

Dip in Enrollment For Fall Predicted, See Next Issue

IMPACT will carry an in-depth article in next issue on enrollment figures for fall semester and a report on how the 1971 graduating class of K-State engineers fared in obtaining jobs in a tight national job market.

As of Aug. 16, the incoming freshman class in engineering at KSU was projected at 280 compared with a total of 335 in fall 1970. This represents an anticipated decrease of 16.5 per cent.

On the positive side of the ledger, an increase in the combined enrollment in the junior and senior classes is projected; from 576 last year to 635 this fall. "We are getting more transfer students," noted Dr. Kenneth K. Gowdy, assistant dean of engineering.

At press time, complete data were not available regarding placement of 1971 graduates. Preliminary figures indicate that KSU engineering graduates averaged about 1.5 offers each. However, many seniors did not have employment interviews because of plans to enter graduate school or the military.

It must be stressed that the above remarks are strictly preliminary figures on enrollment and placement. Look for a more detailed, conclusive report on the enrollment-placement situation in the October-December issue of this newsletter. — Thomas A. Gerdis, Editor.

Select Three New Council Members to Aid College

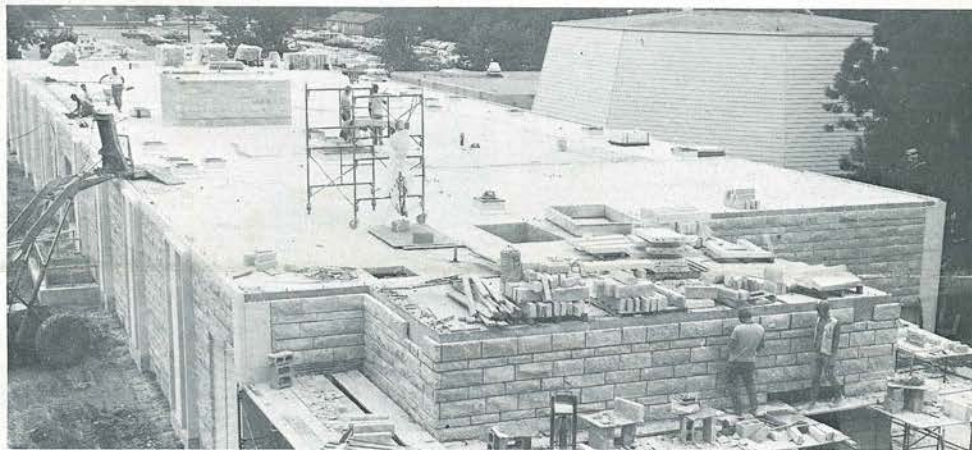
Three distinguished professional engineers — two industrial executives and a college administrator — have been named to the KSU College of Engineering Advisory Council.

To serve three-year terms as at-large council members: W. LeRoy Culbertson, Bartlesville, Okla.; Howard C. Eberline, Oklahoma City; and Prof. Claude L. Wilson, Prairie View, Tex.

The new members will attend the next council meeting October 15-16, weekend of the homecoming football game against the Iowa State Cyclones.

The new members succeed Ross Beach, president, Producers Gas Equities, Hays;

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PROGRESS ON WARD HALL ADDITION — Construction on the external portions of the addition to Ward Hall (Nuclear Engineering) is virtually completed. However, considerable inside work remains. Occupancy is tentatively set for January or February. Work was slowed by a construction workers' strike during the spring semester.

Dean's Club, \$/Year² Club Set, Contributions Still Coming In

The KSU College of Engineering has established two fund-raising clubs for alumni and friends of the College. Purpose of these clubs is to provide public recognition for friends and alumni of the College who provide the financial support permitting the College to do things it needs to do but which are not funded or not fundable by state appropriations. CHARTER MEMBERSHIPS in the clubs will be available through June 30, 1972.

The Dean's Club calls for members to give or pledge not less than \$500 to be paid in not more than five years. Persons who have given \$500 since 1967, or who give or pledge \$500 by June 30, 1972 will be made CHARTER MEMBERS.

The second, Dollar-Per-Year-Squared Club, calls for alumni members to give annually \$1 for each year since graduation from K-State: for example, a 1970 graduate would give \$1; a 1960 graduate, \$11.

Members of both clubs will receive a suitable token of their membership, periodic reports from the College, will have an opportunity to provide feedback, and will be invited to the first annual meeting of the clubs set for next March on the weekend of the traditional Engineering Open House and Alumni Symposium.

