Mechanical and Industrial Engineering

MASTER'S DEGREE PROGRAMS
The mechanical and industrial engineering department at UIC houses three master’s programs, each designed to guide students toward future career success.

Students have access to more than 40 professors who are notable researchers in combustion, environmental science, thermal science, dynamics and control, mechatronics, virtual reality, MEMS (microelectrical mechanical systems), manufacturing, processing, and more.

**MS IN MECHANICAL ENGINEERING**
Those who rise to the top in mechanical engineering are able to recognize emerging issues, come up with creative solutions, and design and refine prototypes until they have something that truly works. UIC’s program will help you to develop that skillset and mindset, opening the door to higher-level opportunities. In this program, you can either combine your courses with a research-based master’s thesis or complete your entire MS degree through coursework.

**MS IN INDUSTRIAL ENGINEERING**
An MS in industrial engineering from UIC will hone your expertise in creating efficient, high-performing systems that bring together people, equipment, materials, power, and information to deliver products or services—preparing you for roles that are expected to grow by 8 percent by 2028, according to the U.S. Bureau of Labor Statistics. You can either combine your courses with thesis research or complete your entire degree through coursework.

**MASTER OF ENERGY ENGINEERING**
This practical program is open to students of many backgrounds: it requires an understanding of math and science but no prior experience or study in engineering. Through courses, guest speakers, site tours, and hands-on projects, you will come to understand the energy industry, from power generation to project management. This program offers evening courses to meet the needs of working professionals, and it has its own website: energyengineering.uic.edu.

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**International Programs**
UIC’s international partnership programs allow students from specific universities around the world to complete part of their higher education in our department, potentially culminating in an MS in Mechanical Engineering or MS in Industrial Engineering from UIC. Learn more at go.uic.edu/COEinternational.

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**UIC’s Academic Strengths**

**Mechanical Engineering:**
- Design, Controls, and Manufacturing
- Energy Research
- Fluid/Thermal Research

**Industrial Engineering:**
- Big Data Analytics
- Advanced Manufacturing
- Machine Learning and Artificial Intelligence

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**Featured Courses**

What will you take as an MS student at UIC? Explore your choices at mie.uic.edu (see the Courses page under the Graduate menu). Here are a few that have captured your choices at mie.uic.edu (see the Courses page under the Graduate menu). Here are a few that have captured your choices at mie.uic.edu (see the Courses page under the Graduate menu). Here are a few that have captured your choices at mie.uic.edu (see the Courses page under the Graduate menu). Here are a few that have captured your choices at mie.uic.edu (see the Courses page under the Graduate menu). Here are a few that have captured your choices at mie.uic.edu (see the Courses page under the Graduate menu).

**ME 411 MECHATRONICS I**
Students learn elements of mechatronic systems, sensors, actuators, microcontrollers, modeling hardware in the loop simulations, and real-time software. The class conducts lab experiments with electromechanical systems.

**ME 547 ADVANCED CONCEPTS IN COMPUTER-AIDED ENGINEERING**
This course covers useful concepts in motion simulation of complex rigid multibody systems. Students learn about the recursive formulation of kinematical and dynamical equations of open and constrained multibody systems and develop interactive computer solutions.

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**A Step Ahead**
Thanks to the strength of our curriculum and UIC’s global connections, many MS students are able to get internships that help them level up their career planning.

**Jacqueline Swift**
Internship: Spraying Systems Company
Location: Wheaton, IL
Assignment: Developing specialized software that research engineers, sales engineers, and technicians can use to analyze sprays created by the company’s spraying products
Her perspective: “UIC has more than prepared me for my current position. The master’s program has been challenging, but well worth it, and UIC is located in the heart of Chicago, which has a nearly endless supply of job opportunities.”

**Michael Bravo**
Internship: The Boeing Company
Location: Chicago, IL
Assignment: Analysis and testing of the flight-control functions of Boeing’s widebody 777X, ensuring that flaperons, elevators, rudders, slats, and flaps behave properly and safely during takeoff, landing, and flight
His perspective: “Mechanical and industrial engineering allows students to touch and invest in almost any industry that you can imagine: automotive, rehabilitative robotics, energy storage, nanotechnology, aerospace. If you can name it, chances are you can do it at MIE.”

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[Image 345x531 to 613x793]
[Image 345x263 to 613x529]
After UIC, where to?

Companies that have hired graduates of UIC’s mechanical engineering, industrial engineering, and energy engineering master’s programs include:

- Air Force Research Laboratory
- Advocate Condell Medical Center
- Altair
- Anthem
- Argonne National Laboratory
- Blue Origin
- Caterpillar Inc.
- CNH Industrial
- Collins Aerospace
- Cummins
- Deloitte Switzerland
- Electro-Motive Diesel Inc.
- Exelon
- Gamma Technologies
- General Motors
- Google
- HBK Engineering
- HydraForce
- Illinois Tool Works
- ImageXpert Inc.

- Intel Corporation
- Intellisense
- ITW
- Johnson Controls
- Komatsu Mining Corp.
- Lockheed Martin
- Mack Trucks (Volvo Group)
- MEMS R&D
- Motorola
- Navistar
- Primera Engineers
- Spraying Systems Company
- SunCoke Energy
- TATA Motors
- Tesla
- TRW Automotive
- U.S. Navy
- USG
- Wacker Neuson SE

Admissions

Full details on how to apply—including requirements and deadlines—are at mie.uic.edu under the Graduate menu.

Interested in graduate study at UIC? Talk to us. Contact our graduate team with questions or for an informal conversation.

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