

## Engineering Building Being Renovated

Many areas of Seaton Hall, the main engineering building at K-State, are undergoing a thorough face-lifting. Work began last winter and is continuing through the coming year.

The basement floor of Seaton Hall (main wing) has been repainted, the floor retiled, and the ceiling of the hallway lowered. The result is a much more attractive basement.

The Applied Mechanics Machine Shop, soon to be incorporated into the department of civil engineering, and operated by Wallace Johnston, has been walled-in, repainted, and air-conditioned.

Many classrooms have been repainted and new curtains installed. Two graduate student rooms on the first floor of Seaton have been repainted and individual carousel study areas added.

The Soil Mechanics Laboratory serving agricultural engineering and civil engineering has been remodeled. Plans call for remodeling the Sanitary Engineering Laboratory.

The Engineering Computer Center, formerly located in the Engineering Shops, has been relocated on the basement floor of Seaton across from the Solid State Engineering Laboratory and south of the Engineering Experiment Station offices.

The main office of electrical engineering will be remodeled. Additional office space will result. There will also be a faculty conference room adjacent to the office of the department head in EE.

The Electrical Engineering Power Laboratory is being remodeled and updated with four work areas as the result of a \$15,500 National Science Foundation grant matched by the State of Kansas. The successful proposal was prepared by Dr. Gary L. Johnson, associate professor of electrical engineering.

In mechanical engineering, there have been extensive renovations for the development of four new laboratories on the main floor in what were screened-in areas. The four new laboratories are thermal science, dynamics systems, mechanisms and small projects. These laboratories have been walled-in, equipped with air-conditioning, appropriate utility connections installed, and instrumentation and other equipment furnished and set up.

Dr. Donald E. Rathbone, dean of engineering, also plans extensive remodeling of the main entrance way to Seaton Hall and of offices along the main hallway (south side in



CONSTRUCTION PROGRESS on the new \$2.8 million M. A. Durland Hall is on schedule on a building site west of Seaton Hall and north of Ahearn Fieldhouse. Durland Hall will house the chemical engineering and industrial engineering departments.

### Includes Five Options . . .

## Approve Technology Degree

The KSU College of Engineering is now providing the final two years of study for engineering technologists following approval by the Kansas Board of Regents of K-State's new engineering technology B.S. degree program.

Some students have been accepted for the fall semester and more will be added this spring, according to Dr. Donald E. Rathbone, dean of engineering.

Rathbone has designated Prof. Dwight A. Nesmith, director of the KSU Engineering Cooperative Work-Study Program, to serve as acting head of this new program.

The new curriculum includes five options in engineering technology: civil engineering technology, computer and instrumentation technology, environmental technology, food technology, and materials and production technology.

KSU President James A. McCain pointed out that "this program is another example of the alertness of our engineering faculty to changing needs in our state and region. The College of Engineering already has impressive resources in all five options."

The new K-State engineering technology program includes two or more areas of emphasis within three of the options:

\* **Computer and instrumentation technology:** areas of study include computers,

electronics, and nuclear instrumentation.

\* **Environmental technology:** radiation protection and sanitary engineering.

\* **Materials and production technology:** materials processing, mechanical design, and production engineering.

The new program differs from previously existing KSU engineering degree programs. Rathbone explained the principal differences in the role of the engineering technologist from that of an engineer.

"The engineer's basic role is to conceive and design new processes, systems, technologies; the engineering technologist emphasizes the development of methods for implementing designs and for manufacturing the products involved."

In most of these new KSU engineering technology areas of study, the University will provide the final two years of educational training for students completing studies at two-year institutions including the Kansas Technical Institute of Salina and several Kansas community colleges. The last two years

## Host Two-Day NSF Energy Conference

Some 40 systems theory experts from U.S. universities, industry, and government pooled their expertise in a special two-day conference at K-State aimed at identifying and defining wide-scale energy problems and needs.

The July 25-26 conference in the K-State Union was hosted by Dr. Donald E. Rathbone, KSU dean of engineering.

A published proceedings will come out soon. Presentations were made by experts from most regions of the nation "on an invitation only basis." Their observations are beneficial in three areas, says Rathbone:

\* Identifying problem areas of large-scale energy systems where there are particular needs for additional research.

