Plants, artwork and even a pendulum soon will grace the vaulted, three-story atrium of Durland, Phase II. The pendulum base is being constructed by Kansas State University artisans, with the pendulum design by engineering faculty. It is expected to be in place for dedication ceremonies.

Dedication set for September 30
Durland funding near goal

A Hewlett-Packard Co. gift of new computing equipment valued at $147,000 has pushed fund-raising efforts for Durland Hall, Phase II over the $900,000 mark.

Recent in-kind donations from Parker-Hannifin Corp. and Control Data Corp. also gave the campaign a boost toward its $1 million goal.

“Computers are now a way of life,” Dean of Engineering Donald E. Rathbone said in announcing the gifts. “We feel very fortunate to have this state-of-the-art equipment from Hewlett-Packard and the other companies.”

Rathbone also announced September 30 as the date for dedication of the new building. Most of the equipment should be in place at that time, he said.

Hewlett-Packard provided computers that will be used by electrical and mechanical engineering, the departments that will occupy Durland, Phase II.

Computers from Control Data will be used primarily in freshman and sophomore courses in computer programming, chemistry and the engineering sciences. Parker-Hannifin donated numerical-controlled machines and equipment for machine shops.

Though the $900,000 in funds and equipment for the new building “will help immensely in keeping our

Mark your calendar

We hope you can be with us for Durland Hall dedication ceremonies September 30. If you plan to attend, please fill out and return the form on page 6, so we can count you among our guests.

Johnson named Alumni Fellow

Gilbert E. Johnson

Gilbert E. Johnson, president of G.E. Johnson Construction, Inc., Colorado Springs, Colo., and a 1955 civil engineering graduate, was chosen as one of two KSU Alumni Fellows for 1983.

The program was initiated this year and is being sponsored by the Council of Academic Deans and the Alumni Association.

The program is designed to recognize alumni who have distinguished themselves in their respective careers. Johnson joined R.E. "Gene" Bonnell, treasurer and vice president of Phillips Petroleum Co. and a 1956 business graduate, in receiving the honor.

"Gil Johnson has had a very successful career as an engineer and businessman," Dean of Engineering Donald E. Rathbone said. "The College of Engineering is proud to have him as its first Alumni Fellow."

Johnson's company has been ranked by Engineering News-Record as one of the nation's top 200 contractors with sales in excess of $100 million. He is a member of the College of Engineering Advisory Council and a trustee of the KSU Foundation.

As part of the Fellows program, Johnson and Bonnell returned to campus as distinguished guests for a day, lecturing to classes and meeting informally with students, faculty and administrators.
Bainer receives honorary degree

Royal Bainer of Davis, Calif., a KSU engineering graduate with an international reputation in the field of agricultural mechanization, received an Honorary Doctor of Engineering degree from the University in May.

Bainer received his bachelor’s degree in agricultural engineering in 1926 and his master’s degree in 1929. After leaving KSU, he spent 40 years as a faculty member in the University of California system where he distinguished himself as an educator, researcher, inventor and author.

Bainer was named associate dean of engineering for the U-C statewide system in 1961 and in 1962 became the first dean of engineering at the Davis campus. While at Davis, Bainer was instrumental in accelerating the development of agricultural equipment, leading Time magazine to describe the school as “the wildly inventive center of the farm machinery revolution.”

In 1969, the University of California awarded Bainer an Honorary Doctor of Laws degree. An engineering building on the Davis campus is named after him.

Among other honors, Bainer is a Fellow of the American Society for the Advancement of Science and a Life Fellow of the American Society of Agricultural Engineers, which he served as president in 1956-57. He was elected to the National Academy of Engineering in 1985.

Bainer is the author of two text-

books on farm machinery which are widely used at engineering colleges, including KSU. He is a former member of the College of Engineering Advisory Council and received a Distinguished Service Award from engineering in 1980.

Three graduates win DSA honor

The College of Engineering honored three of its graduates this spring with Distinguished Service Awards.

Receiving the awards were John H. Bateman, John W. Frazier and Gordon D. Goering. They were recognized for their contributions to the engineering profession and to their alma mater.


