

GENERAL ENGINEERING NEWSLETTER

University of Illinois
Vol. 3, No. 2

Urbana, Illinois
July, 1961

INDUSTRIAL SEMINAR TO BE HELD

The annual Industrial Seminar, sponsored by the G. E. Department in cooperation with the Division of University Extension, which was planned for the spring of 1961 has been rescheduled for late October, 1961. It is hoped that a fall seminar date will be more convenient for both participants and staff than has been true of the spring date. Further information about the seminar will be provided in the near future.

GE HAS TWO NSF SUMMER PROGRAMS

The G. E. Department again this summer is conducting a Summer Science Institute for 41 especially talented high school students whose primary interests lie in engineering and science. The program is being supported by the National Science Foundation, as it was last year, and is six weeks in length. Meeting from June 12 through July 21, the program includes technical lectures by staff members of various departments, as well as lectures on the history of engineering. Various university laboratories are visited to observe actual research underway, and the students participate in the collection and analysis of experimental data.

It was felt that last summer's institute was an outstanding success and this year's program again promises to be very rewarding for all concerned. It is hoped that such an institute may become an annual offering of the department.

The G. E. Department also is offering, with NSF support, an eight-week Summer Institute in Engineering Technology for Instructors in Junior Colleges and Technical Institutes. Three courses are

being offered; Engineering Mathematics, Electronics Technology, and Mechanical Technology, from June 19 through August 12.

Each instructor-student participates in the course in Engineering Math and has chosen one of the other courses. Total enrollment is 30 students, there being 15 in each of the technology courses.

G. E. staff members are participating in the Institute, as are members of the Mechanical Engineering and Electrical Engineering staffs. Under the direction of Professor Jerry S. Dobrovolny, seminars are also being held twice weekly, with many visiting speakers from various positions in technical education.

In view of the tense world situation, the growing need for technicians and engineering aids at all levels of competence, the furthering of technical institute programs and the professional competencies of instructors in these schools is of prime importance to industry and to the nation. The G. E. Department is happy to contribute to these programs, and it is hoped it can conduct such institutes regularly in future summers.

MARTIN EARNS PH. D.

A member of our G. E. staff, Professor Gordon E. Martin, recently received his Ph.D. His thesis topic was "Quantitative Investigations of the Destructive Energy in Tornadoes." The project correlated laws of thermodynamics, atmospheric physics, dynamic meteorology and hydrodynamics with available data from actual tornado observations, and included construction of a model tornado.

PEARSON TO STUDY ATMOSPHERE

Professor John E. Pearson, of the G. E. Department, has received a 3-year grant from the Institute of Public Health for use in atmospheric research. Professor Pearson has done considerable work and study with regard to air pollution, and has instituted new courses in meteorology at the University. He is currently working at Argonne National Laboratory for the second consecutive summer.

Among other things, Professor Pearson will investigate measurement of the diffusion of radon gas in the atmosphere. Laboratory and office spaces are being prepared on the 4th floor of the Transportation Building in the former print shop and blue printing room. Several students in Nuclear Engineering will be employed as assistants in the project.

MOVIE MAKER

G. E. Professor William F. Berkow has been awarded a grant by Kearney and Trecker Corporation, of Milwaukee, for the making of a motion picture to be called, "From Print to Part". The movie will illustrate many machine tool processes in detail and will be for use as a visual aid in teaching dimensioning principles and making them more meaningful in terms of actual production processes.

The picture will be made at the Kearney and Trecker plant in Milwaukee, and Professor Berkow will commute periodically this fall during its production.

HOW ABOUT YOUR ADDRESS?

The addresses we are using are those supplied by our Alumni Association. We suspect some are in error, so please send us your current mailing address.

NEW G. E. DESIGN COURSES APPROVED

On April 11, the College Policy and Development Committee approved the new sequence of G. E. Design Courses submitted by the department. This culminates almost two years of planning and organization on the part of the department Design Committee, with Professor Springer as chairman. General Engineers entering in the fall of 1961 will be required to take their design courses in the new integrated sequence. Effective in the fall of 1961, selected groups of G. E. sophomores and juniors will start the new design sequence on a voluntary basis.

The purpose of the new design program, as mentioned in previous newsletters, is to provide the undergraduate G. E. with design courses which integrate material and design principles from mechanical, civil, and other disciplines of engineering. This is in contrast to the past requirement that the student select an option in either Machine Design or Structural Design. The new courses will amalgamate approaches, methods, and principles applicable to several design areas at about the same depth of study as in the past. It is felt the G. E. graduate will therefore have a broader background for work in administration, sales, project management, etc., in which the engineering involves more than one specific field.

The design sequence will consist of four courses, carrying 14 hours of credit, as follows:

G.E. 231 - 3 hrs.-Engineering Analysis I
Applications of statics and dynamics to the analysis of fundamental problems of simple structures and mechanisms.

G.E. 232 - 4 hrs.-Engineering Analysis II
A study of stress conditions in various engineering materials and configurations as applied to the development of design criteria.

G.E. 241 - 4 hrs. - Component Design
Application of principles and methods of analysis to design of basic engineering components utilizing the common engineering materials. (Continued on Page 3)

DESIGN COURSES (CONTINUED)

G.E. 242 - 3 hrs. - Project Design

Design of various engineering projects emphasizing the synthesis of the subject matter covered in previous courses in basic sciences, engineering sciences, analysis, engineering economics, and component design.