The most pressing immediate problem is the completion of the funding for the addition to Ward Hall. Income from both clubs will therefore be used initially for this purpose primarily.

As of July 1, the College was \$110,000 short of the necessary amount. Since the July 15

mailing to alumni, a total of \$4,462 in cash has been received by Dean R. G. Nevins.

"The response thus far has been very gratifying. However, we still have a considerable way to go to reach our goal of \$110,000, and many more generous contributions are urgently needed," Dr. Nevins said.

Below are listed the charter members of both clubs and those alumni or friends of the College who have made contributions to the addition to Ward Hall, all as of August 13, 1971. Those persons qualifying for charter memberships in either or both clubs on or after August 14, 1971, will have their names published in the October-December issue of this newsletter.

If you would like to add your name to the charter membership of the clubs or to the list of Ward Hall contributors, please send your check (made out to KSU Endowment Association) to Dean R. G. Nevins, KSU College of Engineering, Seaton Hall, Manhattan, Kansas 66502.

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GIFT TO CHEMICAL ENGINEERING — The department of chemical engineering has been given a \$10,000 crystal growing machine by Western Electric, Lee's Summit, Mo. Enabling K-State researchers to grow crystals of high structural quality, the machine has a replacement value of about \$50,000, says Dr. David G. Retzlaff, assistant professor of chemical engineering.

Senior Design Students Derive Solutions to Knotty Problems

Each year since 1966 several groups of three to five KSU seniors in mechanical engineering have had some valuable experience in solving typical technical design problems furnished to their professors by industrial firms.

This industrial liaison program of the department of mechanical engineering typically involves about 35 students a semester. Here is how the program works:

A company representative comes to campus at the start of a semester and explains his firm's technical problem to an assigned group. Some firms sponsor more than one problem a semester.

A contract is worked out between the firm and the assigned student group along with the department of mechanical engineering. Students work on their problem during the semester. They take an expense-paid trip to present their findings to a team of engineers at the sponsoring company shortly before the semester's end.

Alternative solutions to the problem are presented with emphasis given to their recommended solution.

The presentation is a valuable experience for the students because the firm's engineering staffs have a habit of asking thorny questions to students.

Last spring Thomas A. Gerdis, IMPACT editor, accepted an invitation to take a trip to Bendix-Kansas City. He observed two groups of ME seniors making presentations to a group of nine engineers and three technicians.

In charge of the presentation was C. P. (Chuck) McKay, chief engineer. Several K-

State engineering graduates helped evaluate the presentations: R. H. (Dick) Floersch, Dr. David R. Hahn and Donald D. Oswald.

The first group's presentation was begun by Clark Harbaugh who used transparencies to describe a design for an applicator blade mounting. Harbaugh discussed the alternative solutions and some design restrictions. Gary Davis and Ray Siebert explained the part of the design for which they were responsible. Both were careful to point out any pitfalls in their designs.

Lowell McAfee began the presentation by the second group for their recommended design of a long-term static load fixture. Members of the second group: Willard Ransom, Evan Wenger and James Whelchel.

Initially, both groups thought the problems they were assigned were very simple. However, once "they got into them, they found they were quite complicated," said Dr. John C. Lindholm of the K-State mechanical engineering faculty.

McKay pointed out that the problems assigned are "everyday problems that engineers work with. More unknowns and variables crop up. Lots of little things come up. Both groups did a fine job."

Bendix has participated in this KSU industrial design program since its inception five years ago. Besides giving students some real-life professional experience and having some problem solved quite inexpensively, "our participation has been important in recruiting. We have hired eight to 10 K-Staters as a result of this program," McKay said. One recruit is Floersch.

Charter Memberships In KSU Giving Clubs Are Still Available

DEAN'S CLUB . . .

Ray Adee, '47; W. E. Balderson; Fred J. Benson, Jewell R. Benson, '33; Cecil H. Best'; N. G. Branson, '38; C. E. Brehm, '32; W. M. Carleton, '38; Curtis G. Chezem'; Hon. Donald Christy, '33; Robert W. Clack'; Howard Coleman, '31; Harry Darby; Martin K. Eby Jr., '56; and Walter Hanson, '39.

W. C. Higdon, '34; Donald King, '40; Edward J. King, '43; Clifford Krabbenhoft, '38; Virgil F. Lundberg, '34; Lawrence D. McDonald, '23; Ralph G. Nevins'; Philip M. Noble, '26; Adm. E. J. Peltier, '33; Henry F. Pierce Jr., '63; W. H. Prentice, '37; William V. Schoof, '53; T. F. Skinner, '36; and Harry R. Wege, '25.

