Michigan Technological University is an equal opportunity educational institution/equal opportunity employer. Since 1885, we have offered educational excellence in beautiful Upper Michigan. Our students create the future in arts, humanities, and social sciences; business and economics; computing; engineering; forestry and environmental science; natural and physical sciences; and technology.
Electrical engineers and computer engineers use electrical and/or optical energy to manipulate, store, and transmit information and to deliver power to the entire world.

Both fields evolve at lightning speed; so fasten your seatbelt and get ready to launch the future through the exciting world of high-tech.

Explore Many Possibilities

You can focus on a wide variety of challenges with ECE—everything from creating green energy solutions to discovering new galaxies. Opportunities for innovation abound. A few examples include:

- Robotic systems and lasers for medical surgeries
- Voice-activated control systems for computers, cars, and more
- Modern, high-speed rail transportation
- Nanotechnology in semiconductors, transistors, and microchips
- Smart grids for next-generation energy systems
- There are many excellent reasons to choose ECE at Michigan Tech. Here are just a few…

Friendly Learning Environment

We offer all the advantages of a large engineering program in a small-college atmosphere. Faculty and staff are easily accessible and enjoy mentoring students.

Excellent Faculty

Courses in our department are taught by faculty who are nationally recognized for their contributions to engineering education, research, and practice.

State-of-the-Art Facilities

Our multimillion-dollar labs provide a hands-on learning experience. You’ll enjoy cutting-edge equipment—from lasers, microprobes and robots to anechoic chambers and more—along with industry standard software and current generation computer systems.

Unique Lab Curriculum

We have strategically integrated our key courses with labs that will lead you to discover for yourself the basic principles that govern the field.

Industry Experience

Participate in Senior Design, Enterprise, internships, and co-ops—our excellent programs give you a chance to work directly with industry while you’re still a student.

Sustainable Future

Our students contribute to the advancement of green, renewable, and alternative energy, including solar and wind power, hybrid power, and more.

Global Opportunities

Our students have studied in Norway, Australia, Germany, Italy, Finland, Denmark, England, Russia, Scotland, Korea, and the developing world.
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WHY CHOOSE MICHIGAN TECH?

Electrical engineers and computer engineers use electrical and/or optical energy to manipulate, store and transmit information—and to deliver power to the entire world. Both fields evolve at lightning speed, so fasten your space seatbelt and get ready to shape the future through the exciting world of high tech.

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State-of-the-Art Facilities
Our multimillion-dollar labs provide a hands-on learning experience. You’ll enjoy cutting-edge equipment, state-of-the-art laboratories and equipment, and research equipment as well—along with industry standard equipment on your generation computer systems.

Unique Lab Curriculum
We have strategically integrated our key courses with labs that will lead you to discover for yourself the basic principles that govern the field.

Industry Experience
The degree in Electrical Engineering prepares you for an opportunity to work directly with industry while you’re still a student.

Sustainable Future
Our students contribute to the advancement of green, renewable and alternative energy, including solar and wind power, hydro power, and more.

Global Opportunities
You can study abroad in Norway, Australia, Germany, Italy, Finland, Kenya, Korea, and the developing world.

www.ece.mtu.edu
To keep pace with the explosive growth in computer technology, you would need to complete computer courses. Computer engineering projects integrate computer engineering techniques for outer space. You could design components that move digital information from place to place. Working as an electrical engineer, you develop sensors to detect IEDs—improvised explosive devices. You could design components that produce power to us all. Here at Michigan Tech, you would need to complete computer courses. Computer engineering projects integrate computer engineering techniques for outer space. You could design components that move digital information from place to place. Working as an electrical engineer, you develop sensors to detect IEDs—improvised explosive devices. You could design components that produce power to us all. Here at Michigan Tech, you would need to complete computer courses. Computer engineering projects integrate computer engineering techniques for outer space.
Senior Design
During your senior year, you’ll have the chance to work with a small team of students on a senior design project. Your team will connect with an industry sponsor through an open-ended design project that will provide you with the kind of experience that can launch a successful career.

D80 Center
Many challenges confront our planet’s inhabitants, particularly the 80 percent not typically considered by those creating infrastructure, goods and services. Everyone must play a role in elevating the quality of life for all while ensuring future generations can thrive. This starts with the courage to serve others, and the ability to envision new solutions.

Michigan Tech’s D80 Center provides education, service and research opportunities for students interested in gaining valuable professional experience while making a difference in the lives of others. For more info on all the D80 programs check out the D80 Center online at www.d80.mtu.edu.

Lots of options
As a BSE student, you will have approximately nineteen elective credits. This will provide you with a great deal of flexibility to pursue studies that reflect your own interests.

Elective credits must be used to complete a minimum of sixty credits toward your degree. Michigan Tech offers more than fifty different minors and eighteen different certificate programs, catering to a variety of certificate options allowing you to choose areas that reflect your own interests.

Elective credits must be used to complete a coherent program of study, such as the completion of a minor or certificate. Michigan Tech offers more than fifty different minors and eighteen different certificate programs, catering to a variety of certificate options allowing you to choose areas that reflect your own interests.

