



MS in FINANCIAL ENGINEERING ACADEMIC ADVISING FOR FALL 2017



AGENDA

1. Degree Overview
2. Degree Requirements
3. Program Overview
4. Fall FE Electives
5. Concentrations
6. Faculty Advisors

MSFE DEGREE OVERVIEW

- Master of Science in Financial Engineering
- Awarded by The Fu Foundation School of Engineering and Applied Science, Columbia University
- Expected Completion:
 - May, August or December 2018
- Expected Degree Conferral:
 - May 2018, October 2018 or February 2019

DEGREE REQUIREMENTS

1. 36 credits
2. Core, semi-core and electives
3. ENGI E4000 is required in order to receive IEOR Career Management services
4. No Pass/Fail courses
5. Attendance and Learning Journals for the FE Seminar Series (Fall 2017 & Spring 2018)
6. All courses must be completed at Columbia
7. Remain in good standing
8. Academic integrity



MSFE PROGRAM

For Fall 2017 semester, register for the following:

1. IEOR E4721 Mathematics of Financial Engineering Primer
2. ENGI E4000-009 Professional Development
3. IEOR E4007 Optimization Models
4. IEOR E4701 Stochastic Models
5. IEOR E4706 Foundations of Financial Engineering
6. FE Elective (select 1 or 2 courses)

DESCRIPTION OF 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	M.S. MS in Operations Research (MSOR) MS in Management Science and Engineering (MSME) MS in Financial Engineering (MSFE) MS in Industrial Engineering (MSIE) Courses Student groups	PHD Students On The Market PHD Orientation 2017 Life as a Doctoral Student PHD Advisors and Mentors 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

www.ieor.columbia.edu and
click on Courses

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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

SEMINARS



IEOR-DRO Seminar: Cynthia Rudin (Duke)
Speaker: Cynthia Rudin
Date: 05-09-2017
Location: Mudd Hall 303
This issue of inoperability in predictive

IEOR Courses By Topics

M.S.

- MS in Operations Research (MSOR)
- MS in Management Science and Engineering (MS&E)
- MS in Financial Engineering (MSFE)
- MS in Industrial Engineering (MSIE)

Courses

Student Groups

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

1. [Analytics](#)
2. [Computing & Programming](#)
3. [Consulting](#)
4. [Entrepreneurship](#)
5. [Financial Engineering & Finance](#)
6. [Independent Research](#)
7. [Operations & Production Management](#)
8. [Optimization](#)
9. [Probability & Applied Probability](#)
10. [Service & Systems Engineering](#)
11. [Supply Chain and Logistics](#)
12. [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)

FALL 2017 FE ELECTIVES

Select from:

- IEOR E4403 Quantitative Corporate Finance
- IEOR E4500 Application Programming for FE
- IEOR E4718 Beyond Black-Scholes: The Implied Volatility Smile
- IEOR E4725 Big Data in Finance
- IEOR E4726 Applied Financial Risk Management (3 points)
- IEOR E4727 Programming for Financial Engineering
- IEOR E4728 Quantitative Alpha Strategies (1.5)
- IEOR E4731 Credit Risk & Credit Derivatives
- IEOR E4733 Algorithmic Trading
- DROM B8116-060 Risk Management
- **IEOR E4732 Computational Methods in Derivatives Pricing (Instructor's permission only; 2nd year elective)**
- **IEOR E4736 Event Driven Finance (Instructor's permission only; 2nd year elective)**

*Courses outside of this list must be reviewed and approved by info@ieor.columbia.edu

CONCENTRATIONS

The MSFE Program offers (5) concentrations:

- Finance and Economics
- Derivatives
- Asset Management
- Computing and Programming
- Computational Finance and Trading Systems

For requirements, see:

<http://ieor.columbia.edu/concentration/259>

MSFE FACULTY ADVISORS



Agostino Capponi



Emanuel Derman



Ali Hirsra



Daniel Lacker



Dylan Possamai



Xunyu Zhou

Faculty advisor will be assigned beginning of 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. Review your tuition e-Bill
5. Review academic calendar
<http://registrar.columbia.edu/>



THE IEOR OFFICE

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