\$ / YEAR² CLUB . . .

William Turnbull, '04; Donald F. Foote, '09; Clyde Q. Ward, '10; Earl L. Hageman, '11; George L. Usselman, '16; William D. Scully, '21; Ernest F. Stalcup, '22; Leland O. Sinderson, '23; Floyd L. Werhan, '24; Charles F. Irwin, '25; Donald Lee, '29; Edward C. McBurney, '30; Ralph O. Smith, '33; James C. Richards, '34; and Wayne C. Richards, '34.

Clifford F. Newell, '35; Leonard B. Izard, '36; Loren D. Grubb, '37; Clyde McCauley Jr., '37; John H. Bateman, '38; Brig. Gen. Chester H. Johnson, '38; Paul M. Hefty, '39; George H. Larson, '39; Richard C. Allen, '41; Carl T. Besse, '41; Robert A. Peterson, '41; John P. Ransom, '41; Cdr. Frank W. Jones, '43; Richard M. Smoll, '43; and Arthur R. Laughlin, '45.

Melvin L. Johnson, '46; Brig. Gen. (Ret.) William G. King Jr., '46; F. R. Dean Engwall, '47; Paul L. Furbeck, '47; John Anderson, '48; John F. Honstead, '48; Edwin C. Warren, '48; George H. Weekley Jr., '48; Elvin J. Chatelain, '49; Roger L. Sandstedt, '49; and Everett J. Taylor, '49.

James L. Burgess, '50; Lt. Col. Paul R. Curry, '50; Donald E. Curtright, '50; Mark E. Baldwin, '51; John J. Corrigan, '51; Victor L. Fincham, '51; John F. Huff Jr., '51; Max G. Main, '51; James B. Newman, '51; William B. Simecka Jr., '51; George R. Teneyck, '51; Gerald Houk, '52; Dwight Nesmith, '52; Ralph O. Turquist, '52; and Hajime Tanaka, '52.

James W. Adams, '53; Warren M. Beevers, '53; Roger M. Brislaw, '53; John O. Mingle, William K. Binford, '54; James R. Grove, '54; Hubert W. Smith, '55; James T. Bonner, '56; Donald Kershner, '56; Thomas L. Lethcho, '56; Kerry F. Clifford, '57; Joe D. Daniels, '57; Gene W. Geil, '57; Norman J. Teflow, '57; Kenneth R. Ingerly, '58; and Gle. E. Kater, '58.

Hubert F. Caspar Jr., '59; Wen-Hsiung King, '59; Yung Ling Ko, '59; Kenneth E. Blevins, '60; Michael D. King, '60; John D. Palmateer, '60; Dean A. Skaer, '60; Richard C. Arnold, '61; Vincent P. Driski, '61; Douglas W. Exline, '61; Jerry W. Fankhouser, '61; Ralph D. Johnson, '61; David W. Pearson, '61; John V. Ramsour, '61; Donald L. Gish, '62; Ronald J. Haky, '62; John Z. Reynolds, '62; and Ralph H. Schimke, '62.

James A. Baran, '63; Jarold W. Boettcher, '63; Allen D. Boge, '63; Capt. David L. Flynn, '63; Robert E. Kever, '63; Karl Muenzenmayer Jr., '63; Shridhar V. Parikh, '63; Olin L. Vanderslice, '63; David S. Dodsion, '64; Joseph J. Fettes III, '64; Roger W. Heitschmidt, '64; Un Pah Hwang, '64; Earl N. Kientz, '64; and John R. Nelson, '64.

Gerald V. Auchard, '65; Robert O. Avery, '65; Thomas R. Hill, '65; Oliver W. Holmes, '65; Daniel Y. Chung Ko, '65; Lorrin E. Lowe, '65; Robert C. Selby, '65; Warren R. Staley, '65; Jay A. Wiechert, '65; Thomas A. Boyer, '66; Chung Chiang, '66; Robert D. Crangle, '66; Franklin D. Duncan, '66; James A. Huggans, '66; Edward L. Johnson, '66; Billy J. Livesay, '66; Robert E. Olmstead, '66; and Kerry F. Williams, '66.

