Putting it together

Last year, Brady Middleton provided Chicago Public Schools students in underserved communities with a hands-on kit designed to help them learn about the Internet of Things, filled with instructional videos and 21 electronic components to play with.

To create the kits—a product of his startup business, Think773—Brady called on his UIC major in industrial engineering. “The kit is an electrical engineering product,” he explained, “but I’m doing the industrial engineering when it comes to the business and the numbers, the operations, and working with people.” Brady is coordinating with manufacturers in China and managing his own quality control and distribution. Courses such as IE 380 Manufacturing Process Principles and IE 446 Quality Control and Reliability can help.

“The IE department here is where it’s at,” Brady said. “It’s the place to be. For me, it’s everything.”

Visit our Internships and Jobs and Student Profiles pages at mie.uic.edu to learn more about current students and alumni.

Industrial Engineering

Industrial engineers help us to work smarter.

As an industrial engineer, you’ll develop analytical vision that will allow you to see processes in a whole new way. Excellence and efficiency will be your areas of expertise. By assessing a wide range of factors—such as technology, time, staff, environmental concerns, safety, and cost—you will create a road map for doing things better.

With an industrial engineering degree, you might:

- Manage supply chains of raw materials sourced from all over the world
- Devise quality controls to ensure that products meet customers’ needs
- Provide project-management expertise to complete initiatives on time and on target

“You may not think about it when you go to a theme park, but every aspect of it is engineered with the guest in mind.”

Jonathan Khou, Industrial Engineering ’15
Industrial Engineer, Universal Parks and Resorts

Creativity in action

For our annual senior design showcase, the UIC Engineering Expo, industrial engineering students have created:

- A plan to improve tool room operations for United Airlines at O’Hare
- An app to optimize freight flow at a YRC Freight distribution center
- A system to collect Metra fares via RFID technology
- A business intelligence dashboard for supply chain management at Littelfuse, Inc.
Mechanical Engineering

Flying high

Imagine having to not only fly a drone accurately, but also design and build it. UIC students, including several ME majors, took on the challenge at a competition sponsored by the U.S. Army Combat Capabilities Development Command. More than 1,700 colleges and universities were eligible to compete, but only the top 11 proposals made the finals. Finalist teams had to propose and prototype solutions to real-world technological problems that the Army faces in the area of unmanned aerial vehicles.

UIC’s design used 3D printing technology to eliminate copper wires, minimize assembly time and user intervention, and improve structural rigidity—all properties that are useful in the field. For their ingenuity and in-flight performance, the UIC team won third place in the competition and $3,000 in prize money.

Visit our Internships and Jobs and Student Profiles pages at mie.uic.edu to learn more about current students and alumni.

Creativity in action

For our annual senior design showcase, the UIC Engineering Expo, mechanical engineering students have created:

- An injection-molding machine for chocolates
- A design for an autonomous Mars rover
- A method of remotely refilling space rockets with nitrous oxide
- A tuning plan for a Formula 1 exhaust system

With a mechanical engineering degree, you might:

- Work on the rocket propulsion that will enable our next Mars mission
- Investigate alternative energy sources to help the world adapt to climate change
- Develop next-generation automotive fuels, parts, and systems

Mechanical engineers create products and technologies that improve modern society.

As a mechanical engineer, you will develop an understanding of mechanics, design and production, and the flow and transfer of energy. You will have the freedom to direct your knowledge and skills toward the products and systems that interest you most: from the very large—think aircraft, power plants, and factory equipment—to the extremely small, in the realm of nanotechnology.

“I’m excited to be working on projects that could change the fundamental way we look at the universe.”

Annie McDonnell, Mechanical Engineering ’16
Systems Integration and Test Engineer, NASA Jet Propulsion Laboratory

Mechanical engineers create products and technologies that improve modern society.