

MASTER OF SCIENCE INDUSTRIAL ENGINEERING



The Master of Science in Industrial Engineering (MSIE) is a 30-credit STEM program for students with an undergraduate engineering degree who want to enhance their training in special fields, such as scheduling, production planning, inventory control, and industrial economics. Industrial engineering programs have an illustrious history at Columbia, with the program starting in 1919 and the first class graduating in 1922.

“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 (2024)



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.

Application Deadline

Priority: January 15 | Regular: February 15
<https://ieor.columbia.edu/industrial-engineering-msie>



Department of Industrial Engineering & Operations Research

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“We empower students on their journey to securing internships and careers, a fulfilling effort that enables us to channel top talent into the dynamic and evolving landscape of quantitative fields.”

Lucy Mahbub
Director of
Career Placement



Course Highlights

Healthcare Management

- Production Scheduling
- Quality Control and Management
- Operations Research in Public Policy
- Project Management
- Systems Engineering, Tools, and Methods
- Health Analytics
- Operations Strategy
- Service Operations
- Managerial Negotiations

Asset Management

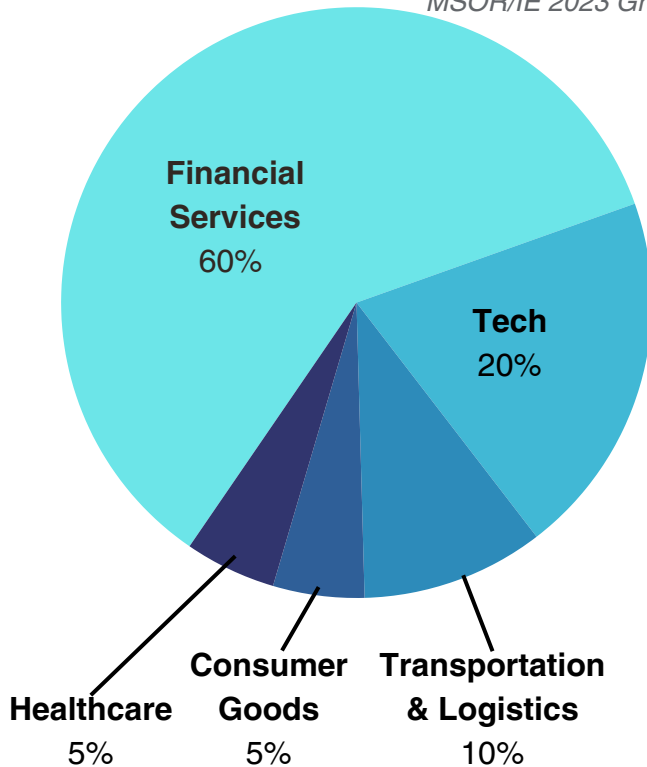
- Intellectual Property for Engineers
- Quantitative Corporate Finance
- Simulation
- Quality Control
- Transportation Analytics & Logistics
- Business Analytics

Systems Engineering

- Quantitative Corporate Finance
- Simulation
- Production Scheduling
- Quality Control and Management
- Applied Systems Engineering
- Systems Engineering Tools and Methods
- **Additional Electives** in Infrastructure & Sustainability, Mechanical, Electrical & Computer Systems, Biological Systems Electives)

Career Outcomes for Alumni

**MSOR/IE 2023 Grads*



For more information, visit ieor.columbia.edu