William O. Fielding, '67; James L. Finney, '67; David E. Klotz, '67; James L. Long, '67; Richard A. McKown, '67; Randall Schermerhorn, '67; William L. Selbe, '67; Subir Banerji, '68; Steven C. Borell, '68; Vincent L. Carlson, '68; Donald R. Frikken, '68; Larry E. Greene, '68; Gary L. Johnston, '68; David S. Joy, '68; Dallas L. Kibbe, '68; Hung-Cheong Leung, '68; Gunter Malik, '68; Capt. Jim A. McKinnis, '68; John C. Peck, '68; Donald W. Prather, '68; Vijaykumar P. Rode, '68; Thomas W. Skinner, '68; David J. Unruh, '68; and Capt. William A. Wright, '68.

Douglas S. Clark, '69; Charles M. Haney, '69; Daniel S. Huffman, '69; William H. Maxwell, '69; Dick McCreight, '69; Timothy W. Moran, '69; Neil F. Pellmann, '69; Richard E. Steele, '69; Kenneth L. Thomas, '69; Steven J. Weybrew, '69; and Chun Sup Yoon, '69.

Steven J. Cohorst, '70; Lt. Charles R. Cole, '70; Kenneth R. Fladie, '70; David B. Fruetel, '70; David C. Hall, '70; Steve E. Hanan, '70; James E. Keck, '70; Duane L. Keller, '70; Randall W. Koudele, '70; Donald E. Lindahl, '70; David G. Reilly, '70; Thomas C. Roberts, '70; Dwight A. Schulke, '70; Randell L. Sedlacek, '70; James D. Weichel, '70; and Lt. Fred R. Harris, '71.

WARD HALL DONORS . . .

Ray Adee, '47; E. Q. Adams, '68; Armco Company Foundation; Robert O. Avery, '65; W. E. Balderson; James A. Baran, '63; Black & Veatch; N. G. Branson, '33; C. E. Brehm, '32; W. M. Carleton, '38; Caterpillar Tractor

(Continued on page 3)

Girl Conducts Study Of Light-Dark Cycles With Rohles' Help

A bright, 16-year old high school coed from Leawood, Kan., presented her research activities on light-dark cycles at KSU during the recent annual state meeting of the Kansas Junior Academy of Science.

Joni Baeke, an incoming junior at Shawnee Mission South High School and the daughter of Dr. and Mrs. John O. Baeke, Leawood, presented a 10-minute paper titled, "A Study of the Effects of Orbital Photoperiodism on the Behavior Patterns of Gerbils."

At the meeting she became acquainted with Dr. Frederick H. Rohles Jr., associate director of K-State's Institute for Environmental Research. He helped her get started in her photoperiod research of effects involving gerbils, rodents found in Africa, Asia and Southeast Europe.

In October 1969 she wrote to Rohles, professor of mechanical engineering and experimental psychology, for guidance. He sent her a copy of a scientific paper he had published dealing with light-dark cycle changes in monkeys.

Using his work as a model, she studied gerbils on a day consisting of 45 minutes of light and 45 minutes of dark with a control group of gerbils living a normal day of 12 hours of dark and 12 hours of light.

Miss Baeke developed her own equipment for conducting her experiments, including a sensing device and a special lighting system. She says the change in light-dark cycles had considerable effect on the gerbil's feeding habits and activity levels.



TALK ABOUT LIGHT-DARK CYCLES — Joni Baeke, a high school girl from Leawood, Kan., chats informally with KSU's Dr. Frederick H. Rohles Jr. about light-dark cycles in animals. Miss Baeke sought Rohles' aid about 18 months ago before embarking on research of her own which she reported to the Kansas Junior Academy of Science.

Garth Thompson Heads ME Dept., McNall Takes Industry Position

A 36-year-old University of Texas engineering educator-researcher, an automatic controls expert, has been named the new head of the KSU department of mechanical engineering.

The appointment of Dr. J. Garth Thompson to the position was announced by Dr. Ralph G. Nevins, KSU engineering dean.

Thompson succeeds Dr. Preston E. McNall Jr. who resigned effective June 30 to accept a challenging assignment at Johnson Service Company in Milwaukee. McNall had been department head since February 1968.

As department head, Thompson will oversee a 20-member faculty, about 280 undergraduate students, and 18 doctoral and 30 master's students.

Born in Logan, Utah, Thompson comes to KSU from Texas' Austin campus where he has performed impressively since September 1966 when he joined the engineering faculty.