Frazier is a partner in Finney & Turnipseed, Consulting Engineering, Transportation and Civil Engineering, Topeka. Frazier graduated in 1935 with a degree in civil engineering.

Goering is senior vice president of Phillips Petroleum Co., Bartlesville, Okla., and a 1945 graduate in chemical engineering.

Bateman, a native of Holton, joined The Marley Company in 1940 and was elected vice president in 1966. He became president of Marley International in 1957.

As a student at KSU, Bateman was a member of Steel Ring honorary and also was president of the student chapter of the American Society of Civil Engineers (ASCE). He is a former member of the Kansas Engineering Society and was a director of the Kansas City Section of the ASCE.

Mr. and Mrs. Bateman established the John Bateman Scholarship for engineering students at K-State.

Frazier is a Columbus, Ohio, native and attended public schools in Manhattan. He joined Finney & Turnipseed in 1946 after 11 years with the State Highway Commission, and became a partner in the firm in 1964.

Frazier has been active in the ASCE and the Kansas Engineering Society.

A former national president of the K-State Alumni Association, Frazier is currently a trustee of the KSU Foundation and a member of the K-State Intercollegiate Athletic Council.

Goering's professional memberships include the American Petroleum Institute and the National Petroleum Refiners Association, which he serves as a member of the board of directors.

Goering has been a member of the KSU College of Engineering Advisory Council for a number of years. He also has assisted in the fund-raising campaign for Durland Hall, Phase II.

Engineers named to Board of Regents

Two KSU engineering graduates, Wendell E. Lady and Norman W. Brandeberry, have been named to the State Board of Regents.

Lady, a 1952 graduate in architectural engineering, is project manager for Black and Veatch Consulting Engineers, Kansas City, Mo., and former Speaker of the Kansas House of Representatives.

Brandeberry is president of Pioneer Operations Co., Inc., of Russell.

The nine-member board is the policy-making governance body for the seven Regents institutions in Kansas. Members, who serve a four-year term, are appointed by the governor.

In another recent appointment, Brandeberry was chosen as a leader in the fund-raising efforts for the proposed KSU coliseum, along with Gilbert L. Johnson, KSU Alumni Fellow for 1983.
Mingle in new post

John O. Mingle, professor of nuclear engineering, has been named executive vice president of the KSU Research Foundation.

Mingle replaces William H. Honstead, who retired in January as chief administrator of the foundation. Honstead is former professor and head of the Department of Chemical Engineering.

In his new position, Mingle will be responsible for administering the patenting and licensing of inventions stemming from research at KSU. He will continue to hold part-time teaching responsibilities in the Department of Nuclear Engineering.

Hummels to head EE department

Donald R. Hummels, professor of electrical engineering, has been named head of the department.

Hummels replaces James H. Tracey, who resigned to become resident dean of engineering at the University of Colorado at Colorado Springs.

"He has been very successful as a teacher and a researcher," Dean Donald E. Rathbone said of Hummels. "And he has the motivation and personal skills to be an excellent department head."

Hummels is the author of numerous technical articles and was selected four times by students as top educator in the Department of Electrical Engineering.

He has been active in private industry through consulting work with Motorola, Inc. His research, both in industry and at universities, has ranged from spacecraft communication systems to an improved system for detection of radar signals.

Hummels holds B.S., M.S. and Ph.D. degrees from Arizona State University. He was appointed to the electrical engineering faculty at KSU in 1970.

Familiar faces will be missing

The College of Engineering will be losing a good share of its teaching expertise this fall.

Six faculty members retired after the close of spring classes. Together they represent 226 years of service to the University.

New emeritus professors are Joseph E. Ward of electrical engineering, who spent 43 years at K-State; Gustave E. Fairbanks, agricultural engineering, with 40 years to his credit; James F. Crary, civil engineering; Ralph I. Lipper, agricultural engineering; and Ross I. Pauli, mechanical engineering, all with 36 years of service; and Dwight A. Nesmith, mechanical engineering, with 35 years.

Ties to K-State started even earlier for Fairbanks, Crary, Lipper and Nesmith. Fairbanks and Lipper received B.S. degrees in 1941 and M.S. degrees in 1950. Crary is a 1947 graduate and Nesmith earned an M.S. in 1952.

