. This is a choice of the lesser of the evils, perhaps.

EDITOR: It's a choice you hate to have to make. Could anything be done at a lower level?
DEAN BEYLER: There's been a lot done there and I suppose more can be. But you can only push so much material back into high school also.

We have National Science Foundation institutes for high school teachers and summer programs for high school students which have brought us a long way in this direction.

EDITOR: Is there a possibility of going the other direction: to a five-year bachelor's degree?
DEAN BEYLER: Yes, this is possible. Of course that's about what it amounts to now if a student can't get everything in 192 quarter hours.

I think the field of engineering has felt that pinch in particular. It's also possible that we may come to recognize that, especially in the sciences, this is a problem of continuing education throughout the professional career.
EDITOR: Are the sciences still getting a large share of research funds? Is this picture changing?
DEAN BEYLER: Yes, the picture is changing. The ability to get individual grant monies is one which I think has been particularly difficult for new people in the last couple of years. It has been extremely hard to get a young Ph.D. started in terms of grant money. Funds available have gone largely to the prestigious investigator. We have to spend more of our own University funds, I think, to help people get started.

EDITOR: Do you see the fight against the polluted environment as a potential new source of research funds?
DEAN BEYLER: Well, there’s going to be more money for environmental research, but I believe that not all will go to the physical or biological sciences. Both of these are vital; but some of it I’m sure will go to the social sciences because part of the solution is related to controls imposed on society and economic factors which enter in. It will represent some increase, but probably not on the same order of magnitude—at least in the immediate future—as was brought on by the space program, for example, or back in time by atomic energy.

EDITOR: Will the developing School of Medicine affect any of your programs in Liberal Arts and Sciences?
DEAN BEYLER: The biological sciences will have a definite tie with the medical school, as will biochemistry and of course psychology and sociology. And of course some of the most interesting things in science today are going on in the biological or life sciences. There’s been a shifting of very competent personnel from fields like physics and math to biologically-oriented problems. They’re more interested, I suppose, in the complexities of the human mind or the tiny cell. These kinds of things present the tough problems, and therefore the outstanding investigator tends to shift to the biological areas—even from areas that at first glance don’t seem to be closely related. Some of our top research at SIU is of this type.

EDITOR: Has science enrollment paralleled the general increase in college enrollment?
DEAN BEYLER: There has been a difference. The sciences are in a downward trend. The social sciences enrollment has climbed, and so to some extent has that in the humanities. I think there’s no question that this generation is concerned about the problems of society, not so much from the standpoint of technical problems but rather human-to-human problems. This shows itself in the majors they’re selecting. We’re in a period of what might have been predicted, I suppose, considering the very big peak of students entering science in the post-Sputnik era.

EDITOR: Still, many feel that only the scientist can solve many of our environmental problems.
DEAN BEYLER: Oh, yes, in a sense this is very true. If you think of the earth as a spaceship, which is presently a popular and not inappropriate concept, one thing you have to consider is a re-cycling process for materials: water, oxygen, certain minerals, for example. This is not only a social problem, but also a technological and scientific one.

EDITOR: At SIU, the sciences have been among our strongest programs. Is this still true? Where do we stand now?
DEAN BEYLER: I think we’re still strong, particularly in terms of our undergraduate programs in the physical sciences. In the graduate programs we’re in a much tougher league. That is particularly true when you get to the doctoral level. There are a good many institutions which have been in the Ph.D. program for a long time and our program, though it’s developed very well, is by no means a mature program. Our individual Ph.D. graduates in the sciences can go out and hold their own, but ours is a smaller program with a narrower emphasis, perhaps, than the long-established program.

EDITOR: Speaking specifically of SIU, do you see any particular new directions in the sciences in the near future?
DEAN BEYLER: Nothing unique, although we do need more of the interdisciplinary approach. Simply be-
cause of the complexity of problems today, one person just doesn't have all the answers. SIU probably will get into the problems of the environment in more organized fashion. We've had people here studying these problems, but many of them have been working somewhat independently. I think we'll see this kind of work pulled together into more of a package in the future.

We're in a much improved position as regards facilities, with the addition of the Physical Sciences Building and with the second stage of the Life Sciences Building nearing completion.

I suppose there will be a little more emphasis on applied research and a little less on fundamental research, though I hope that balance doesn't swing too far. We've got to help solve society's problems and that's going to be priority research. But a great amount of basic research still must be a part of the University.

Dean Laurence R. McAneny, Science and Technology Division:

Editor: Dean McAneny, what is your particular educational philosophy as regards science and technology? In other words, how do you approach education for your students?

Dean McAneny: In this division, there are several different approaches, because we have several different tasks and each one has its own educational philosophy and objective. The most obvious one, I suppose, is to produce scientists. This has to be modified by the factor of need, of course, particularly when you're talking about the graduate level, the professional scientist.

In mathematics, for example, there is still a need for Ph.D.'s, particularly in those areas of mathematics which are somewhat more applied in character than some fields of mathematics. Mathematics has a Ph.D. program which has passed the Graduate Council of the University, and we hope it will be sent to the higher board fairly soon.

In physics, on the other hand, the faculty has decided there is no need for an additional Ph.D. program, but there is a need to train people specifically to teach in two- and four-year colleges. So, they are developing a doctor of arts program. These programs have been recommended for quite a number of years but very few schools have moved in this direction. The physics faculty is very much in earnest about this, and I hope it will be a significant enterprise for them.

In addition to training scientists, we also have the function of serving other units of the University which actively use science. Here, our objective is simply to be cooperative. There is also the objective of communicating about science to the general public. This is a function which we take very seriously, I think, in the division. In our General Studies program, we try very hard to accomplish this. This is becoming increasingly important, in my opinion,
in the area of biology. Although my training is in physics and my inclination is toward the physical sciences, it has become my personal philosophy that the most important thing we are doing in this division is communicating with a fairly large segment of the general public about the problems facing mankind, which involve biology very strongly. I'm talking about the problems of overpopulation, pollution of our environment, drug abuse, and so on. I think we are quite definitely in danger as a species and if we lose that battle, obviously, the other factors—inflation, race relations, and all of these others—have become not very important at all.

EDITOR: Did the focus of science and technology change significantly during the sixties? Were there any really significant break-throughs that need immediate attention in terms of education at the college and university level?

DEAN McANENY: Yes, I would say so. And, again, I would have to come back to the area of biology. The emphasis in the area of biology has been shifting fairly steadily from the traditional field biology to something much closer to the physical sciences. The modern biologist is apt to be much more like the bio-chemist of a few years ago. So bio-chemistry and bio-physics are much more important than they were. And the field biologist, although he's trained a little differently than he was, is going to continue to be important, certainly with matters of the environment. Ecology, that part of field biology, is becoming extremely important. I don't mean to imply that field biology is anything out of date, but biology has changed very drastically.

EDITOR: The Edwardsville Campus is in an urban area. Does this present a real need in terms of urban and environmental studies?

DEAN McANENY: I think the need is quite definitely there. The problems of the cities on the East Side are well known, I think. We're in a complex of cities with different types of problems. Some are technological and can only be solved with technological help. The politics and economics of such areas also are enormous factors, and urban and environmental engineering is just one of many things which can contribute to an overall understanding of and prospective solutions for urban problems.

EDITOR: Are faculty members in the division actively involved in any specific endeavors in areas of environmental pollution?

DEAN McANENY: Yes, we have a program currently underway for the training of waste-water treatment plant operators. This is not a degree program, but it is operated by individuals in this division. We think it's very important, because there are a great many sewage treatment plants which are run by people literally taken off of the grass-cutting detail and who know very little about what actually happens in their plants. The program is federally sponsored. We hope to continue it until waste-water treatment plants are properly run in Illinois.

In addition, we're planning an engineering technology program in sanitary engineering. That's probably the most common name. But this is a program designed for people who will not be research and development types but who will be able to handle major plants and do some of the routine design work and this sort of thing. It's supposed to be a very practical type of program, and it will lead to a degree.

EDITOR: How many departments are included in the Division of Science and Technology now?

DEAN McANENY: There are five: mathematics, biology, chemistry, physics, and engineering. Engineering at this time still has the status of a single department (or faculty, as we call them), although it has two very distinct subdivisions, electronic engineering and urban and environmental engineering. We anticipate considerable expansion.

