WHY ELECTRICAL ENGINEERING?
Electrical engineering is an exciting, challenging, fast-growing profession with abundant job opportunities. As an electrical engineer, you’ll work at the forefront of technology to build the next generation of cell phones, electric cars, digital televisions, robots, satellites, microelectronic devices, solar, wind, and ocean energy and electric power systems, and microelectro-mechanical machines — pretty much anything that uses electricity. Almost regardless of where your interests lie (cars, airplanes, music, medicine, biology) you can be sure to find careers for Electrical or Computer Engineers. It’s really about being creative, and finding ways to improve people’s lives.

WHAT’S THE DIFFERENCE BETWEEN ELECTRICAL AND COMPUTER ENGINEERING AND COMPUTER SCIENCE?
Our department offers bachelor of science degrees in both computer and electrical engineering. Computer engineering centers around hardware and hardware/software integration, including digital hardware design, microprocessors, microcontrollers and programming in a variety of languages. Electrical engineering focuses on electronics, energy conversion, communication theory, signal processing and electromagnetic field theory. In computer science, students learn the more formal theory of programs, languages and algorithms.

WHY STUDY ELECTRICAL ENGINEERING AT UMAINE?
At UMaine, engineering classes are small. Our programs in electrical and computer engineering (ECE) are accredited. UMaine’s College of Engineering offers a five-year B.S.–M.B.A. degree with the Maine Business School, as well as a minor in engineering leadership and management. We offer state-of-the-art teaching and research facilities. Undergraduates have the opportunity to do meaningful research alongside faculty. Professors with Ph.D. degrees, not graduate students, teach classes. We have a high placement rate in top graduate programs.

Since 2004, two UMaine ECE students have been named the nation’s Outstanding Electrical and Computer Engineering Student by the Eta Kappa Nu and Tau Beta Pi engineering honor societies. In the last 44 years, only 48 students have received this award, including UMaine’s first Eta Kappa Nu honoree in 1979.

Electrical and Computer Engineering undergraduate students from UMaine continue to compete and excel in the IEEE Xtreme international programming competition— the largest annual programming competition in the world. UMaine placed No. 1 and No. 2 in the Northeast USA (Maine, New York, Massachusetts, Vermont, New Hampshire, Connecticut, and Rhode Island) in its inaugural year in the competition (2011). Most recently (2016) a UMaine team had the second highest ranking of all Northeast USA teams.

WHAT CAN YOU DO WITH A DEGREE IN ELECTRICAL ENGINEERING?
Our graduates work in industries that include energy, wireless communications, aerospace, biomedical, nanotechnology, microelectronics, and defense. Our students are in demand. With an average starting salary of more than $61,000, they are among the highest-paid graduates in four-year degree programs.

OUTSTANDING FACULTY
Our faculty are recognized nationally and internationally for their research. They receive major grant funding from such agencies as National Science Foundation, NASA, Department of Defense, Department of Energy, National Institutes of Health and many companies. Industrial sponsors include IBM, Texas Instruments, On Semiconductor, BAE Systems, Sappi and International Paper.
RESEARCH OPPORTUNITIES

Active Electrical Engineering research areas include biomedical applications, wireless communications and aerospace, sensor development, energy, nanofabrication, and wireless sensor networks. There are many opportunities for undergraduates to become involved in the research, including an NSF Research Experience for Undergraduates summer program which has been in almost continuous operation in the ECE department since the early 1970s.

SCHOLARSHIPS

In addition to first-year scholarships, active student in Electrical Engineering compete for a large number of donor or industrially sponsored scholarships directed specifically at ECE students.

HOW DO I APPLY?

Visit umaine.edu for an application, as well as information about academics and life at UMaine.