In that five-year period, he developed undergraduate courses and a laboratory and a graduate program in dynamic systems analysis, design and control; received outstanding teaching awards; and has been awarded research grants from the University, National Aeronautics and Space Administration and the National Science Foundation.

In addition, he has published extensively and been the recipient of the Ralph R. Teetor professional development award of the American Society of Automotive Engineers. He is a member of several technical and professional societies and honoraries.

Dr. J. Garth
Thompson



Active in the Mormon church, he received his B.S.M.E. degree in 1960 from Brigham Young University. In his senior year, he designed and built a research plasma generator.

He continued his studies at Purdue University, receiving his M.S. in January 1962. His thesis was a study of time optimal discontinuous control systems. In that investigation, he developed optimal switching criteria for second and third order single variable systems and for multi-variable systems.

The following year he worked for Thompson-Ramo-Woolridge Corporation, Redondo Beach, Calif., at their space technology laboratory. He returned to Purdue to complete his Ph.D. His dissertation dealt with identification and compensation of nonlinear systems. He received the degree in 1967.

Thompson is married and the father of five children.

Write for Free Copy Of Convocation Talk

"That There Might Be a Tomorrow: The Challenge to Engineering," or "Who Cares Whether the Sun Comes Up If There's No One to See It?"

That is the title of an address made by Engineering Dean Ralph G. Nevins last spring to graduating seniors in engineering at a convocation preceding Engineering Open House and the Alumni Symposium.

Excerpts from that address restating the "abiding purpose" of the College were published in the last issue of IMPACT. Interest in the speech has been such that copies of the address will be made available to alumni and friends of the College.

In addition to purposes, Dean Nevins listed several goals for the College and discussed trends in engineering education. A reading of it would be well worth your time.

To obtain your copy of the convocation address, write to: R. G. Nevins, KSU College of Engineering, Seaton Hall, Manhattan, Kan. 66502.

Instruction Awards To Two Educators, Lucas, Nash

Two K-State engineering educators have been awarded \$500 awards for excellence in teaching from two different sources. They are Dr. Michael S. P. Lucas, professor of electrical engineering, and Rodney T. Nash, instructor in mechanical engineering.

Lucas, granted a special \$500 KSU College of Engineering award, was selected by the student-faculty advisory committee of the K-State Engineering Center for Effective Teaching (CET). Lucas is director of the K-State Solid State Engineering Laboratory.

Nash received a university-wide award during commencement exercises May 14. His award was funded by Standard Oil (Indiana) Foundation. Nash has been an engineering faculty member since 1968.

"Solid state engineering courses taught by Dr. Lucas are so popular that the College has had to limit enrollment due to space and equipment limitations. These are two of only a few technical elective courses at our university so highly regarded by students," noted Dr. Paul L. Miller Jr., associate professor and CET director.

A color portrait of Lucas and a plaque will be placed in a display case in Seaton Hall, main engineering building at K-State. Lucas will get permanent possession of them next May. Lucas has ranked in the top third of the College of Engineering faculty on every undergraduate student evaluation of teaching he has been eligible for in the past five semesters.

Nash, working with Dr. Clyde H. Sprague of mechanical engineering, was honored for his use of individualized instruction techniques since June 1969.

"Nash has been evaluated four semesters by engineering students. He ranked in the upper third all four times and was in the upper 10 per cent the last two times.

"This is in competition with more than 100 engineering teachers of all professional ranks, through full professor, and is a very outstanding accomplishment," Miller said.

List Ward Hall Donors, Follow-up in Next Issue

(Continued from page 2)

Company; Curtis G. Chezem; Hon. Donald Christy, '33; Robert W. Clack; Leo R. Conwell, '47; Arthur C. Cotts, '49; and Robert D. Crangle, '66.

Harry Darby; Eleanor Davis, '24; Steven M. Dent, '68; John Deffer, '61; Vincent P. Driski, '61; Franklin D. Duncan, '66; Martin K. Eby Jr., '56; Dr. John H. Enns, '32; Jerry W. Fankhouser, '61; Glenn Farrar, '35; Nelson Galle, '58; General Electric Corporation; Donald Gish, '62; F. R. Good, '56; Kenneth Hanson, '50; Ralph Helmreich, '28; Hesston Manufacturing Company; W. C. Higdon, '34; James Hollis, '38; and Daniel S. Huffman, '69.

