Master of Science in Financial Engineering and Risk Management

36 semester credit hours minimum

Faculty

**Professors:** Ashiq Ali, William M. Cready, Umit G. Gurun, Stanimir Markov, Suresh Radhakrishnan

**Clinical Professors:** John Barden, John Gamino

**Associate Professors:** Zhonglan Dai, Rebecca Files, Surya N. Janakiraman, Ningzhong Li, Ramachandran (Ram) Natarajan, Naim Bugra Ozel, Gil Sadka, Jieying Zhang, Yuan Zhang, Yibin Zhou

**Assistant Professors:** Ying Huang, Meng Li, Maria Loumioti

**Senior Lecturers:** Tiffany A. Bortz, Richard Bowen, Mary Beth Goodrich, Jennifer G. Johnson, Chris Linsteadt, Joseph Mauriello, Steven Solcher, Kathy Zolton

Degree Requirements

The Master of Science in Financial Engineering and Risk Management (MS FERM) at the Naveen Jindal School of Management is a STEM (Science, Technology, Engineering and Mathematics) cohort degree program that requires a minimum of 36 semester credit hours. This Fintech program provides students with the practical and theoretical knowledge needed to pursue careers involving financial data analytics, financial technology, or risk management. The program is designed for students with or without previous educational background in finance, but with a proclivity toward more quantitative approaches to managerial issues.

Students completing this program will have the knowledge necessary to take the Certified Corporate Financial Planning & Analysis Professional exam, the RMA Credit Risk Certification, the Financial Risk Manager (FRM) exam, the Enterprise Risk Management Certified Professional (ERMCP) exam, or similar finance related certifications. While the full-time program is a cohort program, a part-time program for working professionals is also offered. Both programs only begin each fall. Special tuition, fees and admissions requirements apply and the program is supported entirely by participant tuition/fees.

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 all graduate courses taken in the degree program, excluding program prerequisites to qualify for the MS degree.

Prerequisites

Students pursuing the Master of Science in Financial Engineering and Risk Management degree program are required to have completed course work in calculus, linear algebra, probability/statistics,
and programming with a grade of "B" or better. Applicants who have not satisfied these requirements will need to satisfy these requirements prior to beginning their program of course work. The program director will work with such candidates on different ways to satisfy these requirements. Degree credit is not earned for program prerequisites, however, the grade achieved in prerequisites will count toward the student's grade-point average (GPA).

Course Requirements

Core Courses: 36 semester credit hours

Program director develops a program of study for students each term based on courses listed below.

- **FERM 6301** Financial Accounting Information and Analysis
- **FERM 6302** Financial Forecasting, Planning and Analysis
- **FERM 6303** Financial Assets and Market
- **FERM 6305** Introduction to Mathematics in Finance
- **FERM 6306** Advanced Mathematics in Finance
- **FERM 6310** Financial Information and Analytics
- **FERM 6311** Financial Technology
- **FERM 6320** Statistical Methods for Financial Analytics
- **FERM 6321** Advanced Statistical Methods for Financial Analytics
- **FERM 6330** Insurance and Risk Management
- **FERM 6331** Risk Evaluation and Management
- **FERM 6332** Financial Risk Management
- **FERM 6333** Enterprise Risk Management
- **FERM 6334** Financial Applications of Machine Learning
- **FERM 6V98** Financial Engineering and Risk Management Internship
- **FERM 6V99** Special Topics in Financial Engineering and Risk Management