EDITOR: You mentioned a doctoral program in mathematics. What other graduate programs are offered, or on the drawing board?

DEAN McANENY: We have master's degree programs in mathematics and the three hard sciences of physics, chemistry, and biology. We are doing some planning in the area of master's programs in engineering. Biology will have to develop programs at a doctoral level because of need. I think there's a growing concern in the nation over adequate health care, and this means that we need more basic health scientists. Biology would help fulfill this need with a Ph.D. program.

Also, I think it's a necessity if we are to properly serve the professional schools SIU is developing in medicine and dentistry, particularly with dentistry on this campus.

EDITOR: What is the relationship between the School of Dental Medicine and the Division of Science and Technology?

DEAN McANENY: Administratively, of course, they are completely separate. However, it is true that the initial education of dentists is largely in the so-called health sci-
ences. So the first dental faculty members hired were hired jointly with biology. What we’re seeking is to have people whose teaching function will be in health sciences in the dental school but whose research will be lodged in the biology faculty of this division. We want to have one unified graduate program in the life sciences, and it should be broad enough to encompass the pure, esoteric biological sciences plus the fairly applied matters in the health sciences.

Editor: Is there an abundance of scientists nationally?

Dean McAneny: At the doctoral level, generally speaking, there is an abundance. A super-abundance exists in physics. There probably is a slightly less than adequate supply in some of the other areas. Certainly, the applied areas of mathematics has a shortage, and there’s a particular shortage in computer science people. I would say that most of the shortages at the graduate level are for people with a tendency toward the applied edge of the spectrum. At the bachelor’s level, I think there’s certainly no abundance at all. I think we can place anybody with a bachelor’s degree in the sciences without any problem at all. And this is as true in this particular area as it is nationally.

Editor: Are industries in the St. Louis area asking for particular kinds of scientists and technologists?

Dean McAneny: There’s a kind of split right now in their demand for technical people, particularly engineers. By and large, the industries which require continual technological up-dating are happy with the type of engineer which is being turned out in almost every first-class engineering school today. On the other hand, there is a considerable segment of industry which has need for technical people, but not particularly research and development types. It’s because of this demand that many engineering schools are going to the engineering-technology program.

Editor: What do you see in the immediate future for your division?

Dean McAneny: We look for considerable play yet in all our units. I think you’d have to single out biology, though, with the development of the dental school. Engineering, we’re into in only a small way. How far we go in engineering or what we move into there depends upon the demand—primarily local demand—and of course our own capability.

We have a number of limitations in terms of capability. The prime one right now is space. Most fields of engineering require considerable laboratory facilities, and we will not be able to expand very much in engineering until we have additional buildings.

Dean Thomas B. Jefferson,
School of Technology:

Editor: Technology includes a good many areas of study, does it not?

Dean Jefferson: Yes, it does. The School of Technology at SIU offers baccalaureate degrees in four major areas: engineering, engineering technology, industrial technology, and technical and industrial education. In addition, there are master’s degree programs in engineering, applied science (with a specialty in materials science), and in technical and industrial education. There is participation in doctoral work by members of the School of Technology faculty—for example in the Ph.D. program in education and in such interdisciplinary programs as the one in molecular science.

The four undergraduate programs prepare graduates for careers in various technology-related areas. Engineers are trained for professional activities in design, research, and development with the objective of converting materials and forces of nature into products and systems which will benefit man. Technical and industrial education programs are designed to prepare persons for teaching, supervisory, and leadership roles in occupational education in schools, colleges, and industry. Engineering technology and industrial technology degree programs develop young people to become an integral part of the technological team; these technologists work with the engineer, the scientist, the technician, and the craftsman to develop and produce the countless devices and systems that are so much a part of our life today.

Editor: Where are we today in technology, not just at SIU but in general?

Dean Jefferson: We have been and are still making very large technological strides. You hear people talking about what percent of the engineers and scientists who ever
lived in the world are living now, and it's a pretty big number. We're hearing a lot now about the ills the world is harvesting as a result of this rapid technological progress, but I think we're going to see continued technological advances. We're already seeing a sharper awareness on the part of the technological community in general of some of the side effects that can come about as a result of these developments.

In engineering education, we've been trying for some time to keep prospective graduates aware of the impact of what they do on society. We still need to do a better job of this, however. You see now an increased emphasis on social studies and the humanities in engineering curricula. We're going to see lots more activities in the environmental area over the next few years, I think. We've simply reached a point where there are so many of us in the world that we're going to have to be very careful of our resources, including air and water and other things we haven't worried about as much as we should have in the past.

**Editor:** Today's graduates are coming out of engineering school more aware of these things?

**Dean Jefferson:** We hope they are. This is our goal. But it's pretty hard to figure out how to do this. One way is to give engineering students more courses in various social sciences. But we have to give the student this kind of awareness right in the engineering courses, too. At the same time a student learns how to design a complex system, he needs to be reminded that it will be used in an environment where there are people. He's got to think about the long-term effects of the system he's designing.

**Editor:** Aren't there enough problems already in engineering education, simply keeping up with advancing technology?

**Dean Jefferson:** Yes, it's difficult to keep up these days. And you must also consider the fact that we're educating people today who will be working over a time span of perhaps forty or forty-five years from the time they graduate when we really don't have a very clear idea of what sort of things they'll be working with in just ten years.

Perhaps the most significant change in engineering education in the last twenty-five years is the increase in emphasis on the fundamentals: the physical sciences, the mathematics, and the engineering science that builds on top of these. We still try to give the student some experience that is "real-looking" experience. He's working with realistic problems so that he gains enough confidence in his ability to put all of these fundamentals together and apply them to a problem he hasn't tackled before.

We are not going as much into "state of the art" design as was done a good many years ago in engineering education. We have space vehicles now. Well, having a course in space vehicle design as the state of the art presently is would be very interesting to the student, but the time probably can be better spent giving him all the fundamental material, knowledge, and capability that isn't likely to change and giving him an idea how he can put all of this together and apply it to almost any problem. He has to be able to handle problems he hasn't seen before and of which there aren't any examples in the text book.

**Editor:** This is the key to the way SIU's engineering program is set up, isn't it?

**Dean Jefferson:** Yes, it is. Ours is different from some programs. We don't have the traditional departments like civil, electrical, or mechanical engineering. Our baccalaureate program is a unified program—one single degree with a large core of courses. The present catalog has nine or ten hours of technical electives available to the engineering student for purposes of specialization. The new (1970-71) catalog will show three optional areas of twenty-six hours for the same purpose. But it is expected that the real specialization will occur at the master's level.

Even at the master's level, however, the specialized areas are not divided up according to conventional titles. A master's degree student would study in such areas as fluid mechanics, solid mechanics and structures, environmental engineering, electrical science, systems engineering, materials science—this sort of thing.

Our program is really a pretty forward-looking one. I think we're going to see more engineering programs across the country going in this direction. The boundary lines between conventional degree programs are beginning to get hazy. There's more emphasis on interdisciplinary activity and we're going to see in the next ten years a move toward the master's degree being accepted as the first degree for entering the profession.

**Editor:** Is the SIU engineering program well accepted today?

**Dean Jefferson:** It is insofar as people know about it, but this is...
our youngest baccalaureate program. We have an unusually good faculty throughout the School of Technology. These are mainly young, eager people, a large proportion of them with doctoral degrees.

EDITOR: How many engineers has SIU produced?

DEAN JEFFERSON: Since 1964, when the first class of engineers was graduated, SIU has produced 102 engineers. This compares to 200 degrees in engineering technology in the same period, 170 in industrial technology, and 208 in technical and industrial education. These figures include only the bachelor's degrees.

Engineering enrollment has leveled off to some extent nationwide in the last few years but has continued to grow here at SIU. I think it's partly a case of our getting up speed since it's a new program. We hope it's going to grow a lot more. We need to be doing a bigger share of the engineering education in Illinois—especially here in this end of the state.

EDITOR: How many engineering students are enrolled at SIU now?

DEAN JEFFERSON: Total enrollment in the School of Technology, including graduate students, is 1,300 students. Of these, 197 are engineering students and an additional 271 are General Studies students who have listed themselves as pre-engineering majors.

EDITOR: What about enrollment figures in some of the other areas?

