Our Focus is on YOUR Future

The Electrical Engineering program at Michigan is one of the highest ranked programs in the country, making our students sought after for high-paying jobs in a wide variety of technical fields. Below are some of the companies who have hired recent alumni:

- Apple Inc.
- AMD
- Boeing Company
- Capital One
- Cisco Systems
- Consumers Energy
- Cybernet Systems Corp.
- Ford Motor Company
- General Dynamics
- General Electric (Aviation Systems, Energy)
- Google Inc.
- Harman International
- IBM
- Intel Corp.
- Lockheed Martin
- Microsoft Corp.
- Motorola
- Qualcomm
- RF Micro Devices
- Texas Instruments
- Toshiba
- Apple Inc.
- AMD
- Boeing Company
- Capital One
- Cisco Systems
- Consumers Energy
- Cybernet Systems Corp.
- Ford Motor Company
- General Dynamics
- General Electric (Aviation Systems, Energy)
- Google Inc.
- Harman International
- IBM
- Intel Corp.
- Lockheed Martin
- Microsoft Corp.
- Motorola
- Qualcomm
- RF Micro Devices
- Texas Instruments
- Toshiba

Our graduates also continue their education at the best graduate schools in the country, many choosing to stay at the University of Michigan.

EE Degree = Secure Future

An EE degree from the University of Michigan will open doors to hundreds of careers and provide you with the experience you need to succeed in today’s multifaceted marketplace.

High Average Salary
Electrical Engineering degrees lead to some of the highest salaries in all professions (National Association of Colleges and Employers)

Prevalence of Jobs
Opportunities for electrical engineers are projected to remain strong for the foreseeable future (Bureau of Labor Statistics)

The impact of electrical engineering on our daily lives can be seen and felt most everywhere. Solar panels, environmental and medical sensors, power systems, communications systems, satellites, satellite imaging, nanotechnology & nanoelectronics, new and improved medical procedures and devices, information technology, electric lighting, HDTV, digital cameras, cell phones, MP3 players, personal computers, automotive electronics, and bioelectrical devices are all the work of electrical engineers.

If you wish to understand electrical phenomena and apply this knowledge to design, invent and perfect devices that enhance life for the individual, as well as help solve society’s problems, there is no better field than EE.

Undergraduate Programs in EECS
Department of Electrical Engineering and Computer Science
The University of Michigan

The spark of electrical energy is the basis for all transmission of energy and information. Your degree in electrical engineering sets you up with a solid foundation for a lifetime of discovery.
Improving our World through ECE

Electrical engineers are working to improve health care, environmental sustainability, security, information technology, energy, and transportation safety.

- Energy from the sun, wind, and even vibrations, is being harnessed and distributed to the nation’s grid and to small ultra-low-power devices.
- Lasers and optics are being used for the next round of non-invasive medical procedures, and for cancer treatment.
- Remote sensing is being employed to measure soil moisture and sea surface salinity, which impact the Earth’s climate and weather patterns.
- Medical imaging is being perfected to detect injuries and tumors safely and quickly.
- Sensors are being developed to alert us to environmental, security, and transportation safety issues.
- Solar power and energy-efficient lighting are being developed to reduce the nation’s dependence on fossil fuels.
- Work in robotics and computer vision will enable search and rescue attempts, traffic safety, and improved prosthetics.
- Low-power chips, antennas, and networking systems are being developed to enable improved wireless communications, medical implants, and environmental monitors.

Research Experience

Our students gain valuable research experience through individual research opportunities with faculty, and through extracurricular projects and teamwork. They also participate in a broad selection of summer co-ops and internships. Here are some examples of recent undergraduate research projects conducted by our students:

- Develop a microfluidic chip for cancer detection.
- Create a next-generation ultrasound imaging system.
- Design the electronics for the world-class Solar Car Team, MRacing Team, or a variety of space projects.
- Develop prototypes for next-generation ultra-low power wireless electronic devices.
- Help understand growth dynamics in forests.
- Contribute to next-generation optoelectronics.
- Design and build a mini hybrid-electric car for system testing.

"I chose Electrical Engineering after attending a workshop about all the different majors, and out of them all, electrical engineering seemed really cool and exciting, and fun."  
EE Junior

"Because I was in EE I got to do a lot of things, such as internships at NASA Ames Research Center, being involved in a zero-gravity team here at Michigan, and getting paid for going abroad—all because I have skills that people need out in the real world."  
EE Senior

Major Design Experience Courses

Electrical Engineering is a remarkably broad and varied discipline. For many students, a highlight of their undergraduate education is their major design course. Here’s what you’ll be doing in your major design courses in electrical engineering:

**Research Experience**

- **VLSI DESIGN** (EECS 427): Design and build circuits into an entire digital system, such as a microprocessor that will go into a cell phone, iPod, or television.
- **MICROSYSTEMS LAB INTEGRATED MICROSYSTEMS LAB** (EECS 425): Design and fabricate an integrated microsystem in the Lurie Nanofabrication Facility. Students have built thermal- and pressure-based flowmeters and thermal- and pressure-based micromirrors.
- **MICROSYSTEMS LAB** (EECS 425): Students have designed a switched-beam antenna, a satellite ground station, and the electronics for a space satellite to be launched by NASA.
- **ADVANCED LASERS AND OPTICS LAB** (EECS 438): Design and set up a practical optical system. Students have created a solar light concentrator for solar cells, a laser used in a national space elevator competition, and a tunable fiber laser.
- **RADIOWAVE PROPAGATION AND LINK DESIGN** (EECS 430): Design, build, and characterize a practical radio link. Students have designed a switched-beam antenna, a satellite ground station, and the electronics for a space satellite to be launched by NASA.
- **DIGITAL SIGNAL PROCESSING** (EECS 452): Design and implement a real-time software package or hardware device. Students have designed a cost hearing aid, a guitar autotuner, and even a wireless electrocardiogram with biosensors.
- **INTEGRATED MICROSYSTEMS LAB** (EECS 425): Design and fabricate an integrated microsystem in the Lurie Nanofabrication Facility. Students have built thermal- and pressure-based flowmeters and digital micromirrors.
- **COMPUTER ARCHITECTURE** (EECS 470): Explore the basic concepts of computer architecture and organization.
- **MICROWAVE CIRCUITS** (EECS 411): Design, build, and test a commercially-available standard receiver, such as WiFi, BlueTooth, or GSM.
- **MONOLITHIC AMPLIFIER CIRCUITS** (EECS 413): Design advanced analog circuits for different applications. Projects have included a high-performance op amp, a new circuit for biomedical application, and a sensor interface circuit.
- **ADVANCED LASERS AND OPTICS LAB** (EECS 438): Design and set up a practical optical system. Students have created a solar light concentrator for solar cells, a laser used in a national space elevator competition, and a tunable fiber laser.
- **“It’s impossible to describe how valuable a team experience is. You just have to do it.”  
EE Student

It's impossible to describe how valuable a team experience is.

You just have to do it.