Literally everything around us is made up of chemicals. As a chemical engineer, you will transform chemicals and raw materials into useful, valuable, and often lifesaving forms. You could design processes that involve chemical and biological transformation in large-scale manufacturing plants, ensuring safety, sustainability, and efficiency. You could also play an important role in protecting the environment, inventing cleaner technologies, calculating environmental impacts, and studying the fate of chemicals in the natural world.

Chemical engineers also pioneer new developments in medicine, energy, nanotechnology, advanced materials, manufacturing, microelectronics, biotechnology, and more. Discoveries often lead to major breakthroughs, including:

- Chemotherapy with reduced side effects
- Vaccines that ward off epidemics
- Clean energy sources
- Earth-friendly plastics
- Greener chemical processes
- Innovative consumer goods
- Rapid bloodtyping
- Medical microdevices
- Rechargeable batteries
- Freshwater from seawater

Chemical engineering is one of the most challenging—and one of the most rewarding—degree programs available at Michigan Tech. Award-winning faculty have written nationally-recognized textbooks on safety, environmental design, chemical engineering, and more.

Unit Operations Lab
Our UO Lab is the only lab of its kind and size in the world used for chemical engineering education. At three stories tall and 6,000 square feet, it emulates a real-world chemical processing facility.

World-class Facilities
All of our laboratories are state-of-the-art, and our BASF and Kimberly-Clark classrooms offer multimedia equipment, videoconferencing, and audiovisual technology.

Global Opportunities
Our students enjoy study-abroad opportunities all around the world, including Europe, Asia, Australia, and South America.

Industry Experience
Our strong internship and cooperative education programs can give you a thorough understanding of engineering practices in industry while you are still a student.

Communicate Like a Pro
We offer one of the nation’s only technical communication courses specially designed for chemical engineers.

Professional Success
Our graduates are recruited by regional, national, and global corporations, with a placement rate of 98 percent within six months of graduation.

As a chemical engineer, you can save lives, clean up the planet, and make everyday life safer and easier. Join the community of professionals who combine chemistry and engineering to make the world a better place. It could be the most rewarding decision you ever make.
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- Rechargeable batteries
- Freshwater from seawater
- Nanotechnology
- Advanced materials
- Manufacturing
- Microelectronics
- Biotechnology
- Energy
- Environment
- Medicine
- Public Health

Michigan Technological University is an equal opportunity educational institution/equal opportunity employer.

Michigan Tech offers more than 130 undergraduate and graduate degree programs in engineering, forest resources, computing, technology, business, economics, natural, physical and environmental sciences, arts, humanities, and social sciences.

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We offer minors in four rapidly expanding areas:

**Hydrogen Technology**
- Understanding the science of hydrogen and its properties
- Designing and developing hydrogen-powered systems and devices
- Testing and optimizing hydrogen storage technologies

**Mineral Processing**
- Extracting and refining valuable minerals
- Managing the environmental impact of mining activities

**Bioprocess Engineering**
- Developing and optimizing processes to extract and refine biological materials
- Creating sustainable and environmentally-friendly products

**Polymer Science**
- Exploring the properties of polymers, plastics, and composites
- Developing new materials with enhanced performance

**CO2 Sequestration**
- Removing carbon dioxide from flue gases and storing it in stable mineral form
- Developing technologies to capture and store greenhouse gases

**Wheels initiative**
- Bringing together undergraduate, graduate students, scientists, and engineers
- Addressing transportation systems from a 360-degree perspective

**Cutting-edge research**
- Solving modern energy problems through design and production
- Exploring the entire consumer product cycle—from conception to marketing

**Senior Design**
- A capstone design experience
- Working on a student team to build a chemical-reaction powered vehicle

**Chem-E-Car**
- An annual competition for undergraduate and graduate students
- A unique design and engineering challenge

**Enterprise**
- A type of project that combines engineering and business skills
- Working in a research laboratory as an entrepreneur

**Chemical Engineering Advising**
- Helping students map out their academic and career development
- Providing resources and guidance for prospective and current students

**Career Opportunities**
- Chemical engineers enjoy an average starting salary
- A wide range of career paths

**Find out more**
- Special opportunities
- Minors

**Chemical Engineering Advising**
- 324 Engineering Building
- E: cmadvise@mtu.edu
- T: 906-487-4327

**School of Chemical Engineering and Materials Science**
- Michigan Tech
- Houghton, Michigan 49931
- chem.mtu.edu

**American Institute of Chemical Engineers (AIChE)**
- Professional society for chemical engineers
- Advocating for the chemical engineering profession
- Supporting education and research