DEAN JEFFERSON: Technical and industrial education had an enrollment of 251 in the fall term. This compares with 303 in engineering technology and 276 in industrial technology. Enrollment in all these areas is increasing steadily.

The latter two degree programs, the four-year technology programs, are both rather new. You see, engineering programs and requirements in engineering have been gaining in sophistication since World War II. People have become aware lately of a gap; there are a lot of jobs which are very essential in industry and the technological world which engineers have been filling in the past that don't really require the kind of training the professional engineer now gets. The need has developed for the kind of fellow we call the technologist, a man who can work with engineers. "Para-professional" is the term gaining popular usage. These are the kinds of people graduated through our engineering technology and industrial technology programs.

EDITOR: There's a demand for these people?

DEAN JEFFERSON: Yes, there's a strong demand for them. A good many people are becoming more and more aware that this is an area of technological education which needs to be developed right along with engineering.

EDITOR: What are some of the specialties included in technical and industrial education?

DEAN JEFFERSON: Enterprise teaching (formerly industrial arts) encompasses a broad area of study in elementary and secondary schools. It involves the study of technological aspects of productive society and human aspects of the world of work. Trades and industries teaching concerns specialized instruction in vocational-technical occupations; persons following this program are prepared to teach in comprehensive high schools, area vocational schools, industry, private schools, and community junior colleges. Technical teaching is a third area, in which students are prepared to teach in a variety of occupational education programs. Finally, manual arts therapists are trained for the supervision of rehabilitation activities involving tools, machines, and materials in hospitals and other centers.

EDITOR: Not limiting yourself to SIU, do you see any dramatic directions in technological education in the future?

DEAN JEFFERSON: We've got to have a better understanding of the social, political, and economic implications of the impact of technology. If we look at technological education historically, we see special concerns showing up as necessity presented itself.

About 100 years ago, I'm told, there was quite an upheaval on college campuses in this country over the question of relevance of a college education. It was not too long after that that the land grant colleges were established and agriculture and technological subjects added to courses taught in the colleges and universities.

You hear the same kind of talk about relevance today. Mine is a biased view, of course, but to those of us involved in technological education it seems quite relevant today. If a student wants to do something about pollution and some of the other ills of our society, technological education is one of the options he ought to consider. It gives one a chance to try to make a contribution, to alleviate some of our problems.
Southern Illinois University's Vocational-Technical Institute is one unique result of the mission to state, nation, and the world that the University aimed for when it broke out from its ivied quadrangle two decades ago.

Part of that mission was a comprehensive program of technical and adult education that would be a far cry from the traditional academic concept, yet closely interwoven with the resources and expertise of the total University community.

Ernest J. Simon was brought in to direct the effort. A former state director of vocational education and assistant state director of war production training, Simon had developed many of the existing precepts of vocational training during a long and distinguished teaching career.

In the twenty years since Dean Simon arrived to organize and direct its operation, SIU's technical and adult education program has provided adult classes throughout the southern two-thirds of the state; short courses and workshops drawing participants from across the nation in such diverse fields as banking management, funeral service, and cosmetology; manpower training for 4,500 unemployed or under-employed persons in southern Illinois; faculty to develop technical institutes in Vietnam and Afghanistan, and the only university-connected pre-professional technical school of its type in Illinois: the Vocational-Technical Institute.

VTI has its roots in the abandoned wooden barracks and offices of the World War II Illinois Ordinance Plant near Carterville, where the Division of Technical and Adult Education conducted its first vocational courses. After twenty years, VTI still occupies those structures; but plans have been drawn for a modern, permanent campus which will start to go up when a state freeze on construction is lifted.

With its twenty-nine major programs and options (ranging from aviation to highway and civil technology and mortuary science), VTI has proved that even a severely limited physical plant cannot stop an effective educational program.

It's the curricula, faculty, and above all a weather eye to the changing needs of the professions for which people are being trained that really count, Dean Simon believes.

"The success of VTI has to be credited to a dedicated staff, made up of outstanding people in their academic and professional areas," he says.

VTI graduates are awarded associate degrees in technology, arts, and business, depending on their major field of concentration. Its courses are loosely described as two-year programs, but they actually range from six to ten quarters including supervised work experience.

Started as a night school to help working people continue their education, VTI developed into a day school with some 1,500 students. Now it's coming back full circle, with night course offerings designed so that fully-employed people can earn the associate degree in four years of part-time study.

General Studies courses in English, sociology, political economy, history, labor management relations, and industrial psychology are specially tailored to tie into technical subjects and round out the students' educational experience.

Advisory committees drawn from business, industry, and the professions work closely with the faculty and administration to keep courses current and relevant to the real world of work for which the students are preparing.

Feedback from graduates, the advice of professionals, and the infusion of "new blood" into the faculty also contribute to the effectiveness of VTI's program, Simon believes.

"Our placement record is our testimonial," the dean points out. "When we have people coming in and hiring every single person in electronics or data processing or dental laboratory technology as much as two terms before graduation, we can feel that our students are getting the education they need."

In its two decades, VTI has been the proving ground for methods widely used today in technical education. It has been surveyed and studied and copied by administrators across the country.

"We've always been able to show them an effective educational program," says Simon. "Maybe now, after twenty years, we can begin to show them a new campus with functional buildings designed specifically for our type of school."
Research Moves Ahead in Science and Technology

Pure protein food supplements and a technique for detecting sometimes deadly penicillin allergies in humans. These end products, though perhaps not representative, illustrate the kind of research just two individual SIU faculty members have been involved in. If other studies have shown less dramatic results, many still have uncovered basic information with prospects for useful and important practical application—or pointed the way more clearly toward paths previously untrod by other researchers. Overseeing financing of most of these experimental undertakings is the Office of Research and Projects, which handles grants to all departments of the University. (Research and Projects assistance, in fact, includes everything from acquiring legal advice for researchers to cataloguing research publications.) Funding of research projects comes from four major sources: the federal agencies, the state of Illinois, private industry, and various foundations. Science and technology have been major areas of research at SIU, as in other institutions. In recent years, science and technology studies at SIU’s two campuses have brought in millions of dollars in outside research grants. Some of these studies are subject of pictures on these pages.

Physicist L. C. Marshall is studying the atmospheric constituents of terrestrial-type planets. His investigations include an elaboration of the history of major atmospheric components on Earth and Mars.

Biologist Michael Levy (in lab coat) is studying the cell organelle called the “peroxisome,” believed to be involved in the metabolism of sugars. His research also involves experimental studies of the effects of environmental stresses on cells.
Physiologist Tom Dunagan’s research into the nervous system of the Acanthocephalan worm has sought answers which might one day help control that swine parasite. The study, seeking specific information about the worm’s responses to stimuli, has utilized direct impulses into the worm’s brain cells.

Dr. Aristotle J. Pappelis, a botanist, has conducted research into the process of aging. Science has evolved no general theory to explain this phenomenon of life, and Pappelis’ investigations have sought to identify the nuclear material lost by cells as the organism grows old.
Zoologist William Lewis, above left, has done much research into the problems of confining warm water fishes in holding tanks. His inexpensive method of rearing channel catfish in six-foot cages with a highly promising food conversion ratio could be extremely important to food-poor countries.

Chemist Gerard Smith has been involved in experiments with great potential for producing solutions to the problems of water pollution. Preliminary results from his investigations indicate the research may lead to a practical "polishing" step for removing trace impurities from water.
Professor J. L. Amoros and Associate Professor Marisa Canut-Amoros, above, are an internationally known husband and wife team on the faculty of the School of Technology. Their studies in crystallography have made them one of the University's foremost research teams.

SIU mycologist William D. Gray holds a small flask of fungus of the type he uses to inoculate such substrate materials as sweet potatoes or whey to produce pure protein such as that filling the canisters in the foreground. Gray's pioneering research in fungus conversion is regarded as a possible answer to protein starvation in many underdeveloped areas of the world.
Dr. Hassan Rouhandeh, associate professor in microbiology, has been involved in extensive investigation and experimentation with oncogenic and pox viruses in tissue and malignant cell transformation. His studies are among a number at SIU offering various approaches to the unlocking of the mysteries of cancer.

