



MANAGEMENT SCIENCE & ENGINEERING

The Master of Science program in Management Science and Engineering (MS&E), is offered by the IEOR Department in partnership with Columbia Business School. This is the first program of its kind between Columbia Engineering and Columbia Business School. The Program provides rigorous exposure to optimization and stochastic modeling in addition to a deep coverage of applications in the areas of operations engineering and management.

Graduates from this program assume positions as analysts and associates in consulting firms, business analysts in logistics, supply chain, operations, or revenue management departments of large corporations, and as financial analysts in various functions (e.g. risk management) of investment banks, hedge funds, credit card companies, and insurance firms.



**Meet an
Admissions Officer**

Mondays & Fridays
10:30-11:30am

RSVP
admit@ieor.columbia.edu

**Application Deadline
February 15**

of the year of matriculation

msba.engineering.columbia.edu
ieor.columbia.edu/ieor-admissions

“MS&E students are enrolled in my Operations Consulting course, a year-long hands-on laboratory in which students ‘learn by doing’ in real-world consulting projects for manufacturing and service, domestic and global, and start-up companies from all sectors. Student teams focus on identifying, modeling, and testing operational improvements and innovations with potential to enhance the profitability and achieve sustainable competitive advantage for their sponsor companies. This experience is a tremendous opportunity for professional growth and job placement for our students.”



Dr. Soulaymane Kachani
Vice Provost
of Columbia University
Senior Vice Dean
of Columbia Engineering

“It’s inspiring to work with talented individuals while uncovering the many exciting career opportunities available to them. Our unique MS&E Program cultivates the quantitative skills associated with engineering and produces proficiency in qualitative abilities — providing a significant competitive advantage in today’s global business environment. MS&E students regularly receive offers from top consulting and financial services firms, including Fortune 500 companies. Our students also flex their entrepreneurial muscles by working for start-ups and even starting their own ventures.”

Course Highlights

Students can specialize in a number of professional concentrations including:

Core Classes

- Operations Consulting
- Optimization Models & Methods
- Probability, Statistics & Simulation
- Professional Development
- Stochastic Models

Analysis Electives

- Data Analytics
- Data Mining
- Deep Learning
- Dynamic Pricing & Revenue Management
- Computational Discrete Optimization
- Game Theory
- Healthcare Operations Management
- Machine Learning
- Scheduling
- Tools for Analytics
- Transportation Analytics & Logistics

Decision, Risk, & Operations Electives

- Business Analytics
- Data Driven Entrepreneurship
- Demand & Supply Analytics
- Health Analytics
- Managerial Negotiations
- Quantitative Pricing & Revenue Analytics
- Risk Management
- Service Operations
- Supply Chain Analytics

Management Electives

- Corporate Finance
- Designing Digital Operating Models
- Entrepreneurial Business Creation
- Global Capital Markets
- Lean LaunchPad
- Operations Research in Public Policy
- Project Management
- Quality Control & Management

Mindi Levinson
MS&E Career
Placement Director

