INDUSTRIAL ENGINEERING
INDUSTRIAL ENGINEERING

The DEPARTMENT OF INDUSTRIAL ENGINEERING AND MANAGEMENT SCIENCES equips students with the analytical and organizational skills they need to pursue a broad range of career options. The department’s internationally recognized faculty members conduct research in areas such as financial and healthcare engineering and humanitarian logistics, and teach courses designed to develop our students’ analytic skills and understanding of business.

UNDERGRADUATE STUDY

The undergraduate program was developed for students interested in probability, statistics, and mathematical modeling, as well as economics and decision science.

PROGRAMS OF STUDY

\ Bachelor of science in industrial engineering
\ Dual major with economics
\ Kellogg Certificate Program for undergraduates

EXAMPLE COURSES

IEMS 313 Deterministic Models and Optimization
IEMS 325 Engineering Entrepreneurship
IEMS 341 Social Networks Analysis
IEMS 381 Supply-chain Modeling and Analysis
IEMS 385 Introduction to Health Systems Management

NETWORKING

Attend regional and national meetings; participate in competitions against other universities.

INSTRUCTION

Assist faculty in curriculum studies, course grading, and development.

STUDY ABROAD

Apply for an IEMS study abroad award to study industrial engineering in Hong Kong or Istanbul.

THE INSTITUTE OF INDUSTRIAL ENGINEERS

This student group advances industrial engineering through networking, training, and knowledge sharing.

GRADUATE STUDY

PROGRAMS OF STUDY

\ Master of Engineering Management
\ Master of science in analytics
\ PhD in industrial engineering and management sciences

RESEARCH AREAS

\ Analytics and statistics
\ Financial engineering
\ Health and humanitarian systems
\ Optimization
\ Organization science
\ Production and logistics
\ Stochastic modeling and simulation

OUTSIDE THE CLASSROOM

RESEARCH

Work with faculty on research. Recent projects include enhancing medical preparedness for marathons and optimizing delivery routes for local nonprofits.
“MY CLASSES ARE VERY APPLICABLE TO REAL LIFE. YOU LEARN THINGS YOU’LL REALLY USE. MY PROFESSORS ARE SO SUPPORTIVE, AND THEY HAVE REAL INDUSTRY EXPERIENCE. I THINK THAT’S THE MOST IMPORTANT THING A TEACHER CAN OFFER.”

SARI NAHMAD \ INDUSTRIAL ENGINEERING

CAREERS IN INDUSTRIAL ENGINEERING

WHAT’S NEXT?

- Many industrial engineering graduates pursue advanced study in business and analytics.
- Others go on to careers in logistics, manufacturing, finance, and consulting.

RECENT GRADUATE PLACEMENTS

- Systems analyst at Nike
- Associate industrial engineer at DSC Logistics
- Data analyst at Oracle
- Consultant at IBM
- Product manager at Redfin
- Industrial engineer at JetBlue Airways
- Business analyst at Accenture
- Corporate banker at HSBC
- Analyst at J.P. Morgan

HOW YOU SPEND YOUR TIME IN THIS PROGRAM

BASED ON A SURVEY OF CURRENT STUDENTS.

- 7.3% Giving/preparing for presentations
- 21.3% Studying for/taking written exams
- 28.0% Group projects
- 27.5% Working on problem sets
- 0.9% Building things
- 5.5% Working in a Lab
- 9.4% Computer programming
ENVISION WHAT’S POSSIBLE

NORTHWESTERN ENGINEERING STUDENTS CONSTANLY EXPLORE NEW PATHWAYS IN INDUSTRIAL ENGINEERING. IMAGINE YOURSELF:

\nLearning how to design, analyze, and improve any organization
\nGetting a systems-level view of business—organizational behavior, economics, entrepreneurship, and innovation
\nDeveloping the skills to create and implement mathematical, statistical, and computer models with confidence
\nLearning industrial engineering concepts and applications from leading innovators and practitioners

FIND YOUR DIRECTION HERE

Northwestern
McCORMICK SCHOOL OF ENGINEERING

www.iems.northwestern.edu