Chemist Cal Meyers, below, initiated the study of polysulfone in 1956 at the Union Carbide laboratories. Polysulfone which can withstand temperatures up to 350 degrees Fahrenheit is the substance used to make the sun visors worn by American astronauts landing on the moon. In addition to teaching duties, Meyers has continued to conduct a variety of research at SIU.
The Sixties: They Were Very Good Years

In the fall of 1959, Southern Illinois University passed Northwestern in enrollment to become the second largest institution of higher learning in the state. It entered the decade of the 1960's with 11,394 students, ranking forty-first in the nation in size.

Now, going into the seventies, SIU is still Number Two in Illinois. But it has leapedfrogs up the national scale to seventeenth position, a ranking that boggles even most recent graduates' minds.

While the University's breakout from teacher's college status to fullblown academic adulthood began in the fifties, it was in the decade now ending that the fact of growth became more apparent than the pains. Signposts at either end of the period help tell the story.

Compared to the 11,000-plus students on hand then, SIU now counts more than 35,000. In the past decade, more than $93-million in new buildings have been completed. In 1960, SIU awarded 1,414 degrees—eight of them the still-new Ph.D. Approximately 5,900 degrees were conferred in 1969, and 103 of them were doctorates.

Outside agencies channeled $628,-000 in research funds to the University in a year-long period a decade ago. Grants for research, training, and equipment on the Carbondale Campus during the past year totaled more than $8,500,000.

SIU's faculty-staff payroll in 1960 covered 1,908 persons. Now, with two major campuses in operation, it tops 6,400.

Students? It was still true, only ten years ago, that SIU drew the bulk of its students from southern Illinois. Jackson County sent 943 students to the University in the fall of 1959, 300 more than distant Cook County. The picture began to change markedly a couple of years later, however, and now one out of every four students at Carbondale hails from Cook County.

The international look became pervasive at SIU during the decade of the sixties. The University broadened its service horizons to include consulting and assistance missions in Asia and Africa, most notably in South Vietnam where SIU teams undertook the training of teachers for elementary and secondary schools. At the same time, the number of foreign students attracted to the University increased greatly.

Morris Library had a 350,000-volume collection ten years ago. Today, that collection numbers upwards of 1,100,000 and Lovejoy Library at Edwardsville contains an additional half-million. University land holdings during the period went from 3,700 acres to 10,000 acres. Book value of SIU's physical plant—land, buildings, and equipment—swelled from $40-million to $195-million.

In 1960, Illinois voters approved a statewide Universities Bond Issue and the $53-million allocated
Delyte W. Morris was honored for twenty years of outstanding service as SIU president.

from that to SIU got the ten-year drive off to a solid start. It meant, among other things, a brand new SIU campus at Edwardsville. The doors opened five years later, and last fall enrollment on the Edwardsville campus totaled 12,152 students—more than were jamming the Carbondale Campus at the outset of the decade.

At Carbondale, the bond issue meant a half-dozen critically needed buildings and projects, including the School of Technology complex. That one held particular interest, because it would house the newly-approved engineering program, SIU's first professional degree.

Before the decade was out, SIU also would win a School of Medicine (with a clinical base in Springfield), and a dental degree program to be located at Edwardsville. Next goal for SIU is a law school, and a decision on that request is expected from the Illinois Board of Higher Education this year.

The Carbondale Campus skyline was sharply altered in the sixties, for better and for worse. Three seventeen-story residence towers were completed between 1966 and 1968 in a complex that now houses 3,400 undergraduate students. But the landmark edifice which until then had been the dominant elevation feature for nearly 100 years—Old Main—crashed into rubble after a June 8, 1969, fire which authorities said was arson. An investigation continues, and a $10,000 reward still is offered.

Student population of the University surged upward during the decade, climbing to more than 35,000 at the opening of the present academic year.

Robert W. MacVicar, left, and John S. Rendleman became first chancellors of the Carbondale and Edwardsville campuses, respectively.

CONTINUED 21
If SIU went “Big Time” in other ways during the past decade, it did so perhaps most obviously in athletics.

In 1960, SIU was a member of the Interstate Intercollegiate Athletic Conference (the IIAC), played basketball in a gymnasium where 1,584 spectators meant a packed house, and was rated “major” in only three sports: gymnastics, swimming, and wrestling.

SIU dropped out of the IIAC in '62, and a couple of years later Saluki basketball teams were drawing crowds which filled the new 10,000-seat Arena. The Salukis were to bring home the National Invitation Tournament title in 1967, while Saluki gymnasts were to repeat as national champions twice in the decade.

Now, all Saluki intercollegiate athletics teams are rated in the NCAA’s University Division—the “major” classification—except football. And the composite record for all Saluki teams during the decade was 906 wins against 385 losses.

The past decade will be recalled by many as the genesis of active student protest in the U.S. SIU was not untouched by it. Three nights of student disturbances in the spring of 1966 resulted in deployment of state police throughout Carbondale. Two years later, a protest erupted into a break-in at the Carbondale Campus President’s Office, resulting in disciplinary action against students involved.

Spring, 1969, witnessed nearly a week of mass “rap sessions” and “sleep-ins” near the president’s home, but they were more vociferous than anything else.

One of the more widely voiced issues was house hours for women students. Rules were relaxed afterward to allow self-regulated hours for most students who are over twenty-one or who have parental consent.

A major administrative change in 1968 saw establishment of the post of chancellor, the top administrative officer on each campus. The former University vice president for academic affairs, Robert W. MacVicar, was named chancellor of the Carbondale Campus. John Rendleman, a former SIU student who then was vice president for business affairs, went to Edwardsville as chancellor.

The decade in which it first took shape proved good to SIU’s Edwardsville Campus. Highlights of the past year provide a significant indication of its rapid development.

Establishment of the School of Dental Medicine, to be quartered temporarily in buildings of the old Shurtleff College campus at Alton, ranks at the top of a long list of notable happenings at Edwardsville. Other new academic programs have emphasized graduate study.

Last August the North Central Association of Colleges and Secondary Schools approved independent accreditation for the Edwardsville Campus, which was previously accredited through Carbondale. Accreditation covers bachelor’s and master’s degree programs, plus the six-year educational specialist program.

Dollar volume of research grants to the campus climbed to a high of $2,495,145 last year. And the 12,152 students enrolled last fall came from eighty-five Illinois counties, thirty-three states in addition to Illinois, and fourteen foreign countries.
Madison, St. Clair, and Macoupin counties provided more than 75-percent of the students.

The enrollment surge created severe space problems on the campus, with 1,200 class sections to be accommodated in only sixty-three general classrooms.

Although the enrollment pinch was intensified because no new classroom buildings were opened last year, three major construction projects were completed: the General Office Building, at a cost of $3,655,858; a wing of the Science and Technology Building, $1,023,426, and a supporting services building at $1,171,925. A 248-unit family housing project to cost a total of $3,700,000 also neared completion.

In September, SIU relinquished responsibility for freshman and sophomore classes in East St. Louis to a new state junior college there. But SIU involvement with the city continued through the Manpower Training Center, the Experiment in Higher Education, and the Katherine Dunham program in the performing arts.

In June the Edwardsville Campus became the entertainment capital of the St. Louis metropolitan area with the opening of the Mississippi River Festival. Six weeks of concerts by the St. Louis Symphony and nationally known pop, rock, and folk groups drew more than 95,000 people. The Festival was judged an artistic and cultural success, though it lost money at the gate.

In athletics, too, SIU Edwardsville had made significant gains as the decade drew to a close. The 1969 Cougar soccer team was invited to participate in NCAA post-season tournament play, a fitting climax to two seasons of intercollegiate competition in which the team won twenty-one contests, was tied once, and was undefeated. The Cougars lost in first-round action to St. Louis University, which went on to claim the national championship.

Addition of wrestling and track to the Edwardsville Campus athletic program brought to seven the number of intercollegiate sports in which the Cougars participate: basketball, soccer, baseball, golf, cross-country, and the two new ones.

In 1962, no one could earn a graduate degree at Edwardsville. Now, twenty-five different graduate degrees are offered and more than 2,300 people are enrolled in the Graduate School at Edwardsville. The six-year specialist certificate in education was first offered in 1964.

On both campuses, intensive efforts to recruit able black faculty members continued. (SIU has one of the largest proportional black student enrollments among major state-supported universities of the nation.) Eleven new black faculty members added to the Edwardsville Campus staff in 1969 brought to thirteen percent the black faculty level there.

