



MS in INDUSTRIAL ENGINEERING

ACADEMIC ADVISING FOR FALL 2017



AGENDA

1. Degree Overview and Requirements
2. Program Overview
3. IEOR E4150 Waiver Application
4. Suggested Electives based on interest:
Consulting, Management, Finance, Analytics and
Entrepreneurship
5. Special MSE Electives (Registration open in
late August)
6. Faculty Advisors

DEGREE OVERVIEW

1. Master of Science in Industrial Engineering
2. Awarded by The Fu Foundation School of Engineering and Applied Science, Columbia University
3. Expected Completion: May, August or December 2018
4. Expected Degree Conferral: May 2018, October 2018 or February 2019

DEGREE REQUIREMENTS

1. 30 credits: Four required core courses plus electives, 18 points must be IEOR courses
2. MSIE core: IEOR E4000, IEOR E4150, IEOR E4004-002/003, IEOR E4106
3. ENGI E4000 is required in order to receive IEOR career management services
4. No Pass/Fail courses
5. All courses must be completed at Columbia
6. Remain in good standing; academic integrity

MSIE PROGRAM

For Fall 2017 semester, register for the following:

1. IEOR E4000 Operations Management
2. IEOR E4150 Intro to Probability & Statistics
3. IEOR E4004 (Section 002 or 003)
Optimization Models and Methods
4. ENGI E4000-011 Professional Development

If are waived of IEOR E4150, then you should register for: IEOR E4106 Stochastic Models

IEOR E4150

- IEOR E4150 Introduction to Probability and Statistics is a foundational core course; inadequate preparation will lead to difficulty completing the program.
- You have an option to take the course in the fall or request a waiver.
- We will review your request to waive and respond within (10) business days.
- To request a waiver, fill out the form:
<https://goo.gl/forms/TXUqWoxuio69VLWh1>
- Deadline to request the waiver: August 25, 2017

DESCRIPTION OF COURSES

www.ieor.columbia.edu and click on Courses

Industrial Engineering & Operations Research

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Resources for: Undergraduates | Graduates | Faculty

ADMISSIONS	B.S.	M.S.	PH.D.	PEOPLE	RESEARCH	CAREERS	SEMINARS
Application Columbia Undergraduates - MS Express Application Deadlines Student Life Meet Our Students Visiting Us Join Our Admissions Waiting List Tuition and Fees Frequently Asked Questions (FAQs)	Academic Advising BS in OR Engineering Management Systems (BSOR EMS) BS in OR Financial Engineering (BSOR FE) BS in Operations Research (BSOR) BS in Industrial Engineering (BSIE) Program Plans Minors Courses Student Groups	MS in Operations Research (MSOR) MS in Management Science and Engineering (MSME) MS in Financial Engineering (MSFE) MS in Industrial Engineering (MSIE) Student groups	PHD Students On The Market PHD Orientation 2017 Life as a Doctoral Student PHD Advisors and Alumni PHD Curriculum PHD Graduation Requirements PHD Residence Requirements PHD Program Plan PHD Dissertations	All People Faculty Staff Department Chairs Post Docs & Visitors Alumni	Research Centers Center for Financial Engineering Computational Optimization Research Center Center for the Management of Systemic Risk PHD Dissertations	Career Development Career Talk Series Professional Commitment Employers Finding Talent PHD Careers IEOR Career Team Departmental Positions IEOR Summer Internship Video Contest Industry Outreach Industry Collaboration Project Proposal Executive Education	Applied Probability and Risk Seminar IEOR-DRO Seminar Financial Engineering Practitioners Seminar

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NEWSLETTER OF THE IND VOL. 4 | NO. 2 SPRING/SUMMER 2017

LETTER FROM THE CHAIR

DR. GARUD IYENGAR



consulting, and financial services. We wish them the best of luck in their future endeavors and look forward to hosting them during our upcoming alumni events!

In August we will welcome a new class of M.S. and Ph.D. students! We received a record number of applicants which allowed us to admit top quality students representing over 60 countries.

In addition to our alumni round table, mentoring

IEOR-DRO Seminar: Cynthia Rudin (Duke)
Speaker: Cynthia Rudin
Date: 05-09-2017
Location: Mudd Hall 303
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IEOR Courses By Topics

- [University Schedule](#)
- [IEOR Fall Schedule](#)
- [IEOR Courses By Number](#)
- [IEOR Spring Schedule](#)
- [IEOR Summer Schedule](#)

- [Analytics](#)
- [Computing & Programming](#)
- [Consulting](#)
- [Entrepreneurship](#)
- [Financial Engineering & Finance](#)
- [Independent Research](#)
- [Operations & Production Management](#)
- [Optimization](#)
- [Probability & Applied Probability](#)
- [Service & Systems Engineering](#)
- [Supply Chain and Logistics](#)
- [Special Topics](#)