Kansas Gas & Electric Company; Kansas Power & Light Company; James E. Keck, '70; Donald E. King, '40; Edward J. King, '43; Leslie King, '31; Martin S. Klotzbach Jr., '38; Leo Lessor, '56; W. L. Loewen, '41; Gunter Malik, '68; Marley Fund; Lawrence D. McDonald, '23; Walter Meyer, '42; William B. Middleton, '47; and Ralph G. Nevins.

Pahhandle Eastern; Arnold E. Paulson, '57; John C. Peck, '68; Adm. E. J. Peltier, '33; Phillips Petroleum Company; Donald Phinney, '43; W. H. Prentice, '37; John V. Rasmussen, '61; J. Frederick Ransom, '35; N. I. Saven, '34; William V. Schoof, '53; Dwight A. Schulke, '70; Randell L. Sedlacek, '70; Samuel Sinderson, '56; T. F. Skinner, '36; J. Michael Smith, '62; Lloyd Smith, '47; and James Stresewski, '64.

Herbert M. Timm, '51; Harry R. Wege, '25; Western Electric; Westinghouse Education Foundation; Steven J. Weybrew, '69; Carson H. Wiedeman, '37; and Jerry Zimmerman, '67.

*Denotes KSU faculty member.



ANALYZE REACTOR SHIELDING — KSU researchers, Dr. Walter Meyer (l.) and James W. Thiesing, are analyzing the designs of various types of shielding used to protect workers and equipment working in and around nuclear power reactors. They are shown adjusting the geometry of water-filled aluminum cans taking place prior to measuring the intensity and spectrum of neutrons penetrating through water. Water is typically used as shielding around the cores of power and research reactors such as the KSU TRIGA Mark II teaching-research reactor.

Parking, Buffet and Bus Service For Alumni at Homecoming Game

Planning to attend the homecoming football game against Iowa State University in Manhattan on Saturday, Oct. 16? You might like to take advantage of some or all of the following activities and services to be provided that day.

You may wish to take a few minutes to visit the office of engineering department from which you were graduated or had or have association. These offices will be open until noon. Representatives of each department will be there to greet and chat with you.

There will be free parking in the K-State Union parking lot. This is a savings and a

convenience. It saves fighting stadium traffic and saves you a \$1 parking fee.

Also, there will be a buffet luncheon in the K-State Union starting at 11 a.m. for returning KSU alumni and firends. Cost is \$2.50 plus tax per person. This will be an ideal time to talk about old times with alumni and firends.

For your convenience, special busses to the stadium will leave the front of Seaton Hall, the main engineering building, every few minutes. Cost is 25 cents per person each way.

Kickoff time for the game is 1:30 p.m. Have a good time!

K-State Engineer Subscription Card — Rate \$2.00 a Year

The K-State Engineer, magazine of the engineering student body published four times a year, is accepting subscription orders from alumni and friends of the College of Engineering. The magazine has made significant strides in the past few years and is excellent reading for keeping pace with engineering student thought and activities at K-State. Clip out this coupon today to be sure to receive the October 1971 issue.

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Seaton Hall
Manhattan, Kan. 66502

*Alumni. How about sending a subscription to a prospective K-State engineering student.

Service Award To Dean Nevins From Illinois

Dr. Ralph G. Nevins, dean of engineering at KSU, was one of five prominent alumni of the University of Illinois, Urbana-Champaign, honored April 30 with the seventh annual College of Engineering alumni honor awards for distinguished service.

These awards are given to persons "who have achieved eminence by outstanding leadership in planning and direction of engineering work, fostering professional development of young engineers, or contributions to the advancement of knowledge."

Nevins, described as "dean, professor, executive, engineer and research worker," is cited "for his original contributions and leadership in applying administrative, engineering, and scientific skills in biomedical, environmental and mechanical engineering education and research."

Born in Kinsley, Kan., he earned his B.S. and M.S. degrees from the University of Minnesota and went to Illinois for a Ph.D. in mechanical engineering in 1953.

He became professor and head of mechanical engineering at K-State in 1957, received international recognition for work in environmental engineering, became founder and director of the K-State Institute for Environmental Research in 1962, and was named dean of the College in 1967.

Dean Nevins is the author of numerous publications and has served in public and professional offices and as consultant to industry and agencies of the federal government.

ONR Boosts THEMIS Project, EES Is Awarded 16 Contracts

While funding to the KSU College of Engineering has not been quite as high as in recent years, the Engineering Experiment Station is pleased to report that 16 contracts totaling \$326,535 have been awarded since March 30.