The dramatic surge of Southern Illinois University during the decade just past notwithstanding, however, the institution did not spring from nothing overnight. Foundations for many of the accomplishments which first drew public notice in the 1960's had been laid over preceding years with care. And SIU had been producing quality graduates long before 1960.

And those who tended to overlook this fact in the excitement of the sixties were vividly reminded in 1969, when the University launched its Centennial Celebration. Charter Day was observed on March 9, and the Centennial Period will continue into 1974, a hundred years after the July morning when Old Main's bell rang the first "Normal" classes into session.

SIU athletics gained new national prominence as the basketball Salukis won the 1967 National Invitation Tournament. The decade of the sixties also brought bad times to SIU. Perhaps the most jarring event of all was the destruction of Old Main by fire on June 8, 1969.
Razing of Old Main Approved

Razing of the ruins of Old Main in preparation for a proposed memorial on the site was approved by the SIU Board of Trustees at its February meeting. Plans for the memorial itself are incomplete, and alumni suggestions still are welcomed.

The Board acted unanimously on a proposal that razing of the structure be done by University physical plant employees, who will salvage all the material they can for possible future use in the memorial.

Cost of the work is covered by a $250,000 emergency appropriation approved by the Illinois legislature shortly after Old Main was destroyed by fire last June 8.

A plan to use part of the building's remaining shell and rebuild the tower (as reported in the February issue of Alumni News) was outlined at the January meeting of the Board. The Board deferred action, however, and asked for other ideas.

Action taken last month was necessary to allow work on razing and site restoration to proceed within time limits set by the emergency appropriation without waiting for completion of plans for the memorial.

A committee headed by University Architect Charles M. Pulley and including alumni representation has been studying possibilities for a me-

The Alumni Association

Alumni Day Set

Alumni Day is scheduled for Saturday, June 6, and will feature Class Reunions for all classes ending in "5" and "0" and the Class of 1969.

Other traditional highlights of the day include presentation of Alumni Achievement Awards and the Great Teacher Award. They will be given at the annual Alumni Banquet, which closes out the day's activities.

Also, new officers of the Alumni Association are to be installed at the banquet. These include David Elder '50, M.A. '51, who will succeed Andrew H. Marcec '56 as Association president.

Elder is research director for the Illinois Education Association in Springfield. He is a past president of the Springfield Area Alumni Club.

A complete schedule of Alumni Day events, along with reservations form and other information, will be included in material to be mailed soon to all alumni.
Carmi alumni among those taking part in regional club officers’ workshop there included Walter B. Young Jr., ex ’47, board member and past president of the Alumni Association, right, and Samuel L. Endicott ’48 of the White County Alumni Club. Also involved were club leaders from the Evansville Area, Richland County, Saline County, and Wayne County alumni clubs.

A $10,000 reward for information leading to arrest and conviction of the person or persons responsible for the fire which destroyed Old Main still stands. Police have reported no new leads in the case.

Alumni Activities

SATURDAY, March 14
Madison County Alumni Club meeting.

MARCH 16–17
Evansville Area Telefund Campaign.

MARCH 17–18
Bond-Clinton Counties Telefund Campaign.

MARCH 23–24
Washington County Telefund Campaign.

FRIDAY, April 3
Franklin County Alumni Club meeting.

SATURDAY, April 4
Bloomington Area Alumni Club meeting.

SUNDAY, April 5
Old Guys Jazz Band with Cal Meyers and Jean Kittrell in benefit concert for SIU Foundation’s Robert D. Faner Memorial Loan Fund, 3 p.m., Communications Building Theater, Carbondale. Tickets $1.50 at door or in advance at Foundation Office or University Center ticket desk.

APRIL 6–9
Jackson County Telefund Campaign.

APRIL 7–8
Decatur Area Telefund Campaign.

FRIDAY, April 10
Champaign Area Alumni Club meeting.

SATURDAY, April 11
Monroe County Alumni Club meeting.

APRIL 14–15
Bloomington Area Telefund Campaign.

APRIL 20–22
Williamson County Telefund Campaign.

THURSDAY, April 23
Randolph County Alumni Club meeting.

FRIDAY, April 24
Open House, 9 a.m. to 5 p.m., Vocational-Technical Institute.

Wayne County Alumni Club meeting.

SUNDAY, April 26
Open House, 1–5 p.m., Vocational-Technical Institute.

APRIL 27–29
Franklin County Telefund Campaign.

SUNDAY, May 3
Chicago Area Alumni Club meeting.

FRIDAY, May 8
Jackson County Alumni Club meeting.

MAY 11–13
Detroit Area Telefund Campaign.

Washington, D.C., Area Telefund Campaign.

SATURDAY, June 6
Alumni Day.

FRIDAY, June 12
Commencement, Carbondale Campus.

SATURDAY, June 13
Commencement, Edwardsville Campus.

Study Firm Named

The Chicago consulting firm of Cresap, McCormick and Paget has been named by the SIU Board of Trustees to conduct a study of the University’s administrative organization and provide “management advice” to the Board.

The firm was selected by a special committee of the Board after committee members had interviewed representatives of several such companies.

The study was suggested in the wake of widespread criticism of both the SIU administration and the Board of Trustees over construction of University House.

No date has been given for completion of the study.
END OF THE WINTER ACADEMIC quarter at SIU means the basketball season is over—the Salukis were closing out the season with a 12-9 record and two games to play at press time—and the start of spring sports. Already there is a beehive of activity around the Arena, where the athletes hibernate. Fact is, all have been quite busy since the start of the new year preparing for the fast-approaching 1970 campaigns. Here's how it looks:

TRACK AND FIELD—Already indoor champions of the state of Illinois and the Central Collegiate Conference meet, Coach Lew Hartzog's outfit appears headed toward a great season.

Competing indoors despite lack of indoor training facilities at SIU, the Salukis topped the University of Illinois 169 to 159 in the second annual Illinois Intercollegiate championship meet. Northern Illinois was third in the field of 17 colleges and universities competing.

The Central Collegiate Conference meet at Notre Dame was even more of a surprise, however, with the Salukis topping a large field of Midwestern track powers.

Final results showed SIU with 85 1/2 points, the Air Force Academy with 83, Kansas 77, Eastern Michigan 69, Western Michigan 50 1/2, Kent State 46, Drake 45, Notre Dame 33, Northern Illinois 25, Wayne State 10, Central Michigan 10, Bowling Green 10, Kentucky State 6, DePaul 4, and Loyola 4.

Individual standouts for the Salukis have been numerous, but two—Alan Robinson and Ivory Crockett—have been absolutely incredible.

In the Illinois championship meet, their efforts produced a total of six first places. Robinson won the 1,000-yard event in meet record time of 2:09.8; won the mile run in meet record time of 4:04.6, and won the two-mile run in meet record time of 8:53.5.

Crockett won the 60-yard dash in meet and Illinois Armory record time of :06.6; won the 300-yard dash in meet record time of :30.6; won the 440-yard dash in :48.4, and led off SIU's victorious mile relay team which turned in a meet record time of 3:17.2.

At the Central Collegiate meet, Crockett, the Webster Groves, Mo., speedster who last summer upset John Carlos in the 100-yard dash in the national AAU finals, suffered a mild muscle pull in the preliminaries and did not compete in the finals.

Robinson posted another super effort, however, winning the mile in 4:09.8, the two-mile in 8:44.8, and anchoring SIU's winning distance medley relay team with another fine mile.

Others whom SIU fans should look for this season are Obed Gardiner, a talented triple-jumper from the Bahamas, and high jumper Mike Bernard, a Californian, who won the Central Collegiate event with a leap of 6-9.

BASEBALL—With only one regular and
SALUKI TRACK STANDOUTS Alan Robinson, center, and Ivory Crockett talk over the upcoming outdoor season with Coach Lew Hartzog, who hopes they can keep up the winning pace set in indoor competition. Robinson is a senior from New South Wales, Australia, Crockett a sophomore from Webster Groves, Mo.

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one experienced pitcher returning from last year’s College World Series entry, first-year coach Rich "Itchy" Jones is facing a rebuilding job. Yet, the former Herrin and SIU star feels it's going to be a good year.

"Even though we're untried and unproved for the most part, I think we will have a good solid club," Jones predicts.

"We had a good fall practice session, picked right up in January where we left off, and have progressed well so far this spring. There's no way for us to have as much power in our lineup as we did a year ago, but once we return from Florida we'll be competitive."