Dean Donald E. Rathbone noted the changes in technology that were taking place during the time the six faculty members taught at K-State, and commended them on their ability to adapt.

"All of them have witnessed revolutionary changes over the years and were able to continue to be effective in the classroom. Their high rankings in student evaluations and individual awards for outstanding teaching, research and service to the engineering profession are an indication of this. They will be difficult to replace. We wish all of them well in their retirement."

Another puzzling situation

Wilson Tripp, professor emeritus of mechanical engineering, is certainly as sharp a thinker as he was back in the classroom. To stay that way, he spends a good part of his time solving puzzles. He also dreams them up.

The following puzzle isn’t one of his originals—he says he first heard it in 1949 when he was a summer engineer with General Electric in Schenectady, N.Y.—but he wants to test your thinking. See if you’re still as sharp as you were in the classroom.

"A census taker (CT) came to a house and wrote down the street number. He then rang the doorbell. A man answered, ‘How old are you?’ the CT asked. The man gave his age. ‘Are there any others who live at this address?’ was the next question. ‘There are three others,’ the man answered. ‘What are their ages?’ the CT asked. The man replied: ‘The product of their ages is six to the fourth power and the sum of their ages equals the street number of this house.’

‘CT, with pencil and paper, worked for awhile on the solution to this. ‘I don’t have enough information,’ the CT told the man. The man replied: ‘One of them is older than I.’ The CT then told him, ‘Now I know their ages.’

‘What were their ages?’

See next issue of IMPACT for the answer to the puzzle and key to its solution.

Answer to George Muehler’s puzzle, which appeared in the Spring 1983 issue: 3, 121, and 27.
Topeka gets help from CE professor

Alexander Mathews, civil engineering, is under contract with the City of Topeka to study possible improvements in the city's water purification system. Mathews will look into the feasibility of replacing much of the older flocculating machinery with a turbine-type system, which would reduce maintenance costs and improve reliability.

Present machinery is of the paddle type, where the equipment must be immersed in the water. This creates problems in that water in the tanks must be drained before repairs can be made. Constant immersion also creates additional stress on machines bearings.

A main advantage of the turbine-type system is that all bearings are outside of the water, thereby facilitating maintenance and repairs.

KSU selected

Kansas State University was chosen as the national institution to select a graduate student for a 1983 American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. fellowship. Designation for ASHRAE's Homer Addams Award nominee is made to one of the schools of engineering with which the society has been engaged in cooperative research of high caliber.

The designated school selects as the recipient a graduate student who will conduct research in the field of heating, ventilating, cooling and air conditioning.

The Department of Industrial Engineering was recognized by the Material Handling Education Foundation for its outstanding material handling program. As a result of the honor, the department has been targeted for special consideration for grants.

Faculty Notes

Nasir Ahmed, electrical engineering, received K-State's Distinguished Graduate Faculty Award for 1983.

Ahmed has done extensive research in image processing and signal processing. His efforts have led to more than $1 million in research grants since 1975. In addition to numerous publications in professional journals, he is the author of three textbooks, one of which has been translated into Russian and Chinese.

Two K-State engineers have been recognized by the University chapter of Phi Kappa Phi for outstanding service to education.

L.T. Fan of chemical engineering received the Phi Kappa Phi Scholar Award.

Prof. Emeritus William H. Honstead, retired director of the KSU Research Foundation and former head of chemical engineering, was given the chapter's first Meritorious Service Award.

Fan is now internationally for his work with fluidized bed processes and holds six patents on the design and performance of fluidized beds. He is the author of four books and more than 400 articles. Fan received the Distinguished Graduate Faculty Award from KSU in 1973.

Honstead retired in January as director of the KSU Research Foundation. He also had served as director of the Kansas Industrial Extension Service.

Honstead played a major role in establishing the Ph.D. program in chemical engineering and headed the department from 1960 to 1988.

Robert E. Dahl, professor and head of architectural engineering and construction science, has been elected to the board of directors of the Associated General Contractors Education and Research Foundation. Dahl will serve as one of two "public" members of the board.

