School of Engineering Reorganization Plan Announced

The School of Engineering will make some major changes in the next few years under a new plan that has been approved by the President and the Board of Administrators. These changes are designed to enhance the quality of undergraduate engineering education, to expand the scope of graduate engineering education, and to improve the financial situation of the School and the University.

Guidelines in making the changes include the following:

The traditional professional designations of chemical, civil, electrical and mechanical engineering should be maintained at the undergraduate level.

As many common undergraduate courses as possible should be combined and taught in larger sections. The School should graduate about 150 bachelor's candidates annually. Undergraduate enrollment should increase to about 700 students.

A single consolidated graduate program under centralized administration leading to master's and doctor's degrees should be established. The School of Engineering must offer the doctorate to attract and hold a good faculty. Graduate enrollment should be (a) from 60 to 75 resident graduate students and (b) from 150 to 200 part-time graduate students.

THE PLAN: PART I

A Separate Professional School Offering Its Own Degrees

The School of Engineering will become substantially a self-contained unit, with some exceptions to be mentioned later. It will offer the degrees of Bachelor of Science in Engineering (B.S.E.—the present degree), Master of Engineering (M. Eng.), and Doctor of Engineering (D. Eng.).

Such a change offers a new and significant means of getting more recognition from the profession of engineering, from industry, and from the public. It greatly increases the potential for recruiting students.

The provision for professionally oriented graduate work will greatly strengthen the School's position with industry. In fact, industry should be ready and eager for this balancing of the academic and theoretical aspects with the professional aspects of engineering in graduate study in view of the necessary increase in science in engineering education since World War II (Continued on page four)

Herbert J. Roussel Wins Levey Award for 1968

Herbert J. Roussel, a 1961 civil engineering graduate, was named 1968 recipient of the Harold A. Levey Award given annually to an outstanding alumnus of the Tulane University School of Engineering for professional achievement during the period from five to ten years after graduation.

Roussel received the award October 19 at the annual homecoming meeting of the Society of Tulane Engineers on the campus. Presentation was made by Dean Lee H. Johnson of the School of Engineering, who was principal speaker during the meeting.

Roussel, who established his own consulting firm in civil engineering in May, 1968 in New Orleans, formerly served as a stress analyst for the Boeing Company and as a design engineer for both Avondale Shipyards, Inc. and J. Ray McDermott and Company in New Orleans.

He received a master's degree from Tulane in 1964 and is currently studying toward a doctor of philosophy degree in civil engineering.

Message From the President

Due to the important nature of the lead article of this issue of the Tulane Engineer, a delay in mailing was necessary in order that complete details of the new reorganization plan for the School of Engineering could be included. We feel sure that this new plan will be of great interest to all of the members.

Response to our first mailing for annual dues of $3.00 has been most gratifying, but urge all who have not sent in their dues to do so as soon as possible.

Plans for the remodeling of Room 205 in the ME Building have undergone some change, but are progressing steadily.

The next Annual Meeting of STE is being planned with a change in format designed to encourage better attendance. Since the meeting time was changed to 9:00 A.M. to avoid conflict with other events, it was decided to serve a continental breakfast (coffee, tomato or fruit juice, doughnuts, etc.). These plans will be finalized at the next officers' meeting. We urge everyone to make a special effort to attend the next STE meeting on Saturday, October 25, 1969.

Frank S. Foster
President
NSF Research Grant Awarded

A grant of $57,000 has been awarded to the School of Engineering by the National Science Foundation for a special two-year research project on engineering problems of velocity and temperature of turbulent fluids.

The project, "Destabilization of a Stored Liquid by Means of Jet Stirring," is under the direction of Dr. Harold H. Sogin, professor of mechanical engineering, and will involve studies on the intensity of fluids which zigzag or move in the atmosphere.

Study of the flow of rapid particles is applicable to problems of reducing airborne noise of jet planes, to problems of pressure release on long space flights, and domestic problems of energy necessary in heating and air-conditioning circuits, Dr. Sogin said.

Under terms of the NSF grant, two doctoral degree candidates will participate in the project and new types of special equipment and instrumentation will be acquired for this study.

Danny G. Kilpatrick, senior in Chemical Engineering, recipient of three awards at the Annual Senior Dinner and Awards Program is congratulated by Dean Lee Johnson as he receives one of his awards.