CURRENTLY IN LINE FOR starting positions are: first base, Dan Radison, a sophomore who hit .390 with the frosh team last year; second base, Mark Newman, a pitcher last year; shortstop, Gene Rinaldi, who saw little action last year but has good hands and throwing arm; third base, Ray Nygard, a junior college All-American last year; utility, George Gower, Ken Kirkland, and Greg Starrick, all of whom are hopeful of moving into a starting role.

Right field, holdover Bob Blakely, a good bid for All-American honors;
center field, Jim Dwyer, who offers good speed, has a good throwing arm, and hit .400 with the frosh; left field, Les Stoots, who played little last year but hits the ball often; catchers, Bob Sedik, who has a good arm and is considered a fine receiver, with Jack Liggett and Larry Calufetti expected to provide adequate support.

Pitching starters are expected to be Jerry Paetzhold, Steve Webber, and John Daigle with help to come from Mike Broeking, Dick Langdon, and basketballer Bob Eldridge. Paetzhold, with a 10-3 record and a 1.87 ERA in 95 2/3 innings last season, may be the key to success of this year's Saluki squad.

JONES, WHO PLAYED SECOND base for the Salukis before graduation in 1961, joined the SIU staff as assistant baseball coach in the fall of 1968 after coaching at Jacksonville high school and MacMurray College. He holds a master's degree from SIU also.

TENNIS--Everyone returns from a 15-2 season of a year ago, and Coach Dick LeFevre can't help but expect a fine season. Fritz Gildemeister of Chile and Australian Bill Lloyd will do battle for the No. 1 singles spot, with Macky Dominguez a good bet for No. 3. Graham Snook, Chris Greendale, and Ray Briscoe--the only American in the group--offer strength at the lower positions.

GOLF--Junior Harvey Ott Jr. of La Crosse, Wis., anchors a squad which is young but eager. Coach Lynn Holder expects an outstanding team, although the lineup could consist of five sophomores and Ott.

The Salukis were 13-5 last spring, and should improve despite a strong schedule which includes such teams as Tulane, Louisiana State, Missouri, Drake, Illinois, and Notre Dame as opponents.

AT EDWARDSVILLE, COACH HARRY Gallatin's basketball Cougars had a rough go of it this season, but Gallatin is not one to write off any year too quickly. For one thing, he says, "I learned a lot."

"My boys played some good basketball in stretches," Gallatin says. "But in stepping up a schedule the way we have, it's pretty tough bringing your team along fast enough to be able to play at the level of some of the well-established schools you meet."

The Cougars, in their third season of intercollegiate competition, came down to the wire with a 7-15 record and one game left to play.

Gallatin refuses to use it as an excuse, but there's no doubt that lack of a home floor on which to practice hurt the Cougar effort considerably. The team had to drill at either the Edwardsville high school gym or at SIU's Alton center, and most nights were limited to a mere one-hour session.

HELP DEFINITELY IS on the way for next year, however, in the form of players up from a fine freshman squad. Leading scorer for Eldon (Ed) Bigham's junior Cougars was Roy Witthoft, who starred in high school play for the Cobden Appleknockers. Bigham, of course, is familiar to many SIU alumni as a former Saluki basketball regular.

"PROMISING" HAS TO BE the word to describe the outlook for Cougar baseball this year. Coach Roy Lee lost only two players from last season, and no fewer than 106 potential players turned out for fall workouts.

The Cougars open their season with a 10-game spring tour March 30, meeting such teams as Mississippi Southern, Tulane, and Loyola of the South. The regular season schedule includes an additional 21 games.

Added incentive for the Cougars is the fact that they are now eligible for post-season NCAA competition. Through last season, SIU Edwardsville held only an associate membership in the NCAA because of the newness of its athletic program and was not eligible for post-season competition.

Full membership was extended this year, however, and an immediate result was a post-season soccer playoffs bid. ##
1899 Mr. and Mrs. Stuart Brainerd (Ethel Cruse, ex) make their home in Denver, Colo., and will be celebrating their 68th wedding anniversary on April 30. A retired master mechanic, Mr. Brainerd wrote the Alumni Office recently: “We were very sorry (to hear that) Old Main burned down. It and the light brick Science Building (Allyn Building) were all there when we attended.”

1909 Ethel Madoux is retired from teaching and lives in Bartelso. She had been a teacher for 39 years, her career including faculty posts at Upper Iowa University and Westminster College in Utah. Miss Madoux holds both A.B. and A.M. degrees from the University of Chicago.

1912 Mrs. Myrtle H. Crisenberry (Myrtle Henson, ex) makes her home in Johnston City. She has been retired since 1957, after 40 years with the Illinois Electric and Gas Company, which she served as office and sales company manager in a four-county area.

1918 Susie E. Ogden, 2, '30, former assistant professor of business on the SIU faculty, makes her home in Carbondale. She retired in 1963. Miss Ogden holds an M.A. degree from the University of Illinois.

Mr. and Mrs. Melvin D. Thomas (Carrie P. Thomas, 2, '49, M.S. '57) make their home in Mounds. Mrs. Thomas has retired from her teaching position at Thistlewood School there.

1921 Elizabeth Kenney, 2, is retired and lives in Belleville. She holds a bachelor’s degree from Washington University, St. Louis, and had been an elementary school teacher.

1922 Mrs. Herbert L. Rieke is retired and lives in Rantoul. She was formerly supervising teacher of foreign languages and counselor of girls at University School, SIU, and also has taught in Tamms, Rankin, and Wood River. Mrs. Rieke holds B.S., M.A., and Ed.M. degrees from the University of Illinois.

1923 Ralph E. Bailey, 2, '27, retired in September and makes his home in Haddonfield, N. J. He had been a communications engineer with RCA in Camden, N. J. He holds an M.S. degree from Ohio State University.

1925 H. Glenn Ayre, longtime professor of mathematics and dean of the

Alumni, here, there...

School of Arts and Sciences at Western Illinois University, is retired. He is author or co-author of two textbooks in mathematics, and has a Ph.D. degree from Peabody College. His wife is the former Virginia Lee Neftzger '24. Their home is in Macomb.

1928 Lawrence, Kans., is the home of Mr. and Mrs. Vinton C. Fishel, 2, '31. Mr. Fishel has retired as engineer for the United States Geological Survey.

Mrs. Jacob C. Frank (Grace K. Frank, 2, '58) retired in June, 1968. She was second grade teacher at Long-fellow School in East St. Louis for a number of years. She makes Belleville her home.

1934 Mrs. William B. Margrave (Mildred Kirby, 2, '36) is an English teacher at Central High School in Champaign. She holds an M.A. degree from the University of Missouri. Mr. and Mrs. Margrave have two daughters, Sue and Mary.

Newton C. Stone is vice president of Water Resources Development Corporation. He holds M.S. degrees from both the University of Illinois and California Institute of Technology. He lives in Palm Springs, Calif.

1942 Mr. and Mrs. Otto J. Justl (Mary Jane Devee) live in Napa, Calif. Mrs. Justl is a teacher of the deaf at Napa Valley Unified Schools.

1946 Paul W. McKinnis, M.S. '52, Ph.D. '68, is associate professor of education at Georgia Southern College, Statesboro, Ga. He formerly taught in Eldorado and at Proviso East High School in Des Plaines. His article, “Frances G. Blair: The Man and the Award,” was published in the October issue of Illinois Education. Mrs. McKinnis is the former Laura Jacobs '31-2, '64.

1947 Lorene K. Wills, M.S. '49, Ph.D. '66, is now director of elementary
education for the Decatur Public Schools. She was previously principal of Benjamin Franklin Elementary School there, and has served as assistant to the county superintendent of schools, dean of girls and principal of French School, and assistant to the state superintendent of public instruction.

1949 Elmer B. Jacobs, Jr., is associate professor of education at Elmhurst College. He received an M.S. degree from the University of Illinois and a Ph.D. degree from Northern Illinois University. He and his wife, Sylvia, have two sons, George and William, and live in Elmhurst.

Elmo Ricci, M.S. '53, is a teacher of mechanical drafting at Frankfort Community High School. He and his wife, Jean Marcella Webster '42, have two sons, Tim and Terry, and make West Frankfort their home.