By far the large majority of the funds come from federal sources: \$314,845. The State of Kansas has awarded \$5,000; industrial firms, \$3,690; and a professional institute, \$3,000.

The largest single grant is \$80,000 from the Office of Naval Research for continuation of the large ONR contract originated three years ago under the Department of Defense THEMIS program.

This grant now insures a total funding of \$1.2 million under the DOD contract through July 1973. The original THEMIS contract was awarded in July 1968 for an interdisciplinary study in nuclear engineering and solid state physics.

DOD's THEMIS program is being phased out, noted Dr. Hermann Donnert, professor of nuclear engineering and project director. However, continued support of the project by ONR beyond July 1973 is expected.

Under the contract, the K-State research team led by Donnert is studying basic phenomena involved in gaining an understanding of radiation-induced damage in electronic materials.

Among results achieved by the K-State team the past year:

— Development of a technique for measuring speed of neutrons in nuclear reactor cores. The technique will be helpful "in conducting more detailed analysis of power reactors."

— Acquisition of more knowledge "about measuring doses of radiation. This will be helpful for environmental monitoring of nuclear power installations."

Donnert said "techniques developed in the study of radiation-damaged electronic materials can be applied to investigate radiation-energy storage in rock salt and ceramic materials. This is one of the pivotal and controversial questions raised in regard to the safety of a radioactive-waste depository near Lyons, Kan., proposed by the U.S. Atomic Energy Commission."

Among larger contracts awarded since March 30:

— Dr. Emerson L. Besch, "Studies of Ventilation and Air-conditioning Requirements of Laboratory Animals," \$45,642, Department of Health, Education and Welfare.

— Dr. L. T. Fan, "Simultaneous Blending and Compaction of Grains and Grain Products," \$44,567, U.S. Department of Agriculture Grain Marketing Laboratory.

— Fort Verser, "Operation of Professional Advisory Service Center," \$36,821, Office of Civil Defense.

— Dr. Fan, "Optimal Design of Waste Treatment Systems," \$26,315, Environmental Protection Agency.

— Dr. E. Stanley Lee, "Invariant Imbedding and Quasilinearization in Engineering Systems," \$21,600, National Science Foundation.

— Dr. C. L. Hwang, "Modeling and Optimization of Transient Cooling Water Discharge from Power Generating Plants," \$18,000, Kansas Water Resources Research Institute.

— Prof. Vernon P. Deines, "Demonstration Project on Business District Planning, \$15,000, HEW and State of Kansas.

— Dr. Walter Meyer, "Fast Neutron Transmission Measurements for Reactor Core and Shielding Materials," \$11,095, Atomic Energy Commission.

Other grants recently received:

— Dr. Larry E. Erickson, "Design and Control of Transient Waste Treatment Processes," KWRRI.

— Dr. Lee, "Analysis, Modeling and Forecasting of Stochastic Water Quality Systems," KWRRI.

— Verser, "Gamma Ray Attenuation Modeling Validity," OCD.

— Dr. Jack B. Blackburn, Fellowship, Institute of Traffic Engineers.

— Dr. Philip G. Kirmser, Fellowship, Phillips Petroleum Company.

— Dr. Frank A. Tillman, "Multi-area Transport Routing Optimization," Post Office Department.

— Dr. Michael S. P. Lucas, Temperature Test Chamber, Western Electric Company, Lee's Summit, Mo.



Messenheimer



Clifton

Three Engineering Grads To Advise KSU College

(Continued from page 1)

Edward J. King, president, King Radio, Olathe; H. V. Rathbun, vice president of operations (ret.), Western Power and Gas, Great Bend; and the late C. C. Tate, vice president (ret.), Phillips Petroleum Company, Bartlesville.

"The council provides valuable advice and direction to our programs. We are honored that these busy people have consented to give of their time to assist the College and Kansas State University.

"We are especially delighted to have these three men advising us. Their background and experiences will aid us significantly in our quest for making K-State's engineering college an even more effective center for teaching, research and service," Nevins said.

Culbertson is vice president in charge of Phillips' natural gas and gasoline department; Eberline, technical director, corporate division, Kerr-McGee Corporation; and Prof. Wilson, vice president and past engineering dean at Prairie View A & M College.

Two Veteran Profs Retire After 53 Years Service

Two veteran engineering educators — John P. Clifton, 70, and Alva E. Messenheimer, 68 — with a combined total of 53 years of teaching and service have retired from the KSU engineering faculty. Both are associate professors and K-State alumni.