Robert Leadership Award Fund
Balance, April 15, 1969, French Market Homestead Account $333.18

Guy J. Sehgers, Jr., Treasurer
NASA Research Contract Extended

A National Aeronautics and Space Administration contract to the School of Engineering for special space-age research in chemical engineering has been extended for an additional year, with an increase of $29,997 in the amount of the contract. The original contract awarded in 1965 has been expanded yearly to a total amount of $188,711, according to Dr. Dale U. von Rosenberg, professor of chemical engineering and director of programs being conducted under terms of the contract.

Research under the contract calls for the development of numerical solutions to partial differential equations. During 1968, the primary problem investigated was the removal of carbon dioxide and water vapor from the space craft atmosphere. Solutions were obtained to the equations describing the absorption of these gases by molecular sieve particles, Dr. von Rosenberg said.

In 1969, research will continue on another NASA laboratory problem dealing with aeronautics of the Saturn V space vehicle. Studies will be made to obtain solutions to problems of compressible flow of gases, including shock waves.

Such studies are possible only with the use of such equipment as Tulane's IBM 7044 computer, Dr. von Rosenberg pointed out.

Waldemar S. Nelson Named General Chairman Of Tulane Alumni Fund

Waldemar S. Nelson, New Orleans engineer, has been named general chairman of the 23rd annual Tulane Alumni Fund, a nation-wide fund raising program conducted among alumni of Tulane University.

He succeeds Dr. John W. Deming, Alexandria physician and a member of the Tulane Board of Administrators, who directed the 1967-68 alumni fund campaigns.

A 1936 engineering graduate of Tulane, Nelson is head of the New Orleans engineering firm of Waldemar S. Nelson and Co., and is a founder and past president of the Engineer’s Club of New Orleans. He is a past president of the Louisiana Engineering Society and of the Society of Tulane Engineers.

Nelson currently serves as a director and vice chairman of the Southwest region of the Professional Engineers Private Practice Section of the National Society of Professional Engineers.

Outstanding Students Honored At Annual Senior Dinner And Awards Program

On May 6, 1969 the Society of Tulane Engineers hosted the 10th annual dinner honoring the graduating engineering class, their guests and members of the engineering faculty at the University Center. Frank S. Foster, Jr., Society President for 1968-69, presided over the dinner.

Principal speaker of the evening was Mr. Edwin Vennard, Managing Director of the Edison Electric Institute, New York City. Mr. Vennard’s remarks focussed on the challenges facing the engineering graduate of today.

Dean Lee Johnson presented to 14 seniors, two juniors and one freshman awards for outstanding scholarship, leadership and student activities.

Danny G. Kilpatrick, a senior in Chemical Engineering was the recipient of three awards: The New Orleans Section, AIChE Award for outstanding scholarship and activity in the Student Branch, The Leon H. Sherck Memorial Award, and The Louisiana Engineering Society Award for the highest scholastic average through seven semesters.

Purvis William Bane, Jr., a senior in Civil Engineering received two awards: The Louisiana Section, ASCE Award and the William F. Tompkins Memorial Award for outstanding achievement in scholarship and extra-curricular affairs.

Other awards presented: The AIChE Award to the junior with the highest average in his freshman and sophomore years went to Julian I. Landau; the Institute of Electrical and Electronic Engineers Award to John W. Bru; the William Benjamin Gregory Medal, Class of 1918 Award to Douglas Michael Boylan; the Frederick H. Fox Activities Award to Roy Roe Beeson; the Frederick H. Fox Achievement Award to Robert W. Fureigh; the Hamilton Watch Company Award to Howard A. Moore; the C. W. Rieker Award to Jerry D. Hill; the La. Highway Engineer Association Award to Charles Randall Orr; the James Marshall Robert Award to Richard J. Gonzalez; the American Society of Heating, Refrigeration and Air Conditioning Engineers Award to Kenneth J. Stucke; the New Orleans Section, ASME Award to William H. Syll, Jr.; the Greater New Orleans Section, AIAA Award to Richard F. Boyce.

The Third Annual "Just Because" Award given by the ladies of the Dean’s Office was presented to George A. Swan III.

The Physics Award for outstanding achievement in freshman science went to Stephen A. Murphy.