1953 Ernest Patterson, M.S. '56, is assistant dean of the Graduate School and assistant professor of political science at the University of Colorado. He received a Ph.D. degree from St. Louis University in 1968. He and his wife, Johnnie, live in Denver.

1954 Jim Bieser has been named president of International Computers of Canada, Ltd., a new company headquartered in Toronto. He and his wife, Alice Mae Towsle '51, make their home in Clarkson, Ontario.

1955 Maj. Charles W. Walter has received the Air Medal at Korat Royal Thai AFB, Thailand, for outstanding airmanship and courage on successful and important missions completed under hazardous conditions. He is stationed at Korat with the 554th Reconnaissance Squadron, a unit of the Pacific Air Forces.

1957 Zweibrucken, Germany, is the home of Mr. and Mrs. Herbert G. Hertenstein and their three daughters, Beth, Patricia, and Mary Ellen. Mr. Hertenstein is with the U.S. Army Audit Agency as audit director in charge of the Zweibrucken and Kaiserslauften area offices.

Dr. Ross N. Schneider, M.S. '59, is assistant professor of mathematics at Upsala State College, N. J. He received a Ph.D. in mathematics from the University of Illinois, where he served as research assistant. He and his wife, Kathleen, make their home in East Orange, N. J.

Mr. and Mrs. Tom Whiteside (Jo Ann McIntyre) and their two sons, Tommy and Michael, live in Tallahassee, Fla., where Mrs. Whiteside is a music teacher at Sealey Elementary School. Mr. Whiteside is completing Ph.D. requirements at Florida State University.

1959 Frank E. Abbott, M.S. '68, is a teacher and football, wrestling, and track coach at Alleman High School, Rock Island. He and his wife, Bridget, have two daughters, Deana and Diane, and live in Moline.

Mr. and Mrs. David L. Hedberg, M.A. '61 (Nancy Jo Apple) and their three children make their home in Chicago, where Mr. Hedberg is area coordinator for the Chicago Department of Urban Renewal.

1962 Larry R. DeJarnett, M.S. '63, has been promoted to production systems review manager for Ford Motor Company, with staff responsibilities in business and industrial control systems in manufacturing and assembly plants. He and his wife (Mary Elizabeth Cotton '62), and their two children, Stephen and Laura Elizabeth, make their home in Dearborn Heights, Mich.


Mt. Vernon is the home of Mr. and Mrs. David Hoxworth (Alice Rendleman '64) and their two children. Mr. Hoxworth has been appointed executive director of the new Jefferson County Mental Health Center there. He formerly served as coordinator of the Suicide Prevention Service at the Mental Health Center in Quincy.

1963 Frances C. Moore, M.A. '65, is assistant professor of social science at Northern Arizona University. She makes Flagstaff, Ariz., her home.

Sam Jr., 11-year-old son of Mr. and Mrs. Samuel L. Silas, M.S. Ed. '65, died January 28 in a Carbondale hospital of pneumonia. Besides his parents he is survived by two sisters, two brothers, and two grandmothers. His father is a former Saluki football star who has played professionally with the St. Louis Cardinals and New York Giants and now is with the San Francisco 49ers. Mr. Silas also is an SIU staff member and doctoral student during the off season.

1964 Malchus B. Baker Jr. is with the U.S. Forest Service as a research hydrologist. He received a master's degree from Yale University. He lives in Flagstaff, Ariz.

1965 Marvin L. Lynch, M.S. '66, is with Eli Lilly and Company as a sales representative in Wichita, Kans. He joined the pharmaceutical firm in 1966 as a sales trainee. In 1967 he entered the U.S. Navy, and after serving for two years returned to the company last November.

Robert Michael Millaway, M.S. '66, received a Ph.D. degree in plant physiology from Iowa State University in November.

U.S. Air Force Captain Michael L. Patton has been assigned to Sheppard AFB, Tex., where he is an instructor with the 375th Technical School. He previously served as an accounting and finance officer at Korat Royal Thai AFB, Thailand.

Charles J. Wilkins, M.A., has completed a four-year tour of duty with the U.S. Air Force and is working toward a Ph.D. degree in political science at the University of Colorado. While in the Air Force, he served as a captain in intelligence services and received nine decorations, including the Cross of Gallantry, a Vietnamese award for valor.

1966 Airmen Charles P. Anthony, M.S. '69, upon completion of basic training at Lackland AFB, Tex., has been assigned to Sheppard AFB, Tex., for training as a management analyst.

Richard Battaglia has been appointed assistant professor in the department of animal sciences and industry at Oklahoma State University. He received both M.S. and Ph.D. degrees from Virginia Polytechnic Institute. He, his wife, and their four children live in Stillwater, Okla.

Jesus C. Carlos, M.A., is associate editor of Rotary International magazine and lives in Chicago.

Robert A. Tingler has been appointed assistant attorney general in the general law division for the state of Illi-
pointed a health educator with offices in the A. L. Bowen Children’s Center in Harrisburg. His responsibilities include community relations and public information programs. He is also pastor of the Baptist Church in Thompsonville, where he makes his home.

U.S. Army Sgt. Dennis Roesslein is a communications operations and techniques instructor in Korea.

1969 Lynn R. Burnett has joined the Wilmington, Del., office of the Liberty Mutual Insurance Company as a clerical supervisor and cashier. She makes her home in Newark, Del.

Bruce Brian Palagi is doing graduate work at the University of Illinois as an Atomic Energy Commission Special Fellow in Health Physics. He is one of 94 first-year graduates across the country selected for AEC special fellowships in both nuclear science and health physics. The programs are administered for the Commission by Oak Ridge Associated Universities, an educational and research corporation of 41 Southern universities and colleges. The fellowship programs support graduate studies leading to nuclear-oriented careers.

Paul Plotnick is a teacher at Hubbard High School in Chicago. He and his wife, Eleanor, were married in January and make Chicago their home.

Airman Harold T. Richardson has completed basic training at Lackland AFB, Tex., and is assigned to Sheppard AFB, Tex. Airman Young is in training as a medical services specialist and Airman Young is in accounting and finance training.

William R. Bequette and Robert H. Harkins have been commissioned U.S. Air Force second lieutenants upon graduation from Officer Training School at Lackland AFB, Tex., and Lt. Harkins is stationed at Mather AFB, Calif., in navigator training.

Marriages

Constance Frank Teesdale ’69, Ran- kin, to Larry E. Carnes, November 27.
Jane W. Lougeay ’69, Belleville, to Ronald D. Crain ’69, Pinckneyville, September 6.
Deana Maria Baima ’66 to Wayne W. Danielson ’65, November 5.
Wanda A. Richmond ’65, Polo, to Marlow A. Drayton, June 14.
Donna Kennedy ’69, Alton, to James Gersman, Alton, November 1.
Jeannie Johnson to Roger L. Kiefl- ling ’65, Cowden, April 18 in Garden Grove, Calif.
Alberta Hidrich, M.S. ’59, Benton, to Offa Lewis, November 24.
Emily C. Palmer, Carbondale, to Thomas O. Lyles ’69, Chicago, November 22.
Kathy K. Hagerman to T. Joseph Marking ’67, St. Louis, November 25.
Anne C. Brink to John E. Moody ’66, West Monroe, La., September 6.
Becky Berman, VTI ’69, Chester, to John Niblock, Chester, October 18.
DEBORAH ALLENE BUCHER '69, Herrin, to DARREN W. PECKLER '69, Carbondale, December 21.

MARILYN SUE CHAMNESS '69, Herrin, to GORDON K. PHOENIX '68, Belleville, December 27.

Marleen Rykovich to WILLIBALD A. SOELDNER '63, Chicago, August 9.

LYNETTE PETTISH '69, Granite City, to RICHARD SPHAR '69, Pana, in November.


JUDITH ANN STIMAC '69, Wood River, to DEAN E. SWEET, Wood River, September 12.

MARY BETH SEIBERT '69, Belleville, to ROBERT KEITH TICKNER '69, Fairfield, September 13.

Births

To MR. and MRS. GARY BALLARD '63, Wood River, a daughter, Shelly Renee, born January 19.

To MR. and MRS. R. EDWARD BATES '65 (E. ANN BATES '65), Saline, Mich., a daughter, Kristin Elizabeth, born December 29.

To MR. and MRS. KENNETH J. BOYER '66 (JOYCE WENGER BOYER '64), Lombard, a son, Scott Andrew, born July 31.