\* Relating present concepts and techniques in the systems field to this "new" area of application.

\* Recommending areas of development in systems engineering which would be effective in large-scale energy systems.

Serving as workshop co-chairman with Rathbone was Dr. James E. Van Ness of Northwestern University, Evanston, Ill.

## A Season of Honors For AgE's Bill Johnson

The months of May and June were a season of honors for K-State's agricultural engineering department head, Dr. William H. (Bill) Johnson. No less than three recognitions came his way.

In early May he received a Distinguished Alumnus Award by the College of Engineering at Ohio State University, Columbus.

Also in early May Johnson was one of 10 adults—who have been vigorous supporters of vocational agriculture and the Kansas Future Farmer of America program—designated as "Honorary State Farmers" this year.

Then in June Johnson was named awards department director by the American Society of Agricultural Engineers at the 67th ASAE meeting at Oklahoma State University, Stillwater.

## A.S.E.E. Writing Award To Dr. Lynn E. Bussey

Dr. Lynn E. Bussey, associate professor of industrial engineering, on June 19 was the co-recipient of the Eugene L. Grant Award of the Engineering Economy Division of the American Society for Engineering Education.

The annual Grant award is presented to the author of the best article appearing in "The Engineering Economist," a quarterly research publication of ASEE.

Bussey's technical paper, co-authored by Dr. G. T. Stevens of Oklahoma State University, "Formulating Correlated Cash Flow Streams," was judged best in Volume 18. Bussey joined the K-State faculty in January 1971 after receiving his Ph.D. at OSU.



**K-STATE DUAL DEGREE PROGRAM**—Three years ago the K-State chemical engineering faculty initiated a five-year dual degree program in chemistry and chemical engineering with Kansas State College, Pittsburg. The program is directed by Dr. Walter P. Walawender (l.) of chemical engineering. The first two chemistry students from Pittsburg (from left)—Lester Melton, Weir, Kan., and Steve Bussjaeger, Shawnee Mission, Kan.—enrolled this past fall to complete a degree in chemical engineering at K-State in two years. Dr. L. T. Fan, professor and head of chemical engineering at KSU, is shown at the right.

## Potpourri . . .

# Lauds Faculty Research

As you will note from the story on page 4, the new freshman enrollment at K-State this year increased over 50 per cent over last year's freshman enrollment, our graduate enrollment increased approximately 50 per cent and our overall enrollment increased 10 per cent compared with 1973-74. We hope this is good news for the engineering profession and for industry.

As I quoted in a previous issue of Impact, "Contrary to a general public conception, a serious shortage of engineers is developing in the country." The key to the enrollment picture is, of course, not to overshoot the mark and thus have a cyclic employment demand. This likelihood is very small in the foreseeable future since forecasted demand for the engineer for the next two decades is excellent.

You may have noticed the announcement of our new degree program, the Bachelor of Science in Engineering Technology. We requested this program because of the need that has developed for these graduates throughout the country and the fact that there was no such program in Kansas. As stated in the **Guidelines for Increasing Academic Efficiency at the State Colleges and Universities** as approved by the Board of Regents, State of Kansas, "It (KSU) should be expected to foster and develop engineering education to the fullest, including continued involvement in interdisciplinary programs throughout the University." With the exception of food engineering technology and specialized areas in environmental engineering technology, we have committed ourselves to providing only the final two years of the program. This approach was in keeping with the Board's philosophy of minimum duplication of programs throughout the state.

**Seaton Hall continues to undergo the "minor surgery" that was initiated last year. We emphasized laboratory renovations and developments originally and will hopefully improve our classrooms, hallways and offices this coming year. The campus remote computing center is being moved to Seaton Hall and should be an excellent addition to our facilities.**

Engineering education continues to undergo change. Perhaps the most notable differences from the past are more flexible curricula, greater social sensitivity in the various programs, and a positive thrust toward professional practice with emphasis on design and practice.

From an administrator's point of view, the changes in engineering education include formula budgeting, advanced level accreditation and the possibility of faculty unions. The formula budgeting is a rather strict accountability procedure that most states and universities have recently implemented. It is closely related to student-credit hour production and is "weighted" according to discipline.

