

# Naveen Jindal School of Management

## Master of Science in Management Science

36 semester credit hours minimum

### Faculty

FACG> jsom-management-sciences-ms,jsom-management-science-phd

**Professors:** Ashiq Ali, Indranil R. Bardhan, Alain Bensoussan, Gary Bolton, Metin Çakanyildirim, Huseyin Cavusoglu, Daniel A. Cohen, William M. Cready, Milind Dawande, Theodore E. Day, Gregory G. Dess, David L. Ford Jr., Umit G. Gurun, Ernan E. Haruvy, Varghese S. Jacob, Ganesh Janakiraman, Elena Katok, Dmitri Kuksov, Nanda Kumar, Seung-Hyun Lee, Stanley Liebowitz, Zhiang (John) Lin, Sumit K. Majumdar, Syam Menon, Vijay S. Mookerjee, B. P. S. Murthi, Vikram Nanda, Özalp Özer, Mike W. Peng, Ashutosh Prasad, Suresh Radhakrishnan, Srinivasan Raghunathan, Ram C. Rao, Brian Ratchford, Michael J. Rebello, Sumit Sarkar, Suresh P. Sethi, Kathryn E. Stecke, Wing Kwong (Eric) Tsang, John J. Wiorkowski, Harold Zhang, Zhiqiang (Eric) Zheng

**Associate Professors:** Nina Baranchuk, Norris Bruce, Jianqing Chen, Zhonglan Dai, Rebecca Files, J. Richard Harrison, Dorothée Honhon, Kyle Hyndman, Surya N. Janakiraman, Robert L. Kieschnick Jr., Jun Li, Ningzhong Li, Livia Markóczy, Toyah Miller, Ramachandran (Ram) Natarajan, Naim Bugra Ozel, Orlando C. Richard, Young U. Ryu, Gil Sadka, Jane Salk, David J. Springate, Kelsey D. Wei, Han (Victor) Xia, Jun Xia, Ying Xie, Yexiao Xu, Alejandro Zentner, Jieying Zhang, Yuan Zhang, Feng Zhao, Yibin Zhou

**Assistant Professors:** Bernhard Ganglmair, Meng Li, Jean-Marie Meier, Alejandro Rivera Mesias, Alessio Saretto, Simon Siegenthaler, Christian Von-Drathen, Malcolm Wardlaw, Steven Xiao, Nir Yehuda

**Clinical Professors:** John Barden, Britt Berrett, Abhijit Biswas, Shawn Carraher, Larry Chasteen, David Cordell, John Gamino, Randall S. Guttery, William Hefley, Peter Lewin, Jeffrey Manzi, Joseph Picken, Divakar Rajamani, Rajiv Shah, Habte Woldu

**Clinical Associate Professors:** Lale Guler, Carolyn Reichert

**Clinical Assistant Professors:** Moran Blueshtein, Ayfer Gurun, Revansiddha Khanapure, Liping Ma, Drew Peabody

**Senior Lecturers:** Frank Anderson, Tiffany A. Bortz, Richard Bowen, George DeCourcy, Amal El-Ashmawi, Mary Beth Goodrich, Jennifer G. Johnson, Chris Linsteadt, Joseph Mauriello, Robert (Stephen) Molina, Matt Polze, James Richards, Debra Richardson, Anindita Roy Bardhan, Steven

## Degree Requirements

The Master of Science in Management Science (MS MSc) is a minimum 36 semester credit hours STEM (Science, Technology, Engineering and Mathematics) degree program that provides students with flexibility to customize and choose their own course of study by selecting a variety of masters courses and tracks offered by JSOM to satisfy the elective requirements.

To apply for this degree program, an undergraduate degree is required (all majors are considered). Students must maintain a 3.0 grade-point average (GPA) in both core courses and in aggregate courses to qualify for the MS in Management Science degree. Students also can obtain a double MS MSc and MBA degree by successfully completing a minimum of 63 semester credit hours (if all prerequisites are met).

**NOTE:** The Executive Education area of the Jindal School of Management offers three additional and separate MS MSc programs, which retain the same set of core courses but have their own set of specific electives. These include (1) the MS MSc with an emphasis in project management, (2) the Executive Healthcare Leadership and Management MS MSc and (3) the MS MSc with an emphasis in organizational behavior and coaching (see Executive Education catalog for more details). All three programs are supported entirely by participant fees, and special admissions requirements apply.

## Prerequisites

Students pursuing the Master of Science in Management Science (MS MSc) degree program are required to complete one semester credit hour of [MAS 6102](#) Professional Development course (except specialized Executive Education programs). In addition, knowledge of calculus is required and students who have not completed an undergraduate calculus course may satisfy the prerequisite by completing [OPRE 6303](#) Quantitative Foundations in Business with a grade of "B" or better. Degree credit is not earned for program prerequisites, however, the grade achieved in prerequisites will count toward the student's grade-point average (GPA). All program prerequisites must be satisfied within the first semester of graduate study as a degree-seeking student.

## Course Requirements

Core Courses: 12 semester credit hours

Students must satisfactorily complete the following core courses.

[MECO 6312](#) Applied Econometrics and Time Series Analysis

[MIS 6320](#) Database Foundations

[OPRE 6301](#) Statistics and Data Analysis

[OPRE 6332](#) Spreadsheet Modeling and Analytics

Elective Courses: 24 semester credit hours

As a highly flexible program, students may customize and choose their own course of study by selecting a variety of masters courses and tracks offered by JSOM to satisfy the elective requirements, including an international trip. Students are not required but are encouraged to focus on a specific or a combination of tracks (see samples below) to gain in-depth knowledge in a specific business area.

## Sample Tracks

**Accounting:** In today's global and technology-driven environment, managers need skills to effectively analyze accounting information and make value-enhancing decisions. Students may select accounting courses to concentrate in financial analysis, consulting, corporate governance and tax management. This concentration can be further refined to the areas of assurance services, taxation and internal audit.

**Business Analytics:** A concentration in business analytics covers statistics and econometrics, predictive modeling, decision and optimization (prescriptive) modeling, and data management. Students are prepared for a position within marketing analytics, decision and operations analytics, financial analytics, healthcare analytics and IT analytics.

**Finance:** Students can prepare for careers in corporate finance, investment management, or the management of financial institutions. Courses in this area emphasize creative solutions to business financing problems, the development of value maximizing investment and financing strategies, and the analysis and management of fixed income and equity investments. Students may choose to concentrate in either corporate financial planning or the analysis of financial securities and investment portfolios.

**Information Technology Management:** Information technology is integral to all business operations and permeates all aspects of modern business and our courses will enable students to fully utilize information technology to solve business problems and gain strategic advantage. Advanced courses provide skills necessary for the "supply" side of information technology for IT consulting, software management and e-business.

**Marketing:** Students learn to understand customers' needs and purchase behaviors, how to satisfy those needs, and how to make a profit in competitive industries and markets. Topics include developing an effective marketing strategy, developing new products and managing different brands, and product categories. Students can also acquire expertise in pricing, advertising and promotions, market research, and retailing strategies.

**Supply Chain Management:** Students specializing in supply chain management gain an analytical understanding of how to leverage profits by continuously improving business processes. Effective integration of customers, suppliers, factories and stores through the coordination of various functional areas (marketing, finance, procurement) is an important theme. The area emphasizes using incentives, contracts and information technologies to foster efficiency and success.

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