Ralph Lipper, who retired as professor of agricultural engineering this spring, was named 1983 "Engineer of the Year" by the Mid-Central Region of the American Society of Agricultural Engineers.
Scholarships

An endowed scholarship is being set up in honor of Joseph E. Ward, Jr., professor emeritus of electrical engineering. A minimum of $25,000 must be accumulated before the scholarship can be established with the KSU Foundation, which will administer the funds. Interest from the fund will be applied toward an annual award for an electrical engineering student.

Those wishing to contribute may make their checks payable to the KSU Foundation-Joseph E. Ward Scholarship Fund. Checks should be mailed to: KSU Foundation, Hollis House, Kansas State University, Manhattan, KS 66506.

Other scholarships recently established with the Foundation include:

Neal Atkinson Service Scholarship, in memory of Mr. Atkinson, an engineering graduate who died in a construction accident in 1982. The award will be made each spring to a junior who has exhibited outstanding qualities of leadership, citizenship, moral integrity and service to the University community.

The Ralph I. Lipper Scholarship for agricultural engineering students. The award will be given annually to a student who has taken course work in agricultural mechanization. Selection will be based on financial need, demonstrated student leadership and academic achievement. Lipper is professor emeritus of agricultural engineering.

The Charles A. and Nona B. Frankenhoff Scholarship for engineering freshmen. The award provides for financial assistance in the amount of tuition and books for one academic year. Frankenhoff, who is retired chairman of the board of the Kenite Corp., Scarsdale, N.Y., is a 1918 KSU graduate in mechanical engineering. He received a Distinguished Service Award from the University in 1979.

The Virgil and Dorothy Lundberg Scholarship in Engineering and Athletics, to be made available to a sophomore, junior or senior majoring in engineering and participating in varsity athletics at the University.

Contributions to any of the scholarships should be made payable to the KSU Foundation-(name scholarship) and mailed to the address as listed above.

Ask the Dean

Here are Dean Donald E. Rathbone’s answers to some of the questions engineering graduates were asking at a recent University reunion. If you have any questions about engineering, please write us and we’ll “Ask the Dean” in the next issue of IMPACT.

Job prospects for nuclear engineering graduates are good; enrollment had been dropping, but is now holding its own. “Nuclear power seems to be at a crossroad,” Rathbone noted.

Job prospects for all engineering graduates are tight compared to last year. “All of them will get jobs, but they will have to hustle.”

Disposal of hazardous waste materials can be handled in two ways—either by permanent storage or by breaking down toxicity. “I like the second option best,” Rathbone said.

Engineering enrollment was up during the past academic year, with 2,887 students enrolled for the fall semester, compared to 2,819 in 1981. M.S. candidates numbered 166 and 43 students were enrolled in Ph.D. programs. Totals for 1981 were 155 (M.S.) and 41 (Ph.D.).

“I think we’ll have a good year next year,” Rathbone answered in response to the question, “Should I put my money on the football team?”

Societies honored

The student chapter of the Institute of Electrical and Electronics Engineers has been recognized by its region for outstanding achievement in increasing the number of new members.

During the recruitment period, membership went from 100 to 162, representing the largest percentage increase of all 28 schools in Region S of the IEEE. Another 38 members have been added since the recruitment period. Average student chapter membership is 50, according to Eddie Fowler, faculty advisor.

The student chapter of the Institute of Industrial Engineers has been given an Award of Excellence by its professional branch.

According to Frank Tillman, faculty advisor, the students were honored as a result of their high level of programming and outstanding participation in chapter activities. The chapter has 75 members, nearly half of all industrial engineering students enrolled at KSU.

Old saying: The person who does not read has no advantage over the person who cannot read.
Virgil Stone (EE '13) of Russellville, Ark., "slipped away from engineering" after he graduated and went into the aviation section of the Army. He spent part of that time in Alaska.

Kenneth Benjamin (EE '33), Tempe, Ariz., is semi-retired from the construction business. He and his future wife reigned over 1933 Open House as St. Patrick and his lady.

W.L. "Mac" McFillen (AE '33) spent 25 years with the USDA, then went on to what he considered a more satisfying career as a volunteer in Heifer Project International. The organization, started by the Church of the Brethren, arranged for placement of animals with missionaries in 97 countries of the world.

