INDUSTRIAL ENGINEERING

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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*

OUTSIDE THE CLASSROOM

RESEARCH \ Work with faculty on research. Recent projects include enhancing medical preparedness for marathons and optimizing delivery routes for local nonprofits.

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.

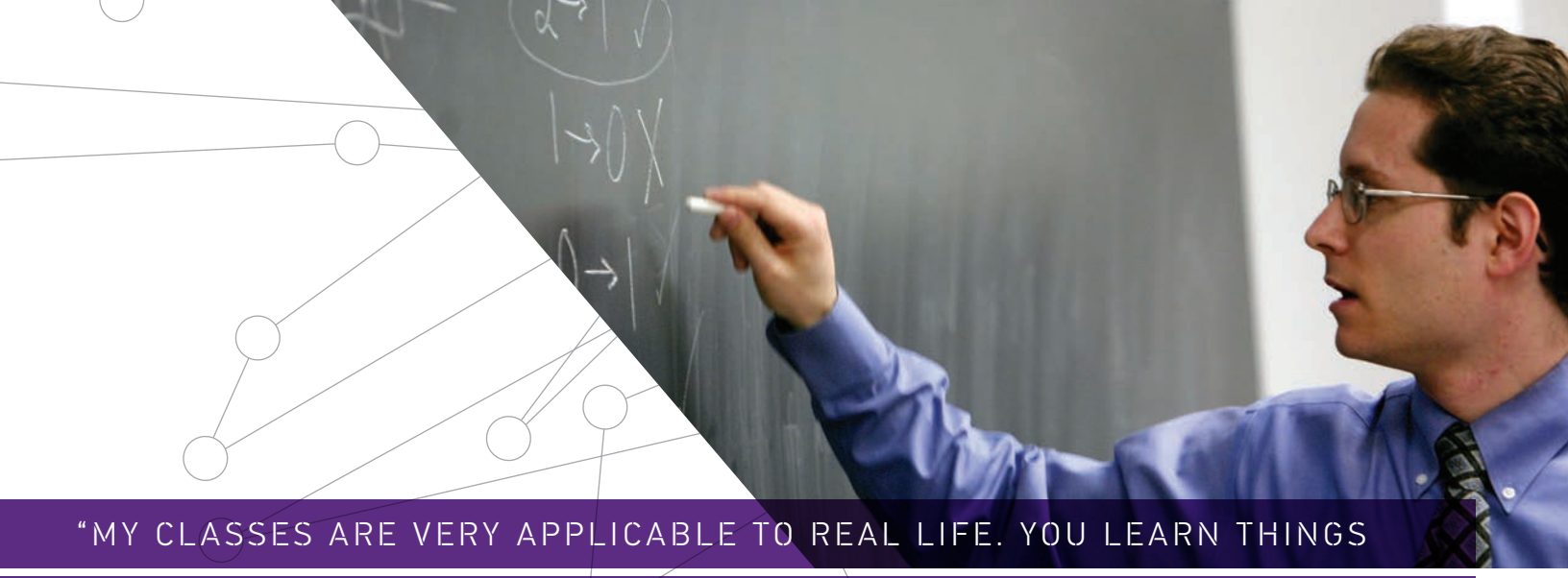
GRADUATE STUDY

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



"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**
- Business analyst at **McKinsey & Co.**
- 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 CONSTANTLY EXPLORE NEW PATHWAYS IN INDUSTRIAL ENGINEERING. IMAGINE YOURSELF:

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

FIND YOUR DIRECTION HERE

Northwestern | McCORMICK SCHOOL OF ENGINEERING

www.iems.northwestern.edu