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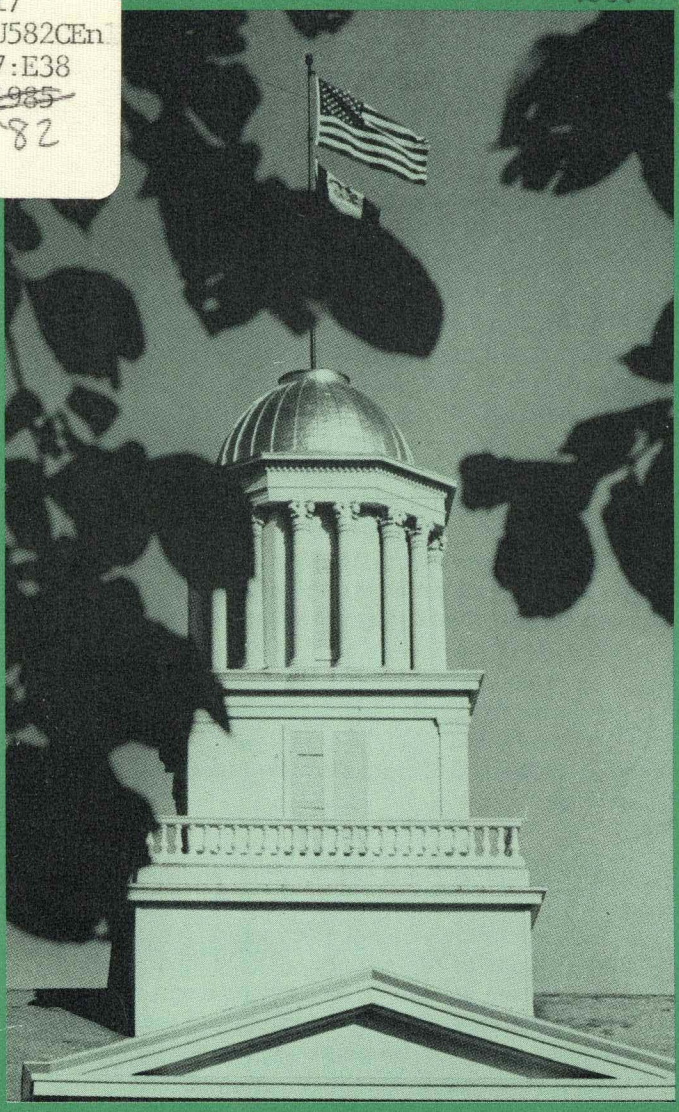

Electrical and Computer Engineering at Iowa

The University of Iowa, Iowa City, Iowa 52242

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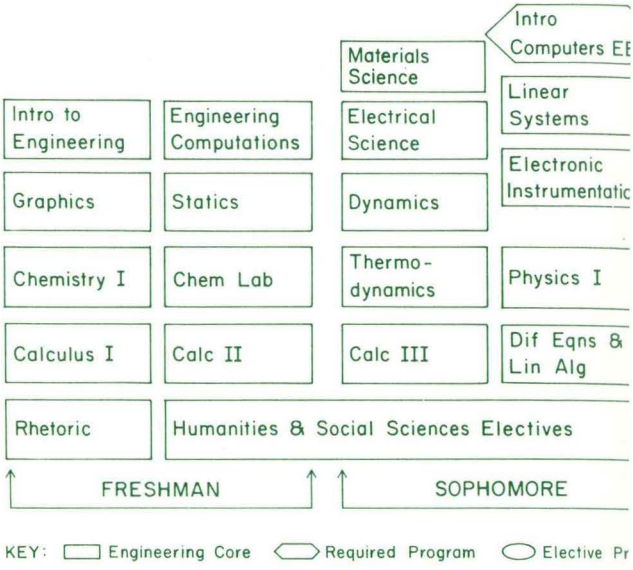
Electrical and Computer Engineering

"Scientists explore what is; engineers create what never has been."—Von Karman. One of the largest and continually developing areas of engineering is electrical and computer engineering. It is estimated that there will be at least two job openings for each electrical and computer engineer on through the 1990s. The explosive growth of computer and telecommunication technology is driving the creation of information systems. The generation and control of energy, particularly electrical energy, is one of the basic concerns of our society. For these and a number of additional reasons, electrical and computer engineering provides a dependable opportunity for solving significant problems.

Electrical and Computer Engineering at Iowa

Our program stresses fundamental knowledge and the ability to learn. Technical details change almost completely in just a few years; hence basic principles and thinking are emphasized. The program is continually evolving and adapting. Our program includes one of the most current sequences in computer engineering in the nation. The modest size of our program and being a part of the total University facilitates such improvements.