John P. Woolcott (FME '33) was among the last class of flour milling engineering graduates at KSU. Since retirement, he has spent his time working with his microcomputer.

Carl Miller (EE '38) is a retired Navy captain. He also worked for General Electric and AMCO before becoming self-employed. He now lives on the shore of a 52,000-acre lake in Somerset, Ky.

Jack Warner (EE '42) is a retired colonel in the Army, where he worked in missiles and operations research. He is now mayor of Greene, Kan.

William R. Kimel (ME '44, M.S. '48) has added to his long list of awards with a Distinguished Service Citation from the University of Wisconsin, where he received his Ph.D. He was recognized for significant contributions to the development of nuclear engineering education and to the body of technical knowledge in the field. Kimel spent 22 years as an engineering faculty member at KSU, where he formed the Department of Nuclear Engineering. He is now Dean of Engineering at the University of Missouri-Columbia.

Al Silady (CE '44) has been named an Associate at Howard Needles Tammen & Bergendorff, where he is in charge of the Overland Park office. During his tenure with HNTB, he has directed such projects as major arterial streets, bridges, freeways and airports.

Robert J. Scanland (CE '49) is working in Malaysia, where he is directing construction of a portion of a six-mile-long bridge.

R. Rahn Smiley (Arch'E '49) has opened an office in Topeka for the practice of structural engineering. He was associated for 32 years with Finney and Turnipseed, Topeka.

Donald Curtright (EE '50) was featured in the Kansas City Star in a "Corporate profile" of his company, Greb X-Ray of Lenexa. Curtright is president of the firm, which sells and services medical imaging devices such as X-ray machines and CAT scanners. Curtright noted that he expects close to 50 percent of advancements in medicine in the next five years will be in imaging. Curtright is a member of the College of Engineering Advisory Council.

Marion E. Oliver (EE '58) is program manager for the Technical Direction Agent responsibility for the John Hopkins Applied Physics Laboratory, in the Joint Cruise Missiles Project under Rear Admiral Steven J.

see p. 8

Durland Hall Dedication Set for September 30

Dedication ceremonies for Durland Hall, Phase II are scheduled for 3 p.m. Friday, September 30. Engineering Student Ambassadors will be on hand to show you through our newest facility, and you'll have a chance to tour other engineering buildings as well.

The College of Engineering also has planned a luncheon for 1 p.m. Friday in the K-State Union and a hog roast for 5:30 p.m. in the back yard of KSU President Duane Acker's home. If you can attend, please fill out and return the form below by September 23.

Several other events will be taking place that weekend, including the Oklahoma football game and Parents' Day. The Engineering Advisory Council and groups sponsoring women's and minorities programs in engineering also will be meeting.

Durland Hall is located on the northwest end of the campus, across the street from Seaton Hall.

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PLEASE RETURN THIS FORM TO:
Donald E. Rathbone
Dean of Engineering
146 Durland Hall
Kansas State University
Manhattan, KS 66506

NAME __________________________ CLASS OF ________ CURRICULUM ________

ADDRESS _______________________

( ) I will be present for the Durland Hall dedication at 3 p.m. Friday, September 30 and will bring ____ additional guests.

( ) I plan to attend the luncheon at 1 p.m. in the K-State Union and have enclosed my check for $$______ ($5 per person, payable to the K-State Union).

( ) I plan to attend the hog roast at 5:30 p.m. in the back yard of KSU President Duane Acker’s home and have enclosed my check for $$______ ($7.50 per person, payable to the KSU College of Engineering).

ALUMNI GUESTS
Durland Hall Dedication
September 30, 1983

6 K-State Engineering IMPACT, Fall 1983
Students put new twist on frisbees

Civil engineering students have put a new twist on frisbees. They’re making them of concrete.

It’s all part of their education—trying out various mixtures of the material to find out which works best for a particular job.

The concrete frisbees make learning more fun. So do concrete canoes, which have provided a lesson for the past 10 years.

This year, the students built concrete frisbees for an informal contest held in conjunction with their annual invitational concrete canoe race at Tuttle Creek Dam. They also were getting in some practice for a national contest in Kansas City in late September, sponsored by the American Concrete Institute.