**American Chemical Society (ACS)**
- Professional society for chemists
- Supporting research and education in chemistry

**Graduate school**
- Opportunities for advanced training
- Preparation for graduate school or professional careers

**Medical school**
- Pathway to becoming a medical doctor

**Consulting**
- Providing expert advice to industries
- Developing solutions to complex problems

**Design engineering**
- Creating new products and systems
- Addressing technical challenges

**Consumer goods**
- Developing new consumer products
- Designing and testing new materials

**Pharmaceuticals, biomedical, and composites**
- Developing new drugs and medical devices
- Creating advanced materials for healthcare

**Oil exploration and refining**
- Exploring new oil reserves
- Refining crude oil into usable products

**Mineral processing/mining**
- Extracting valuable minerals
- Managing the environmental impact of mining activities

**Chemical production or manufacturing**
- Producing chemicals on a large scale
- Designing and optimizing production processes

**Alternative energy**
- Developing renewable energy sources
- Designing new technologies for energy production

**Environmental cleanup**
- Cleaning up pollution
- Restoring the landscape

**Process safety**
- Ensuring safety in chemical processes
- Designing safeguards to prevent accidents

**Process technology**
- Developing new processes for chemical production
- Improving existing processes

**Environmental remediation**
- Cleaning up contaminated sites
- Restoring the environment

**Manufacturing**
- Designing and producing new products
- Optimizing production processes

**Consumer goods**
- Developing new consumer products
- Designing and testing new materials

**Pharmaceuticals, biomedical, and composites**
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We live in an era of tough rapidly changing times.

**Minors**

- Packaging
- Polymer Science
- Manufacturing
- Chemical Engineering
- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
- Computer Science
- Biology
- Chemistry
- Physics
- Mathematics
- Engineering Technology
- Environmental Studies
- Sustainability Studies
- Business
- Economics
- International Relations
- Political Science
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**Mineral Processing**
- Help communities recover valuable minerals while reducing environmental risk.
- Students may choose from concentrations in mining, concentration, and environmental applications.

**Polymer Science and Engineering**
- Understand the use of polymers in engineering and find better ways to create the 130 million tons of iron and steel consumed in the US each year.
- Graduates combine their knowledge of chemical engineering and materials science to develop, process, and develop new materials.

**Chemical Engineering**
- Work to develop lifesaving pharmaceuticals and improve the food supply for a hungry world.
- Students may choose from concentrations in bioprocess engineering, biochemical engineering, and environmental engineering.

**Hydrogen Technology**
- Understand the role of hydrogen in a sustainable future.
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We offer minors in four rapidly expanding areas:

**Sustainable Iron & Steel Making**
- Help manage the earth's resources in an environmentally-friendly manner.
- Students may choose from concentrations in sustainable iron and steel making.

**CO2 Sequestration**
- Learn how to remove carbon dioxide from flue gases and store it in stable mineral form. The CO2 sequestration industry is estimated to grow to $47 billion by 2030.

**Bioprocess Engineering**
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Hydrogen Technology

Understand the use of hydrogen and its potential applications as a clean energy carrier. Graduates with this training, and hydrogen-related knowledge, will be well positioned to work in major chemical, pharmaceutical, and food processing industries, among others.

Mineral Processing

Help to manage the earth’s resources in efficient and environmentally-friendly ways. Graduates with this training will be well positioned to work in major chemical, pharmaceutical, and food processing industries, among others.

Bioprocess Engineering

Work to develop lifesaving drugs and other pharmaceuticals. Graduates with this training will be well positioned to work in major chemical, pharmaceutical, and food processing industries, among others.

Polymer Science and Engineering

If you dream of being a polymer engineer, then pursue this minor. Graduates with this training will be well positioned to work in major chemical, pharmaceutical, and food processing industries, among others.

Special Opportunities

Graduate school
Medical school
Law school
Consulting
Design engineering
Environmental cleanup
Process safety
Alternative energy
Consumer goods
Food production
Pharmaceuticals, biomedical, or biotech
Oil exploration and refining
Mineral processing/mining
Chemical production or biotech

Career Opportunities

Chemical engineers enjoy an average starting salary that is consistently among the highest in the nation. The average starting salary for chemical engineers is approximately $70,000. Chemical engineers enjoy a wide range of career opportunities, including: engineering, management, manufacturing, consulting, and teaching.

FIND OUT MORE

SPECIAL OPPORTUNITIES

MINORS

WWW.MTU.EDU
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