Students and faculty members work together with their colleagues in a number of areas in the University, e.g., computer science, physics, radiology, and internal medicine. Ongoing projects include: ultrasound imaging, image processing, laser optics, plasma physics, control theory and robotics, fault-tolerant computers, reliable computers, reliable computer systems, and real-time digital control.

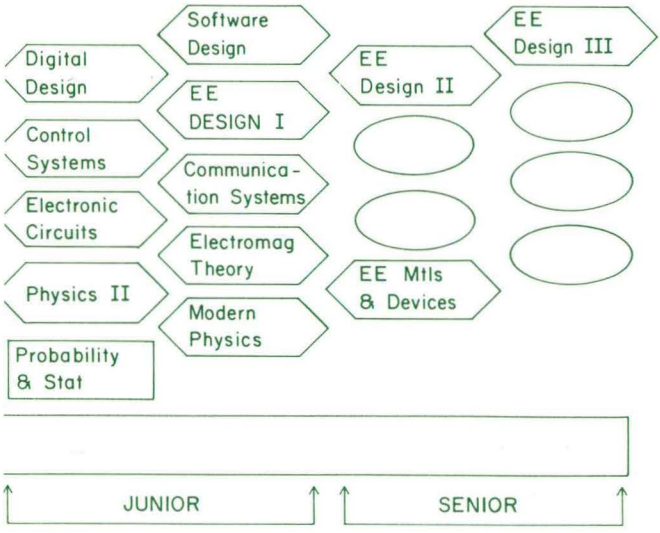


The Undergraduate Program

The Electrical and Computer Engineering Program offers an undergraduate program leading to a Bachelor of Science in Engineering degree with Electrical Engineering major. In addition to this degree program, the college also offers B.S.E. degrees in biomedical engineering, chemical engineering, civil engineering, industrial and management engineering, and mechanical engineering.

All undergraduate programs within the College of Engineering are based on a core curriculum consisting of four stems which extend through all four years of study. These four stems are sociohumanistic studies, mathematics, basic and applied science, and analysis and design. Within this core program, there are 16 hours of electives in the sociohumanistic stem.

ı Electrical Engineering



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The undergraduate program in electrical and computer engineering is outlined in the accompanying diagram. In addition to the required courses in the core curriculum, all students take an additional 37 semester hours of required program courses. The remaining 15 semester hours of technical electives must include at least 2 of the following 3 semester hour courses: Minicomputers, Microcomputer-Based Systems, Elementary Thick and Thin Film Microelectronics, Digital Image Processing, and Computer-Based Control Systems. This last list is expected to grow and develop. The technical electives are selected by the student to best accommodate specific interests and career objectives.

Scholarships, Assistantships

Students applying for admission to the College of Engineering as freshmen or as transfer students will be considered for a limited number of honor scholarships.

Scholarships are awarded on the basis of a superior high school record and the promise of future accomplishment as indicated by high ACT scores or previous collegiate academic performance. Scholarships for upperclassmen are also awarded on the basis of merit. These scholarships are in addition to those available through the Office of Student Financial Aid.

All financial assistance available from general University sources is administered by the Office of Student Financial Aid. Assistance is provided through scholarships, grants, loans, and part-time placements.

A limited number of assistantships in support of teaching are available for qualified undergraduate students in their junior and senior years.

Transfer Students

Students from other institutions may transfer directly into the Electrical and Computer Engineering Program or may elect the program in subsequent semesters. Prospective transfer students are urged to contact the Program Office as early as possible for academic guidance. The transfer student must be enrolled in the College of Engineering for at least the last 30 semester hours, or 45 of the last 60 semester hours, or a total of 90 semester hours. Students who have acquired knowledge in subject matter areas from sources other than course registrations may be granted credit toward graduation by examination.

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Student Admissions

Please note that the response to engineering programs at The University of Iowa has exceeded our capacity to admit all qualified applicants. Those wishing to be considered for admission to the Electrical and Computer Engineering Program must apply early and know that admissions will be very selective.

Other Information

You may obtain additional information by writing directly to:

Electrical and Computer Engineering Program
College of Engineering
The University of Iowa
Room 4400 Engineering Building
Iowa City, Iowa 52242

Closing Thoughts

"This advent of computer and communications technology is causing a quiet revolution to occur in the field of information. It is quiet because signs of changes are subtle and not always visible. It is a revolution because the rate of change is very rapid."

Report to the President of the United States

"The universe is not only queerer than we imagine, it's queerer than we can imagine."

Anonymous

"The concern for man and his destiny must always be the chief interest of all technical effort. Never forget it among your equations."

Einstein

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