Clifton, native of Vermillion, Kan., was on the industrial engineering faculty from 1947 until last semester. He received an M.S. degree in his field at K-State in 1956.

A native of Admire, Kan., Messenheimer earned his B.S. degree in electrical engineering in 1924 at KSU and joined the machine design faculty in 1942.

Clifton has no particular retirement plans. "I closed the office door on June 30. I determine what I'll do on a day-to-day basis," he said.

Since retirement, Messenheimer too has remained in Manhattan. He and his wife have had a cottage at City Lake in Council Grove, Kan., since 1953. "We spend a lot of time during the summer down there," he said.

News-worthy Notes

James P. (Pat) Murphy, instructor in agricultural engineering, has joined the K-State Cooperative Extension Service engineering department as a farm structures specialist. He is responsible for planning and conducting educational programs in Kansas on buildings and equipment needed for efficient livestock production, including management of animal wastes to prevent pollution.

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An associate professor of mechanical engineering, Dr. John C. Lindholm, is on leave of absence this academic year to the engineering staff of DuPont Company, Newark, Del. He will take part in DuPont's year-in-industry program for faculty members of U.S. engineering colleges.

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Dr. Floyd W. Harris, associate professor of electrical engineering, has returned to the faculty after being on an 18-month appointment with the American Electric Power Service Corporation, New York City. His employment was arranged by the American Society for Engineering Education and the Ford Foundation program for residencies in engineering practice.

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Dr. M. John Robinson, associate professor of nuclear engineering, has returned to the faculty after serving the past 12 months as an International Atomic Energy Agency technical assistance expert at the Institute of Atomic Energy, Sao Paulo, Brazil.

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A symposium on "Environmental Requirements for Laboratory Animals" was conducted at KSU May 3-4. It was headed by Dr. Emerson L. Besch, professor and head of physiological sciences and the multi-disciplinary K-State Institute for Environmental Research.

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Ninety-eight of Kansas' brightest mathematics and science students took part in the seven annual Engineering and Science Summer Institutes at K-State. Incoming high school juniors and seniors explored career and educational opportunities in 12 technological fields, says ESSI Director Kenneth K. Gowdy.

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Dr. William H. Johnson, professor and head of agricultural engineering, is a co-author of one of eight technical articles receiving 1971 honor awards from the American Society of Agricultural Engineers. John W. Hodler, a senior from Beloit, Kan., won second place in the spring mid-central regional technical paper competition of ASAE.

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KSU's student chapter of the American Society of Civil Engineers is one of 22 chapters granted a certificate of commendation by ASCE's national office for 1970. This marks the 13th consecutive year, and 14 of the last 15 years, that K-State has been so recognized for its activities. Chapter adviser is Prof. Vernon H. Rosebraugh.

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The Tri-Valley Chapter will host the 1972 annual meeting of the Kansas Engineering Society in Manhattan. Many members of the chapter are K-State engineering faculty members.

K-State Engineering Organizations Have 1st Coed Member

An attractive, dark-haired coed engineering major has broken the tradition of all-male membership for three important KSU engineering student organizations.



Laree Mugler

Laree Mugler, Clay Center, Kan., junior in mechanical engineering,

has become the first female named to Steel Ring, Sigma Tau and Pi Tau Sigma in the long history of K-State engineering.

Steel Ring and Sigma Tau are college-wide organizations. Pi Tau Sigma is open to mechanical engineering majors only. Invitation to these honoraries is based on exemplary academic performance.

"It's kind of neat to be first. I didn't even think I was eligible," she said.

She was invited to smokers by officers of Sigma Tau and Pi Tau Sigma. Smokers are held for screening those students eligible for initiation into the honoraries.

"I didn't even know what a smoker was. But I went. It was fun," she recalled. Laree didn't smoke a cigar as did many of her male counterparts at these functions.

Her mother has taken all this in stride. Keon Mugler, her father, a Clay Center industrial executive, took it rather calmly too.

"He thought it was pretty good that I was named. He wanted to know if there were any other girls in the organization. I told him I didn't know. I turned out to be the only one," she said.

Miss Mugler thought it humorous that her presence at normally all-male initiation ceremonies caused changes in the scripts:

"The guys reading the scripts had to amend them several times from 'gentlemen' to 'gentlemen and lady.' A couple of times they stumbled. Everybody laughed. It sort of broke the ice. I thought this was pretty funny," she said.

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