Advanced level accreditation is simply a formal evaluation of the Master degree programs in engineering throughout the country. It is only in the talking stages as of now but will be voted upon shortly. Engineering has had undergraduate program evaluation nationally for many years. K-State has always fared very well here and should do well on the advanced level accreditation should it come to pass.

Faculty and student research continue to be an integral part of our total college educational program. Funding the past year was \$1.2 million dollars, with \$300,000 of this from state sources and the other \$900,000 generated by the faculty from outside agencies and Companies. To obtain this level of funding, the engineering faculty submitted 68 separate research proposals and were successful on about a third of them. This success rate is very good in the face of keen competition and is considerably above the national level. — Dr. Donald E. Rathbone



**GETS CRC ACHIEVEMENT HONORS**—Eddie Ross Hoover (r.), Phillipsburg, Kan., incoming senior in nuclear engineering, received last year's Chemical Rubber Company Engineering Science Achievement Award for top scholastic achievement. Hoover is congratulated by KSU Engineering Dean Donald E. Rathbone.



**HELENA VERGARA NOLAN**—This attractive December 1973 graduate of K-State is now working for Wilcox Electric, Kansas City, Mo. Mrs. Nolan completed her M.S. in electrical engineering and turned down job offers from firms in Indiana and Nebraska.



**JOHN MEIN GETS INVOLVED**—John Mein, senior in electrical engineering, Walnut, Kan., is the newly-elected president of the Engineering Student Council. He has few if any lazy bones in his body. Typical of Mein's high-tempo involvement last year at K-State was a model windmill dramatizing the use of hydrogen for future farm energy needs.



**MAC SHORT AWARD TO DON GLASER** — The Mac Short Award is given annually to an outstanding senior in mechanical engineering interested in aerospace engineering and honors the memory of Short who had an important role in World War II aircraft production. An inscribed wristwatch was presented to Donald J. Glaser (c.), 22, Emporia, Kan., May 1974 graduate, by Dr. J. Garth Thompson (r.) and Prof. Alley H. Duncan of the KSU mechanical engineering faculty.



**SEVERE WEATHER WITHIN** a 100-mile radius of Manhattan will soon be detected on the screen of this radar set designed in the early 1950s for forward surveillance on a Boeing B52. Dr. Donald R. Hummels—judged the top educator in electrical engineering last year by students in that department—is making minor repairs on the radar set and recently was successful in obtaining an FCC license for its operation.



**DR. FRANK A. TILLMAN** (shovel in hand), professor and head of industrial engineering, was among those who participated in the April 29 groundbreaking ceremonies held in a heavy downpour. Ground was broken for the new \$2,851,000 Durland Hall [chemical engineering and industrial engineering].



**K-STATE'S CHI EPSILON CIVIL ENGINEERING HONORARY** members edged out their counterparts from Iowa State for third place April 27 in the first annual K-State Invitational Concrete Canoe Race. Dr. Jerry Zovne said another half-mile race is planned at K-State next April to be held in the River Pond area of Tuttle Creek Reservoir. K-State's "Portland Queen" competed with entries from MU-Columbia, MU-Rolla, and Nebraska in addition to Iowa State. MU-Columbia placed first.

## NEWSWORTHY NOTES

Dr. **Wellington W. Koepsel** of K-State will be secretary the coming year for the Electrical Engineering Department Heads Association, which includes 180 colleagues at schools accredited by the Engineering Council for Professional Development.

**Gustave E. Fairbanks**, professor of agricultural engineering, has been named a "fellow" of the American Society of Agricultural Engineers.

**Steve Muck**, incoming senior in mechanical engineering from Leawood, Kan., is the winner of the 1973-1974 Outstanding Student Journalism Award of the Kansas Engineering Society. Muck is news editor for **The K-State Engineer** student magazine.

New president of the Tri-Valley Chapter, Kansas Engineering Society, is Dr. **William H. Honstead**, director of the Kansas Industrial Extension Service at K-State.

A two-week seminar for transportation engineers in Kansas was coordinated June 3-14 at K-State by Dr. **Bob L. Smith**, professor of civil engineering.

Dr. **Douglas A. Wallace**, on the K-State civil engineering faculty the past three years, on June 1 joined Stanley Consultants, Muscatine, Iowa, as the principal environmental engineer.