PAY YOUR STE DUES TODAY
SCHOOL (Cont'd from page one)

War II. This does not mean that the scientific and theoretical aspects in both undergraduate and graduate teaching will be deemphasized. It simply means that the graduate program will be expanded to include design, development, production and construction problems.

Such a change should meet with great favor from the engineering alumni, many of whom occupy key positions in American industry. It lends itself readily to the appointment of a Board of Advisors of top management industrialists to help the faculty and the dean develop ideas for cooperation between industry and the School of Engineering and to help the dean and his assistants solve the economic problems of the School.

Such a change will provide a tremendous stimulus and challenge to the faculty of the School to develop something new and significant in engineering education, perhaps making history in the process.

Particular things that can result from this new plan are:

More research and development projects and more support for graduate students coming directly from industry.

Education of advanced degree holders for design, production, construction and operations as well as for research and teaching.

More participation by industry and students in summer co-op program.

A year-in-industry co-op program at the graduate level to help graduate students finance their graduate study.

More seminars and short courses for engineers in industry and professional practice.

More part-time or “in service” graduate students.

Possible use of actual industrial facilities for original and creative work leading to an advanced degree.

In general, more “feedback” from industry to faculty and vice versa.

THE PLAN: PART II

A Separate Professional School Teaching Most of Its Own Courses

The School of Engineering has proposed to teach with its own faculty all of the courses in mathematics, physics, chemistry, and English currently required in the undergraduate engineering curricula and currently taught in the College of Arts and Sciences or Newcomb College.

This change permits the College of Arts and Sciences and Newcomb College to increase their enrollment several hundred students with little increase in faculty.

The School of Engineering now has the faculty to teach the mathematics, physics, and chemistry, with the exception of organic chemistry. Since the time that the plan was prepared and submitted to the Board of Administrators, it has been decided not to implement it with regard to English and chemistry in September, 1969. Accordingly, the School of Engineering will teach only its own freshman mathematics and physics courses in 1969-70.

The foregoing courses as well as the common courses in engineering taken by all engineering students will be taught in large sections of from 75 to 90 students by experienced engineering faculty members noted for their good teaching. They will be assisted by graduate students in tutorial sessions with the undergraduate students and in grading. The additional sections can be taught by the present faculty in existing classrooms by combining a number of common engineering courses into large-section courses.

Engineering upperclassmen in the sophomore, junior, and senior years will continue to register for six semester hours per year of elective courses currently offered in the humanities and social sciences in the College of Arts and Sciences and Newcomb College. Occasionally, engineering students should be permitted to cross-register for other courses taught in the College of Arts and Sciences and Newcomb Colleges.

THE QUESTION OF ACCREDITATION

What appears to be rather drastic changes in a School of Engineering naturally raise questions about accreditation. These are answered in the following paragraphs.

The Engineers' Council for Professional Development, the accreditation agency for engineering curricula, does not wish to impose a rigid pattern on engineering education. It looks with favor upon sound innovation as indicated from the following quotation from its published criteria:

"It is to be emphasized that ECPD desires to encourage new developments and experimentation, as well as to assist those desiring guidance in achieving good and acceptable standards."

There is precedent for Schools of Engineering to teach their own mathematics, physics, chemistry, and English. The School of Engineering at Vanderbilt University has its own courses and faculty in engineering mathematics and applied mathematics in its Division of Engineering Science. The School of Engineering at the University of Virginia has its own Departments of Humanities and of Applied Mathematics and Computer Science. The Department of Humanities offers courses at all levels, freshman through senior, with the freshmen courses being primarily grammar, composition, and technical communications. There are other examples of this kind in other schools.

In summary, a curriculum must be sound, but not necessarily traditional, to secure accreditation by ECPD. The two schools just mentioned have had accredited curricula since 1939 or before.

IMPLEMENTATION

The following committees of the faculty have been appointed to make recommendations to the dean and to assist him in inaugurating and carrying out various phases of the new plan:

Mathematics
Physics
Chemistry
English
Humanities and Social Sciences
Recruiting of Undergraduate Students
Graduate Degree Programs
Student-Faculty Relations
Research Opportunities
Special Funding
Space Allocation

A Board of Advisors is being formed to assist in developing the proper approaches to industry for the various aspects of the new plan and in making these approaches.