

# 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, 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, Vijay S. Mookerjee, B. P. S. Murthi, Vikram Nanda, Shun-Chen Niu, Özalp Özer, Mike W. Peng, Hasan Pirkul, 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, Huseyin Cavusoglu, Jianqing Chen, Zhonglan Dai, Rebecca Files, Xianjun Geng, J. Richard Harrison, Dorothée Honhon, Kyle Hyndman, Surya N. Janakiraman, Robert L. Kieschnick Jr., Livia Markóczy, Syam Menon, Toyah Miller, Alp Muharremoglu, Ramachandran (Ram) Natarajan, Valery Polkovnichenko, Orlando C. Richard, Young U. Ryu, Gil Sadka, Jane Salk, Harpreet Singh, David J. Springate, Upender Subramanian, Kelsey D. Wei, Jun Xia, Ying Xie, Yexiao Xu, Alejandro Zentner, Yuan Zhang, Feng Zhao, Yibin Zhou

**Assistant Professors:** Mehmet Ayvaci, Emily Choi, Bernhard Ganglmair, Dorothée Honhon, Elisabeth Honka, Kyle Hyndman, Atanu Lahiri, Sheen Levine, Bin Li, Jun Li, Meng Li, Ningzhong Li, Xiaolin Li, Naim Bugra Ozel, Arzu Ozoguz, Anyan Qi, Alejandro Rivera Mesias, Alessio Saretto, Serdar Simsek, Gonca P. Soysal, Shaojie Tang, Christian Von-Drathen, Yu Wang, Malcolm Wardlaw, Han (Victor) Xia, Steven Xiao, Shengqi Ye, Nir Yehuda, Yuanping Ying, Jieying Zhang, Zhe (James) Zhang, Xiaofei Zhao

**Clinical Professors:** John Barden, Britt Berrett, Abhijit Biswas, Pamela Foster Brady, Shawn Carraher, Larry Chasteen, Paul Convery, David Cordell, Tefik Dalgic, Michael Deegan, Kutsal Dogan, Howard Dover, Greg Durham, Forney Fleming III, Randall S. Guttery, Charles Hazzard, William Hefley, Robert Hicks, Gerald (Jerry) Hoag, Marilyn Kaplan, Peter Lewin, Jeffrey Manzi, John F. McCracken, Dennis McCuistion, Diane S. McNulty, Radha Mookerjee, Joseph Picken, Divakar Rajamani, Daniel Rajaratnam, Kannan Ramanathan, David Ritchey, Arthur Selender, Rajiv Shah, Kenneth Smith, Habte Woldu, Fang Wu, Laurie L. Ziegler

**Clinical Associate Professors:** Sonia Leach, Carolyn Reichert, Avanti P. Sethi, Kelly Slaughter, James Szot, Mark Thouin, John McClain Watson

**Clinical Assistant Professors:** Shawn Alborz, Athena Alimirzaei, Moran Blueshtein, Judd Bradbury, John Gamino, Ayfer Gurun, Maria Hasenhuttl, Julie Haworth, Jeffery (Jeff) Hicks, Kristen Lawson, Vance Lewis, Liping Ma, Ravi Narayan, Dawn Owens, Parneet Pahwa, Anastasia V. Shcherbakova, Jeanne Sluder, Nassim Sohaee

**Visiting Assistant Professor:** Lale Guler

**Senior Lecturers:** Arthur M. Agulnek, Semiramis Amirpour, Frank Anderson, Anindita Bardhan, Daniel Bochsler, Tiffany A. Bortz, Richard Bowen, Monica E. Brussolo, George DeCourcy, Eugene (Gene) Deluke, Alexander Edsel, Amal El-Ashmawi, Carol Flannery, Mary Beth Goodrich, Thomas (Tom) Henderson, Jennifer G. Johnson, Jackie Kimzey, Chris Linsteadt, Michele Lockhart, Joseph Mauriello, Victoria D. McCrady, Edward Meda, Prithi Narasimhan, Madison Pedigo, Matt Polze, James Richards, Debra Richardson, Margaret Smallwood, Steven Solcher, David Spivey, Luell (Lou) Thompson, Amy L. Troutman, Jeremy Vickers, Robert Wright, Kathy Zolton, Hubert Zydorek

**Professor Emeritus:** Dale Osborne

## Degree Requirements

The Master of Science in Management Science (MS MAS) degree is a flexible degree program that allows students to design a program of study that fits their specific needs. Students complete a 36 semester credit hours program, beyond prerequisite courses, consisting of 10 semester credit hours of core courses and 26 semester credit hours of graduate level electives. Students must maintain a 3.0 grade-point average (GPA) in both core courses and in aggregate courses to qualify for the MS degree.