The frisbees, and the canoes, are built of concrete that is much lighter than normal concrete. The mixture consists generally of expanded shale, cement and water, and styrofoam beads, for lightness. The forms are covered with wire mesh before the cement is applied.

Some of the students used pie pans as molds for the frisbees. Others put the concrete around a regular plastic frisbee. The frisbees weigh from 1 1/4 pounds to about three pounds.

In the September contest, students will be judged on accuracy and the length of time (hang time) their frisbees stay in the air. To be eligible for a prize, the frisbees must be 50 percent intact when they land.
Please help us locate donors

Each year, the College of Engineering awards many individual scholarships to deserving students. The College and the students wish to thank the persons who initiated and contributed to the various scholarships. We have, however, lost contact with some of the donors.

Our letters to persons listed below have been returned as undeliverable. If you know the whereabouts of any of these people, please contact the College of Engineering, Office of the Dean, Kansas State University, Manhattan, KS 66506.

Names and last known addresses are: Mrs. Margaret Emma Brown, 330 Laramie, Manhattan, Kan. (Leonard Leon Brown Memorial Scholarship); Mrs. Sarah Link, 1408 Claremont Terrace, Clovis, N.M. (The Captain Richard L. Goudy Memorial Scholarship); Mrs. William A. Hagen, 6954 Southwest 151st St., Miami, Fls. (The William A. Hagen in Mechanical Engineering Scholarship); Mrs. Edith Myers, 4366 Logrono Drive, San Diego, Calif. (Fred Myers Scholarship).

Durland, cont’d.

programs up-to-date, we still have a major need for computers,” Rathbone said. “Our in-kind gifts are a step in the right direction, but we still have a long way to go.”

Rathbone noted the lack of funds to equip laboratories such as those in the thermal science, materials and solid-state areas.

Rathbone added, “We are also seeking support in particular for our new robotics laboratory because of the vital need to educate our students in that area. Robots and computer-aided design and manufacturing are growing in importance, and we intend to prepare our students for what is the technology of the future.”

The cost of equipping a laboratory usually ranges from about $75,000 to $300,000, he said.

Alumni, cont’d.

Hostettler. He has been with the Johns Hopkins laboratory since graduation and is former program manager for Standard Missile Programs.

George Beyer (EE ’65) is systems engineer for environmental systems and product engineering at Beech Aircraft.

Keith L. Bennett (EE ’64), Harold H. Munger II (CE ’66) and Steven J. Metro (CE ’70) have been named Associates at Wilson & Company Salina. Bennett and Metro have responsibilities in the electrical and civil engineering areas, respectively, and Munger is responsible for personnel, administration and project management.

Lt. Commander Dennis E. Horne (CE ’68) has been named executive officer of the Naval Civil Engineering Laboratory at Port Hueneme, Calif. The laboratory is the Navy’s leading laboratory in energy conservation, with an annual budget of approximately $40 million and a staff of about 330 military and civilian personnel. The lab is engaged in about 300 projects within four technical programs.

Rodney S. Horn (AE ’70) has been named 1983 “Young Engineer of the Year” by the Mid-Central Section of the American Society of Agricultural Engineers. He is an advanced development engineer with the Hesston Corporation, Hesston.

Kenneth J. Sidorowicz (M.S., ME ’78) has been named associate consultant for the Kansas City office of Wagner-Hohns-Ingels, Inc. The firm specializes in construction litigation and arbitration as well as project management and critical path method (CPM) construction scheduling.

Deaths

Harry I. Hazzard (ME ’28), Fallbrook, Calif., Dec. 31, 1982. Mr. Hazzard was longtime head of design for the McCullough Corp. in Los Angeles. He had done consulting work in recent years.

Veril H. Dobbins (EE ’29), Sept. 18, 1982. Mr. Dobbins was retired from the Kansas Gas & Electric Co.

Walter “Ron” Fleck (ME ’34), March 13, 1983. Mr. Fleck was chief engineer and director of planning and development for the Wichita Board of Park Commissioners. During part of his 31 years with the park department, he oversaw the development of Mid-Continent Airport, coordinating the design and engineering work with the consultants and contractors.

Ralph D. Mattingly (IE ’58), Dallas, Tex., March 5, 1983.