- 1. Analytics**
- IEOR4211 Applied Consulting (MSOR & MSIE Only)
 - IEOR4207 Statistics and Data Analysis
 - IEOR4407 Game Theoretic Models of Operations
 - IEOR4522 Python for Operations Research (1,5)
 - IEOR4523 Data Analytics for Operations Research (MS only)
 - IEOR4524 Industry Projects in Analytics (MSOR only)
 - IEOR4525 Machine Learning for OR & FE
 - IEOR4540 Data Mining for Engineers
 - IEOR4572 Data Analytics and Python for OR (BS only)
 - IEOR4574 Cloud Computing
 - IEOR4575 Designing Digital Operating Models
 - IEOR4577 Operations Research Methods in Marketing (1,5)

HELPFUL SUGGESTIONS

1. Be conservative and observe pre-requisite requirements.
2. If you are waived from taking IEOR E4150, you should take IEOR E4106 in the Fall so you are prepared to take electives in the spring.
3. Do ***not*** take the following set of courses in the **same** term:
 - IEOR E4150, IEOR E4106, IEOR E4404
 - IEOR E4150, IEOR E4106, IEOR E4700
 - IEOR E4106, IEOR E4404, IEOR E4700

INTEREST IN FINANCE

HIGHLY SUGGESTED, FOUNDATIONAL:

- IEOR E4403 Quantitative Corporate Finance
- IEOR E4711 Global Capital Markets

OPTIONAL:

- IEOR E4576 Derivatives Marketing and Structuring (1.5)
- IEOR E4700 Intro to Financial Engineering*
- IEOR E4620 Pricing Models for FE**
- IEOR E4500 Applications Programming for FE***
- DROM B8116-060 Risk Management (Open late August)

*Requires IEOR E4106

**Requires IEOR E4700; can be taken simultaneously as IEOR E4620

***Requires programming proficiency & opens in late August

INTEREST IN ANALYTICS

FOUNDATIONAL:

- IEOR E4522 Python for Operations Research (1.5)
- IEOR E4523 Data Analytics for Operations Research

ELECTIVES:

- IEOR E4540 Data Mining
- IEOR E4575 Designing Digital Operating Models
- IEOR E4650-001 / 002 Business Analytics
- DROM B8131-060 Sport Analytics (Open late August)

IEOR E4522 PYTHON WAIVER

- IEOE E4522 Python is a required pre-requisite course for the Business Analytics concentration
- You have an option to take the course in the fall or request a waiver in order to take higher level BA electives
- We will review your request to waive and respond within (10) business days.
- To request a waiver, fill out the form:
<https://goo.gl/forms/xFJB87Vt4E8HHDOj1>
- Deadline to request the waiver: August 18, 2017

INTEREST IN CONSULTING

- IEME E4310 The Manufacturing Enterprise
- IEOR E4000 Operations Management
- IEOR E4407 Game Theoretic Models
- IEOR E4711 Global Capital Markets
- IEOR E4555 Design and Agile Project Mgmt. Eng. Lab
([Application Required](#); Deadline: August 4th)
- IEOR E4998 Managing Tech. Innovations
- DROM B8107-060/061 Service Operations (Open late August)
- DROM B8510-060/061 Managerial Negotiations (Open late August)

INTEREST IN MANAGEMENT

- IEOR E4000 Operations Management
- IEOR E4550 Entrepreneurial Business Creation
- IEOR E4998 Managing Tech. Innovation
- IEOR E4575 Designing Digital Operating Models
- DROM B8107-060/061 Service Operations (Open late August)
- DROM B8510-060/061 Managerial Negotiations (Open late August)

INTEREST IN ENTREPRENEURSHIP

- IEOR E4403 Quantitative Corporate Finance
- IEOR E4550 Entrepreneurial Business Creation
- IEOR E4555 Design and Agile Project Mgmt. Eng. Lab ([Application Required](#); Deadline: August 4th)
- IEOR E4998 Managing Tech. Innovations
- DROM B8510-060/061 Managerial Negotiations (Open late August)
- DROM B8858-060 Data-Driven Entrepreneurship (Open late August)



SPECIAL MSE ELECTIVES

The following courses are special courses from the Business school exclusive to MS&E students. **MSIE students are limited to only (1) of the five courses when they open in late August.**

- DROM B8107-060/061 Service Operations
- DROM B8116-060 Risk Management
- DROM B8131-060 Sports Analytics
- DROM B8510-060/061 Managerial Negotiations
- DROM B8858-060 Data-Driven Entrepreneurship

MSIE FACULTY ADVISOR



Dr. Shipra Agrawal

Dr. Agrawal will meet with her advisees early September. For early registration inquiries, please email the [IEOR Academic Affairs Team](#).

YOUR ACTION ITEMS

1. Activate your UNI
2. Login to SSOL <https://ssol.columbia.edu/>
3. Register for your courses (core & electives)
4. Like! the IEOR Advising Facebook Page
<https://www.facebook.com/IEORAdvising/>
5. Review your tuition e-Bill
6. Review academic calendar
<http://registrar.columbia.edu/>

THE IEOR OFFICE

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