Why Computer Engineering?

We all know what a computer is, but did you know that your portable gaming system, car and microwave oven have as much or more computational power as the building-sized computers used for code breaking in World War II? Nearly everything electrical has, or soon will have, one or more computers at its core. From airplanes and rockets to industrial machines and robots, smart handheld devices with cameras, music players, multltouch displays, GPS navigation systems, medical devices, toys, and even household appliances such as autonomous vacuum cleaners all have computers and supporting software.

Computer engineering is a discipline dedicated to the design, construction and programming of computers and computer-based systems. It is focused on the study of digital hardware systems design and software development to control and interact with real-world devices.

Computer engineering is one of the most rapidly growing engineering fields. Jobs are plentiful and salaries are high. Recent computer engineering graduates earn an average starting salary of more than $70,000 — among the highest for graduates of all four-year degree programs.

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 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 an engineering leadership and management minor. We offer state-of-the-art teaching and research facilities. Undergraduates have the opportunity to do meaningful research alongside faculty. Professors, not graduate students, teach classes. We have a high placement rate in top graduate programs.

UMaine graduates work in areas such as microchip design, system software development and embedded technologies at leading companies including Google, AMD, NVIDIA, Microsoft and IBM.

Since 2004, two UMaine electrical and computer engineering 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.

Computer engineering student teams have competed in the IEEEXtreme international programming competition. In 2011, UMaine teams placed No. 1 and No. 2 in the Northeast, which includes Maine, Massachusetts, Rhode Island, Connecticut, New Jersey and New York.

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 and National Institutes of Health. Industrial sponsors include IBM, National Semiconductor, Fairchild Semiconductor,
About UMaine
The University of Maine, founded in Orono in 1865, is the state’s premier public university. It is among the most comprehensive higher education institutions in the Northeast and attracts students from across the U.S. and more than 65 countries. It currently enrolls 11,286 total undergraduate and graduate students who can directly participate in groundbreaking research working with world-class scholars. The University of Maine offers doctoral degrees in 35 fields, representing the humanities, sciences, engineering and education; master's degrees in roughly 70 disciplines; 90 undergraduate majors and academic programs; and one of the oldest and most prestigious honors programs in the U.S. The university promotes environmental stewardship on its campus, with substantial efforts aimed at conserving energy, recycling and adhering to green building standards in new construction. For more information about UMaine, visit umaine.edu.

explore
Bachelor of Science in
Electrical Engineering
Computer Engineering

Minor in
Engineering Leadership and Management

Master of Science in
Electrical Engineering
Computer Engineering

Professional Science Master in
Engineering and Business

Ph.D. in
Electrical and Computer Engineering

Five-Year Master of
Business Administration

BAE Systems, Sappi and International Paper. In the last 10 years, two electrical and computer engineering professors have been named UMaine Distinguished Professors, the university’s highest faculty honor.

Research
There are many research opportunities for computer engineering undergraduates during regular semesters and summers in areas such as supercomputing, scientific visualization, robotics, digital signal processing, embedded systems design and high-performance data systems.

Internships and Co-ops
Our students have the opportunity to work in organizations such as National Semiconductor, Fairchild Semiconductor, IBM, Analog Devices, Keypware Technologies, General Electric and NASA research centers, as well as industries such as pulp and paper and electric utilities.

Scholarships
We offer more than 70 scholarships and awards annually — 15 of which cover full tuition.

How do I apply?
Visit go.umaine.edu for an application, as well as information about academics and life at UMaine.

I visited several places and none of them really compared to UMaine. UMaine has a lot of great opportunities, a beautiful campus and an impressive College of Engineering.”
— Carolyn Pugliano, Electrical and Computer Engineering Major

Anin Maskay of Kathmandu, Nepal, was the outstanding Graduating International Student in the College of Engineering. For three years he was involved in wireless sensing research in UMaine’s NASA lunar habitat and in the Wireless Sensor Networks Laboratory on campus.