



Master of Science

INDUSTRIAL ENGINEERING

The Master of Science in Industrial Engineering (MSIE) Program provides students with advanced engineering skills in specific fields, including service, manufacturing, technology, infrastructure and sustainability, in addition to mechanical, electrical, computer, and biological systems. Students can hone their technical skill set through a number of concentrations and electives.



Columbia Industrial Engineers find placement in large Fortune 500 firms and boutique organizations, in a variety of functions including operations, logistics, data/business analytics, technology, finance, healthcare, and manufacturing. Our students also become engineering leaders of government and non-profit organizations.

**Meet an
Admissions Officer**

Mondays & Fridays
10:30-11:30am

RSVP
admit@ieor.columbia.edu

**Application Deadline
February 15**

of the year of matriculation

ieor.columbia.edu/masters/industrial-engineering
ieor.columbia.edu/ieor-admissions

“Industrial Engineering is the engineering branch involved with quantitative decision making, involving the allocation and control of limited resources. Such problems arise, for example, in the operations of industrial firms, financial institutions, health care organizations, transportation systems, energy and resources, and government. Our world-class faculty teaches and mentors students in a stimulating academic environment. We are very proud of our graduates, many of whom become leaders in industry and academia.”



Dr. Jay Sethuraman
IEOR Department Chair



Mindi Levinson
Career Placement

“Columbia’s MSIE students have a strong foundation in engineering, enabling them to provide a unique perspective as they pursue a variety of career trajectories. We support students as they pursue internships and careers, a rewarding endeavor that allows us to funnel strong candidates into an ever-changing pipeline of fields such as healthcare, data science, production, and supply chain management.”

Course Highlights

Students can specialize in a number of professional concentrations including:

Healthcare Management

The Healthcare Management concentration is for students who are interested in applying the methodology of operations research and industrial engineering to healthcare systems.

Select Course Highlights:

- Healthcare Operations Management
- Health Analytics
- Operations Research in Public Policy
- Project Management
- Quality Control & Management
- Systems Engineering, Tools & Methods
- Service Operations
- Scheduling

Systems Engineering

The Systems Engineering concentration is for students who have an undergraduate engineering degree and are interested in taking a holistic view of engineering and focusing on how complex engineering projects should be designed and managed.

Select Course Highlights:

- Applied Systems Engineering
- Systems Engineering Tools & Methods
- Digital Communications
- Design of Construction Systems
- Operating Systems
- Robotics
- Simulation
- Space Vehicle Dynamics & Control
- Supply Chain Management & Design

Regulated Industries

The Regulated Industries concentration is for students who have an undergraduate engineering degree and are interested in industrial engineering problems in regulated industries.

Select Course Highlights

- Antitrust & Trade Regulation
- Business Analytics
- Capital Facility Planning & Financing
- Environmental Engineering
- Transportation Engineering
- Production of Inorganic Materials
- Transportation Analytics & Logistics