Through all these courses, and especially in the last course, Project Design, economic considerations will be introduced as a vital factor in the design process. In order to strengthen this aspect of the sequence, another new course, G. E. 288, Economic Aspects of Engineering, is now being required of all G. E. students. Though not actually a part of the design sequence its impact will be strong throughout the entire program of design courses.

The department is extremely enthusiastic about the new courses, feeling that they will greatly strengthen the G. E. curriculum. So far as we know, no other major school has ever tried such a program. We would be glad to know your reactions to the design sequence as outlined.

HAMILTON WATCH AWARD TO G. E. SENIOR

Recipient of the Hamilton Watch Award to the College of Engineering student who has shown the most outstanding interest and achievement in humanities and extra-curricular affairs was G. E. senior Gerald Wolin. Gerry served as vice-president of the Engineering Council and was a sparkplug in our student society. He is a graduate of Lane Technical High School in Chicago and attended the University's Chicago Undergraduate Division before transferring to the Urbana campus. His socio-humanistic courses included psychology, sociology, and philosophy. Gerry is planning a career in industrial administration.

G. E. REAPS OPEN HOUSE HONORS

The annual College of Engineering Open House was again a huge success and the General Engineering Department received more than its share of honors. Queen of the St. Pat's Ball was Miss Nancy Kingman, representing the Illinois Society of General Engineers. Chosen on the basis of beauty, personality, poise and interest in engineering, the tall, blond Miss Kingman scored highly in all categories. She is a junior from Cleveland, Ohio and daughter of a U. of I. graduate in Civil Engineering, Dudley J. Kingman, 1933.

Two of the twelve engineering seniors selected as Knights of St. Pat were G. E. students. The honor is earned through service to the Engineering Council and to the engineering societies of which the students are members. Gerald Wolin and Lyle Gerdes were those chosen from the G. E. Department. Gerdes is from Manteno, Illinois, and had an active part in the affairs of the ISGE and the Engineering Council. More about Mr. Wolin appears elsewhere in this newsletter.

Finally, Professor Jerry S. Dobrovolny, Head of the G.E. Department, was made an honorary Knight of St. Pat in recognition of his service to the Engineering Council and his interest in student activities.

COLLEGE GETS 3 SCHOLARSHIPS,

G. E. GRADS GET 2 OF THEM!

Two of the three National Defense Act Scholarships for graduate study in the College of Engineering were awarded to G.E. June grads, Randal Smith and Gerald Wolin. The scholarships are for three years of graduate study in management. Smith has accepted his, and will work toward the Ph.D. degree. Wolin was forced to decline, as he had previously been accepted for graduate study at Harvard University.

G. E. STUDENTS CONSIDER MAGAZINE

Our student society is interested in publishing an annual General Engineering magazine which would review the events and items of interest for each preceding year. Such magazines have been published by other departments of the Engineering College and have been very well received by both students and alumni. Produced on high quality paper, and well stocked with pictures, the magazines devote considerable space to activities and achievements of alumni. We feel the project has merit in at least two respects. First, the magazine offers a handsome and worthwhile record of the year's happenings. Secondly, it is an excellent student project and one on which many of our undergraduates want to work.

Obviously, financing will be needed. This can best be handled through paid advertising in the magazine. It is hoped that many firms will be happy to buy advertising space in the magazine. You, as alumni, may be in a position to offer help and we would appreciate hearing your reaction to the idea of a magazine and whether you could be of assistance in securing advertising. It is important that we hear from you within the next 60 days since the project will begin as soon as school resumes in September.

TO: David Reyes-Guerra
 117 Transportation Building
 University of Illinois
 Urbana, Illinois

I am interested in the proposed yearly General Engineering Magazine.

I believe I could assist in securing advertising.

COMMENTS:

Name _____
 Address _____
 Firm _____

G. E.'S ACTIVE IN TAU BETA PI

John D. Raffl, G. E. '62, was recently elected President of Tau Beta Pi for next year. Other G. E. members of the all-engineering honorary are Lyle D. Gerdes, James G. Govaia, Randal Smith, and Gerald Wolin. Govaia was chairman of the Tau Beta Spring Initiation Banquet held at the campus YMCA in May.

G. E. INSTRUCTOR TO PILOT JETS

We confess to a small play on words here. The JETS referred to stands for Junior Engineering Technical Society, and is a nationwide non-profit corporation organized to promote, develop, and support interest in engineering and science among high school students. Mr. David R. Reyes-Guerra, G. E. instructor, has been appointed State Chairman by Dean Everitt. This ten year old national organization works closely with high school JETS chapters in supplying speakers, sponsoring Science Fairs, Career Forums, Science Assemblies, securing engineering scholarships, etc.

Mr. Reyes-Guerra will spend considerable time contacting interested high school groups to further the JETS program which heretofore was not developed in Illinois, although it is strong in many other states. The high school students attending the summer institutes, described elsewhere in the newsletter, have been contacted, and it is expected that many of them will lead in founding JETS Chapters in their local high schools. Thus, it is hoped to further and encourage the flow of outstanding students into studies in engineering and science.

ANOTHER NEWSLETTER NEXT FALL!!