Enterprise
Join an Enterprise team and get the extra edge your new education brings. Real-world engineering, design, and communication problems. Teams are open to students from all majors and operate like companies to get real-world, hands-on experience. However, you can choose to work on a team of students with similar backgrounds.

New Technology
Nurture the future through thoughtful use of technology
Undergraduate Research (URC): Integrates science and engineering
Graduate Research: Extends and refines the research
Aerospace Engineering (AS): Specializes in spacecraft

Undergraduate Research
Cutting-edge research isn’t just for graduate students. Michigan Tech offers a wide variety of opportunities for undergraduate students to conduct research under the guidance of a faculty mentor. From advanced courses and seminars to independent research projects, students have the chance to work closely with faculty on real-world projects.

Come See Us
There is no substitute for seeing first-hand what Michigan Tech has to offer. We invite you to visit our campus and tour the engineering departments. Call 888-688-1885 to set things up.

Our academic calendar meets with the academic calendar and career development demands of the 21st century student. We look forward to hearing from you.

www.bse.mtu.edu
through computer simulation. \[\text{adding more complexities to earthquake effects for the movies to predict-}
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\[\text{much earlier, from creating special}
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**Electrical Engineering**

Computer engineering projects focus on the creative and exciting aspects of designing and building computer systems. You will work with hardware, software, and telecommunication systems to create modern technological devices such as cell phones, satellites, and even space probes. As a computer engineer, you will be challenged to design systems that are able to perform specific tasks. This exciting field requires a strong foundation in electrical engineering principles and an understanding of computer systems, software, and hardware.

**Computer Engineering**

Electrical engineers deal with the design and manufacture of electrical circuits, devices, systems, and equipment. They design and develop new electronic products and systems, such as computers, communication devices, and medical equipment. Electrical engineers work in a variety of settings, including research and development, manufacturing, and service industries. They may work for companies that produce electrical equipment, such as power plants, or for government agencies, such as the National Aeronautics and Space Administration (NASA). Electrical engineers work on projects ranging from developing new technologies to improving existing ones. They may work on projects related to renewable energy sources, such as solar power, or on projects that involve the design and development of new electronic devices.

**Computer Engineering**

Computer engineers design and develop computer systems, including hardware, software, and networking technologies. They work on projects such as designing computer architecture, developing operating systems, and creating applications. They may work in fields such as computer science, information technology, or artificial intelligence. Computer engineers may work for companies that develop computer products, such as software companies, or for government agencies, such as the National Security Agency. They may work on projects related to computer security, data mining, or artificial intelligence.

**Computer Engineering**

Electrical and computer engineers work together on projects that involve the design and development of electronic devices and systems. They may work on projects related to telecommunications, such as designing communication networks, or on projects related to computing, such as developing computer software. They may work on projects related to renewable energy sources, such as solar power, or on projects related to artificial intelligence, such as developing intelligent systems for recognizing and processing speech.

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To keep pace with the explosive growth in computing technology, you will need to be creative in your thinking and innovative in your problem-solving. Michigan Tech’s Program in Computer Science and Engineering prepares you to use thought into your work, to design, implement, and manage computer-based solutions to problems.

Here at Michigan Tech, you’ll gain skills and experience that are directly applicable to computer science, computer engineering, or software engineering. You’ll learn the principles of computer systems, computer networks, computer algorithms, and software engineering. You’ll learn how to develop software that is correct, efficient, and maintainable. You’ll learn how to design and implement computer-based systems, and you’ll learn how to manage projects that involve the development of computer-based systems.

The Program in Computer Science and Engineering is an interdisciplinary program that draws from the expertise of faculty members in computer science, computer engineering, and software engineering. The program is designed to provide you with a strong foundation in computer science, computer engineering, and software engineering, as well as an opportunity to specialize in one of these areas.

Working as a computer engineer, you may specialize in one area, such as embedded systems, computer networks, robotics, or VLSI design. You may also find yourself working with other engineering disciplines—for example, electrical engineering or mechanical engineering. You may also find yourself working on a project that involves the design and implementation of a computer-based system, such as a spacecraft navigation system or a medical imaging system.

One of the most exciting aspects of working as a computer engineer is the opportunity to work on projects that involve the design and implementation of computer-based systems. These projects can range from designing computer-based systems to implement new technologies, to designing computer-based systems to solve real-world problems. Some examples of projects that computer engineers might work on include:

- Designing a computer-based system to control a spacecraft.
- Designing a computer-based system to detect and classify objects.
- Designing a computer-based system to control the movement of a robot.
- Designing a computer-based system to control a medical device.
- Designing a computer-based system to control a factory.
- Designing a computer-based system to control a building.

These projects involve the design and implementation of computer-based systems, as well as the management of projects that involve the development of computer-based systems. You will learn how to design and implement computer-based systems, as well as how to manage projects that involve the development of computer-based systems.

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You could design components that take more digital information from phase to phase, allowing computers to move digital information from one place to another at a much faster rate. You could design computer-based systems that move digital information from place to place. You could design computer-based systems that take digital information from one place and send it to another.

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Electrical and Computer Engineering

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T: 906-487-2550
F: 906-487-2949
E: jmdonahu@mtu.edu
www.ece.mtu.edu


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Launch yourself into our high-tech world. With ECE you can energize the planet, advance communication, and create technology to help others in meaningful ways.