Electrical and Computer Engineers work together with other smart, inspiring people to make a positive difference in our modern world. From nanotechnology to vast communication and power networks, in critical areas ranging from biology to exploring deep space, electrical engineers are key contributors at the frontier of science and engineering.

Our alumni are employed in many fascinating careers, such as

- designing new electronic equipment and prosthetic systems for healthcare
- devising innovative solutions for alternative and renewable energy systems
- creating optical measurement and communications systems with lasers and microelectronics
- inventing embedded computer systems for high-performance automobiles
- enhancing the joy of living by developing exciting technology for music, film, and game entertainment
- implementing aerospace projects for the next generation of space exploration
- building hot start-up companies as successful entrepreneurs

These and many other rewarding careers are within your grasp when you study electrical and computer engineering.

Specialty Areas

- Optics
- Remote Sensing
- Environmental Measurements
- Micro-electro-mechanical systems (MEMS)
- Robotics
- Power and Energy
- Control Systems
- Digital Design
- Embedded Systems
- Communications
- Audio Engineering
- Microwave Circuits
- Power Electronics
- Electromagnetics
- Digital Signal Processing

For additional information, contact:
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ELECTRICAL & COMPUTER ENGINEERING
COLLEGE OF ENGINEERING | MONTANA STATE UNIVERSITY

ABOUT MONTANA STATE UNIVERSITY | MOUNTAINS & MINDS

Montana State University is a comprehensive land-grant university located in a spectacular mountain setting 5,000 feet above sea level in Bozeman, Montana. MSU, a Carnegie Foundation Research University (very high research activity list), is the academic home of 14,000 students in more than 70 different majors. Students participate in a vibrant campus community with special attention to hands-on research and creative experiences both in and out of the classroom.

Bozeman (regional population 92,000) is routinely listed among the top communities in the United States for year-round outdoor recreation and superior quality of life. Bozeman is minutes away from public trails and blue ribbon trout streams, less than an hour from Big Sky and Bridger Bowl ski resorts, and just 90 miles from Yellowstone National Park.

ECE CURRICULUM

The Electrical Engineering and the Computer Engineering curricula are designed for you to excel as you learn. Your degree program includes the opportunity to learn advanced mathematics, physics, chemistry, oral and written communications, and indispensable college electives including art, history, social sciences, and diverse cultural experiences. Our programs integrate learning and discovery via hands-on laboratory experience: nearly every ECE course has a laboratory component. Our ECE programs are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

All of our undergraduate students participate in a “capstone” senior design team project. Projects incorporate many ECE and interdisciplinary skills and allow you to work on a team to solve a “real world” problem. The Engineering Design Fair each semester provides an opportunity for teams to display their accomplishments for their classmates, the community, and potential employers.

SCHOLARSHIPS

MSU’s Office of Financial Aid coordinates many scholarships (www.montana.edu/admissions/scholarships.shtml), including freshman scholarships that are awarded automatically, without a separate application form, based on ACT or SAT scores you submit with your application for admission.

The College of Engineering and the ECE Department also offer scholarships to qualified applicants on a competitive basis. ECE scholarships include both need-based and non-need-based categories. To be considered for COE and ECE scholarships, submit a special COE scholarship application prior to February 1 for the following academic year. (www.coe.montana.edu/scholarships.asp)

ADMISSIONS

Applications are accepted from in-state, out-of-state, and international students. Eligible undergraduate students may attend full-time or part-time. Applications for admission to undergraduate programs are processed by the Office of Admissions, Montana State University, P.O. Box 172180, Bozeman, MT 59717-2180 (+1 406-994-6617). (www.montana.edu/admissions/)

Degree Programs
The ECE Department offers Bachelor of Science degrees in Electrical Engineering (EE) and in Computer Engineering (CpE). Students may also pursue undergraduate minors in both EE and CpE. Students accepted into our graduate program can pursue a course-only Master of Engineering degree, a research-oriented Master of Science degree, or a PhD in Engineering.

Advanced elective courses include

- Acoustics and Audio
- Alternative Energy
- Analog Electronics
- Automatic Control
- Computer Architecture and FPGA Design
- Communication Systems
- Digital Logic Circuits
- Digital Signal Processing
- Electrical Power Systems and Energy Conversion
- Electromagnetic Theory
- Electronic Materials
- Electro-Optical Systems and Design
- Engineering Ethics
- Laser Engineering
- MEMS Sensors and Actuators
- Microfabrication
- Microprocessors and Embedded Systems
- Mobile Wireless Systems
- Power Electronics
- Remote Sensing Systems
- VLSI Design

ECE students and faculty work hard—but also find time to enjoy the spectacular scenery of the Bozeman area.