Students should be aware that separate Master of Science programs, with varying core and elective requirements exist in the following areas:

- Accounting
- Business Analytics
- Energy Management
- Finance and Managerial Economics
- Healthcare Management
- Information Technology and Management
- Innovation and Entrepreneurship
- International Management Studies
- Marketing
- Supply Chain Management
- Systems Engineering and Management

For the MS MAS degree program, students choose their own course of study, pulling courses from

the Jindal School of Management graduate catalog.

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

## Course Requirements

Core Courses: 10 semester credit hours

Each candidate must satisfactorily complete the following 10 semester credit hours core courses:

[ACCT 6201](#) Introduction to Financial Accounting

[MECO 6303](#) Business Economics

[MIS 6204](#) Information Technology for Management

[OPRE 6301](#) Quantitative Introduction to Risk and Uncertainty in Business

Elective Courses: 26 semester credit hours

A student's course of study beyond the core can be determined in consultation with faculty members, area coordinators or the advising office. Student may continue to generalize in management courses or choose to concentrate in a given subject that has historically been offered as a defined specialty in the master's programs. A concentration is an informal collection of electives that address a student's educational goals and may be aligned with functional area specialties, or it may cut across functional areas. Each concentration has a minimum of 15 semester credit hours in a given area such as:

**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.

**Energy Management:** The energy management concentration will provide students with skills critical to managerial decision making within energy companies, focusing on supply chain, operations, finance, and risk management.

**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.

**Healthcare Management:** The primary goal of this concentration is to prepare students for leadership positions in healthcare organizations. The healthcare concentration is cross-functional and industry focused. Courses include cases, projects and assignments that are centered on applying management skills to healthcare issues and organizations. Classes are taught by faculty and healthcare executives who bring special expertise and experience to the program.

**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.

**Innovation and Entrepreneurship:** The concentration in innovation and entrepreneurship prepares students for successful business careers in entrepreneurial new ventures, entrepreneurial finance (venture capital/private equity), or innovation-related roles in mature organizations (product planning, product marketing, product development, more). The concentration allows students to pursue electives in either the new venture focus area or the innovation within the corporation focus area.

**Internal Audit:** Today's job market for individuals in internal audit and risk management is exceptional. A concentration in this area covers internal audit from a broad perspective and addresses review of business processes, technology, governance, ethics, risk assessment and auditing standards, which allows individual to work in any industry or discipline.

**International Management:** In today's global economy, there is a need to develop skills in various international business environments. Students can take a multidisciplinary approach to study international management, with courses in finance, marketing, strategic management, and legal and cross-cultural management. These integrate concepts and theories with international policies and business practices and prepare students to succeed in developing successful international ventures.

**Leadership in Organizations:** The leadership concentration prepares students for management positions through the study of the psychological, sociological and organizational behavior disciplines. The program provides a foundation of leadership theory, building and problem solving in interpersonal work relationships, group dynamics, organizational decision-making and change

and ethics.

**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.

**Real Estate:** The real estate concentration will provide students with both a practical and educational basis to become skilled decision-makers within the industry. This concentration includes courses in real estate finance and capital markets, covering real estate loans, syndication, securitization, regulation, investment and analysis, combining lectures and case studies to explore the sources of real estate value, project feasibility, strategies for financing, and portfolio management while covering market analysis, government approvals, financing and risk assessment.

**Strategic Management:** This concentration focuses on corporate level strategic management, including implementation of strategic designs, top management team leadership, the strategic implications of the social, governmental, technological, and international environments, organization structuring, and strategic alliances. Students will learn how to integrate accounting, finance, economics and organization theory to create sustainable competitive advantage.

**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.

**Systems Engineering and Management:** The concentration is designed to meet the need for formalized education in design, engineering and management of complex systems involving a large number of interconnected components. It will develop a broad range of engineering and managerial skills that trains students to be managers of large projects that require expertise in both technical and managerial disciplines.

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