To MR. and MRS. ROBERT DEAN BROWN '63 (PEGGY M. BROWN '63), Justin, Calif., a daughter, Shannon Renee, born September 5.

To MR. and MRS. ROBERT E. CAMPBELL '64 (CINDY M. CAMPBELL '64), Bridgeport, a daughter, Wendy Suzanne, born November 20.

To MR. and MRS. DAVID E. DIEFENBACH (BARBARA WALTON '64), New York, N.Y., a son, David Walton, born September 27.

To DR. and MRS. PETER C. DORAN, M.A. '60, Ph.D. '66, Belgrade, Me., a son, Adam Lee, born April 23.

To MR. and MRS. LONNIE E. GARDNER (JUDITH H. PETERSON '62), Arlington, Va., a daughter, Elizabeth Ann, born September 24.

To MR. and MRS. DAVID L. JEWEILL '64, M.S. '67, (PATRICIA GAIL STONE, ex), Las Vegas, N.M., a son, Christian, born July 2.

To MR. and MRS. MARVIN K. KAISER '63 (CAROLYN TILLOCK '63), Albuquerque, N.M., a son, Clinton Kent, born August 23.

To MR. and MRS. RICHARD J. KAUGH '66, Ashland, Ore., a son, Daniel James, born May 6.

To MR. and MRS. WILLIAM P. KEYTON '65, M.S. '68, Glendale, Mo., a son, John Tyler, born May 15.

To MR. and MRS. JAMES S. KOLSKY '67 (MARIETTA SHIRLEY KLUQUE '67), New Athens, a son, James David, born October 1.

To MR. and MRS. DON E. KNUPPEL '64 (KAY COLBERT KNUPPEL '63), Easton, a daughter, Karen Lynn, born October 2.

To MR. and MRS. JOHN B. LAMKE '66, LaGrange, a daughter, Susan, born May 2.

To MR. and MRS. JERRY W. LEMAN '65 (BETTE JANE LEMAN '65), Dearborn Heights, Mich., a son, Todd Matthew, born August 9.

To MR. and MRS. NEIL LIGHTLE '66, M.S. '68, (JO ELLA PUTT LIGHTLE, M.S. '68), Independence, Mo., a son, Drake Alexander, born May 6.

To MR. and MRS. CLARK D. MICHELS '60 (KAY SMITH MICHELS '60), Brownsburg, Ind., a son, Clark Edward, born October 29.

To MR. and MRS. THEODORE A. MIELING '68, El Paso, Tex., a son, Paul Anthony, born September 17.

To MR. and MRS. DONALD L. POLLACK (BERNICE LEVY '60, M.A. '61), Cincinnati, Ohio, a son, Kenan, born December 20.

To REV. and MRS. JERRY L. REED (JO ELLA KNIGHT '65), Lithonia, Ga., a son, Kenyon Lee, born October 22.

To MR. and MRS. JOHN M. REICH '61 (JUDITH R. REICH '62), Fort Myers, Fla., a son, Michael William, born December 5.

To MR. and MRS. RICHARD L. SCHAULIN '64 (MARY JANE SCHAULIN '64), Normal, a daughter, Jennifer Lynn, born June 28.

To MR. and MRS. J. GENE SCHMIDT '66 (PATRICIA TALFORD '66), Ames, Iowa, a daughter, Tarin Anne, born July 2.

To MR. and MRS. ROBERT P. SCHULOF '60, Palos Hills, a son, Robert Paul Jr., born October 11.

To MR. and MRS. CHARLES F. SCHULTZ, VTI '68, Streator, a daughter, Kimberly Ann, born September 3.

To MR. and MRS. WADE S. SEBBY '66, M.S. '68, Newfield, N.J., a son, Todd Eugene, born July 22.

To MR. and MRS. RICHARD P. VICENZI '63 (EVELYN D. VICENZI '66), Anna, a daughter, Patricia Marie, born November 5.

Deaths

1924 MARRON MEREDITH TAYLOR, M.D., 2, '25, River Forest, died November 9. He had maintained a private medical practice in Chicago since 1934 and also served for 20 years as associate medical director of Riverview Park, Chicago; was a surgeon for Cook County Hospital, and was part owner and operator of North Avenue Hospital in Chicago 1936-58. Survivors include his wife, Avis, and a son, Marion.

1926 GLADYS OLIVIA SMITH, 2, '28, Carterville, died of a heart ailment January 23 at her home. Before her retirement in 1966, she had been a social studies teacher at Eisenhower School in Decatur.

1927 GLENN W. TRULOVE, 2, '29, Marion, died February 1. He had been coach, health teacher, and athletic director at Benton High School. He had also taught in schools in Marion, Eldorado, Shawneetown, Mounds, Vienna, and Johnston City. Survivors include his wife, Marjorie; a daughter, and one grandson.

1928 DOROTHY ANN HOPKINS, 2, Granite City, died November 23 in an East St. Louis Hospital.

1932 AMY LILL DURKES, 2, Mascoutah, died in September. A retired St. Clair County school teacher, she became a life member of the Alumni Association in 1967.

1933 MRS. DAULTON L. ROHDE JR. (MARJORIE J. ROHDE, 2) died January 10 in a Nashville hospital. She had been a lifetime resident of Oakdale and was a teacher in the Okawville Grade School. Survivors include her husband, a son, two daughters, and four grandchildren.

1949 GILBERT G. RAGSDALE died December 6 in a Centralia hospital after a sudden illness. He had served as guidance director of Centralia High School for three years. He formerly taught for 10 years at Vandalia High School, and had been a teacher and assistant administrator at Flora High School. Survivors include his wife, Dorris, and a daughter, Amy.

The Alumni Office also has been notified of the following deaths:

1915 EMILE M. BYARS (EMILE B. MILLOGAN, 2), Denver, Colo.

1934 ROSE LEODAICA PIOSEK, Murphysboro, November 17.
Honorable & Mentionable . . .

Back in December, forty-eight American athletes went to Buenos Aires, Argentina, for the Second Pan-American Wheelchair Games. Among them was Dave Williamson, who brought back a gold medal and new world record in the shot put, three silver medals, and one bronze medal.

Williamson is a 1968 SIU graduate now enrolled as a graduate student. He's also an assistant to the coordinator of services for handicapped students. And he's also one of the hardest working athletes on campus—with an array of awards in national and international competition which marks him as a champion.

Since first competing as a member of the United States Para-Olympic team in 1965, Williamson has gained a reputation as one of the pluckiest competitors around in the unique and increasingly important world of wheelchair sports.

Left partially paralyzed by an attack of polio when he was a small child, Williamson got his first crack at athletic competition as a high school student in his home town of Evansville, Indiana. He wasn't very successful in his first outing. But succeeding years of hard work paid off; he has the world records to prove it.

Since arriving on the SIU campus at Carbondale, Dave has qualified regularly for U.S. teams heading for World Games and Para-Olympic competition. He's been an outstanding performer in both national and international meets.

Wheelchair sports has become a way of life for him. But constant conditioning, added to his full-time studies and part-time work, has led to a hectic schedule. Keeping in shape has meant an average three hours of physical activity daily.

A painful muscle injury in the Buenos Aires competition has Williamson sidelined now, probably for the rest of the year. But that won't lessen his interest. In his day-to-day activities, he keeps an eye out for other potential wheelchair athletes. The National Wheelchair Athletic Association, of which he is a member, believes there are two million potential wheelchair athletes in the U.S.—many of whom are unaware of the therapeutic value of such competition.

“If I find a student who has such potential,” Dave explains, “I try to give an honest evaluation of his capabilities. But we're not so concerned with how well an individual does—whether he wins or not—as with how hard he tries. The things we do demand desire and effort. There are so many things most of these kids can do that they were never aware of before.”

Dave is philosophical about his own physical handicap. If other paraplegics want to think of themselves as “cripples,” he says, that's their privilege. But he doesn't feel that way. Everyone, he believes, has some contribution to make.

On the other hand, he is realistic about his capabilities: “I'm an idealist and an optimist, but also a realist. You don't really adjust to a serious physical handicap, you simply learn to live with it. You can't have unreachable goals.

“I'd lie if I told you I wouldn't like to run and dance. But I've compensated in other ways for the things I can't do. No matter who you are and what you do, you've got to have some confidence in yourself and put forth an effort.”