A former K-State visiting professor, Dr. **Paule Rey**, University of Geneva, Switzerland, lectured on "Chronic Bronchitis and Air Pollution" May 3 during a visit to campus.

**Will Cook**, senior, Stark, Kan., has been elected president of the National Council of Student Branches of the American Society of Agricultural Engineers for 1974-1975.

**Eric W. Schoeff**, CE '74, Columbus, Ohio, was named the outstanding graduating civil engineer at K-State by the civil engineering faculty. Schoeff is employed by a Columbus consulting engineering firm.

Students in electrical engineering selected Dr. **Donald R. Hummels**, an associate professor, as the top 1973-1974 educator in that curriculum at K-State.

Dr. **Peter B. Cooper**, professor of civil engineering, received a Key Member Award during the 66th annual meeting of the Kansas Engineering Society in Wichita in early June.

Almost 100 Kansas high school students took part in the 10th annual Engineering and Science Summer Institute which was conducted in two sessions: June 9-14 and June 16-21.

**Russell L. Bone**, 20, Shawnee Mission, Kan., junior in chemical engineering, won the 1973-1974 scholastic achievement award of the K-State student chapter, American Institute of Chemical Engineers.

**Alan L. Sylvester**, Salina, Kan., is president of Tau Beta Pi engineering honorary at K-State for 1974-1975.

Steel Ring, headed by **Rick Koelsch**, Great Bend, Kan., will coordinate the 51st annual KSU Engineering Open House next April 11-12.



**FIVE ATTRACTIVE KSU ENGINEERING COEDS** received their B.S. degrees May 17 and have done well in the job market and acceptance to graduate school. Dr. Doris Grosh (l.) of industrial engineering was a constant friend to the girls in her role as faculty advisor to the KSU student chapter, Society of Women Engineers. Coeds (seated from left): Karen Hoefgen, ChE, 1974 St. Patricia, from Topeka; Aida Pertsch, EE, Caracas, Venezuela; (standing from left): Marla Sheets, NE, Aloha, Ore.; Kathleen Carley Parrish, NE, Kansas City, Kan.; and Vicki Swisher, NE, Gering, Neb.

## Fresh Enrollment Up 50%, 25 Coeds in 1st Year Class

Preliminary figures indicate a promising future for KSU engineering enrollments as well as for employment opportunities for graduates of the College.

### B.S. Program Okayed In Engineering Technology

(Continued from Page 1)

will entail considerable course work in the liberal arts disciplines.

In food engineering, and in the radiation protection area of environmental engineering, it's to the student's advantage to come to K-State for all four years due to KSU's unique capabilities in these two areas. However, transfer students will be accepted in these areas if necessary preliminary course work is taken at other institutions, Rathbone said.

Further details are available by writing or phoning (913-532-5590) Prof. D. A. Nesmith, Office of the Dean of Engineering, Kansas State University, Manhattan.

### Lauds Success Rate On Research Proposals

(Continued from Page 1)

particular). He also plans some remodeling of the lower main entrance way to Seaton.

These renovations and equipment improvements have been made possible, says Dean Rathbone, through federal, private and state resources.

Hopefully, the total program of renovations and other improvements will be completed in time for the 51st annual KSU Engineering Open House set for April 11-12, 1975. You will want to see all these physical changes in Seaton Hall as well as the construction progress on the new \$2,851,000 Durland Hall (chemical and industrial engineering). — T.G.

Steel Ring is a selective organization recognizing outstanding ability in leadership and scholarship of seniors in engineering at K-State.

Assistant Dean Kenneth K. Gowdy reports that K-State undergraduate engineering enrollment is over the 1,000 mark this year after dipping to 946 this past year. Last year there were 196 new freshmen. Gowdy indicates over a 50 per cent increase in new freshmen this fall with a total of 299.

More women are enrolling in engineering. There were 34 coeds enrolled in the College in 1972-1973. In the freshman class alone this year, there are 25 girls compared with only seven the last academic year. There will also be an increased number of minority students in engineering.

The 180 graduates this past year averaged over three job offers each with \$12,000 a year typical for starting salaries. The highest single offer to a B.S. engineering graduate of K-State was \$1350 per month.

For the 1974 engineering class at K-State, 76 per cent accepted engineering positions. The remainder either entered graduate school or the military.

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