

# Naveen Jindal School of Management

## Master of Science in Information Technology and Management

36 semester credit hours minimum

### Faculty

FACG> jsom-information-technology-and-management-ms

**Professors:** Huseyin Cavusoglu, Theodore E. Day, Varghese S. Jacob, Sanjay Jain, Nanda Kumar, Sumit K. Majumdar, Syam Menon, Vijay S. Mookerjee, B. P. S. Murthi, Hasan Pirkul, Srinivasan Raghunathan, Sumit Sarkar, Zhiqiang (Eric) Zheng

**Associate Professors:** Mehmet Ayvaci, Jianqing Chen, Surya N. Janakiraman, Atanu Lahiri, Amit Mehra, Young U. Ryu, Gil Sadka, Harpreet Singh, Upender Subramanian, Feng Zhao

**Assistant Professors:** Radha Mookerjee, Shaojie Tang, Yingjie Zhang, Zhe (James) Zhang

**Clinical Professors:** Ranavir Bose, William Hefley, Peter Lewin, Daniel Rajaratnam, Rajiv Shah, Mark Thouin

**Clinical Associate Professors:** Carolyn Reichert

**Clinical Assistant Professors:** Moran Blueshtein, Judd Bradbury, Sourav Chatterjee, Maria Hasenhuttl, Jeffery (Jeff) Hicks, Liping Ma, Ravi Narayan, Jason Parker, Nassim Sohaee

**Senior Lecturers:** Vivek Arora, Abu Naser Islam, Prithi Narasimhan, Gaurav Shekhar, Timothy Stephens, Luell (Lou) Thompson

### Degree Requirements

The Master of Science in Information Technology Management (MS ITM) is a minimum 36 semester credit hours STEM (Science, Technology, Engineering and Mathematics) degree program that prepares students to better understand the complex world of Information Technology, its management, and issues that occur at the interface between IT and business.

Course requirement consists of core courses, IT elective courses, and free elective courses. Core courses provide foundational knowledge regarding information technology and management practices and serve as the foundation for understanding the complex issues that occur at the

interface between IT and business. IT elective courses provide students with opportunities to learn specialized knowledge in one or more focused tracks and free elective courses enable students to select courses that maximize their individual educational and professional goals. Detailed course requirements for the MS ITM degree may be found in the following section.

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. Following the completion of 18 credit hours, a student must successfully complete an internship or practicum.

## Prerequisite

Students pursuing the Master of Science in Information Technology Management degree program are required to complete one semester credit hour of [MAS 6102](#) Professional Development course. 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: 18 semester credit hours

Select the following three courses (9 semester credit hours).

[MIS 6323](#) Object Oriented Programming in Java

or [MIS 6382](#) Object Oriented Programming in Python

[BUAN 6320](#) Database Foundations for Business Analytics

or [MIS 6326](#) Data Management

[MIS 6308](#) System Analysis and Project Management

Select three courses from three different core business areas listed below. Business core areas are listed in bold and underlined. (9 semester credit hours).

### **Statistics**

[OPRE 6301](#) Statistics and Data Analysis

[OPRE 6359](#) Advanced Statistics for Data Science

### **Accounting**

[ACCT 6305](#) Accounting for Managers

[ACCT 6336](#) Information Technology Audit and Risk Management

[ACCT 6386](#) Governance, Risk Management and Compliance (GRC)

## **Marketing**

[MKT 6301](#) Marketing Management

[MKT 6337](#) Predictive Analytics Using SAS

[MKT 6321](#) Interactive and Digital Marketing

[MKT 6382](#) Professional Selling I

## **Innovation and Entrepreneurship**

[ENTP 6370](#) Innovation and Entrepreneurship

[ENTP 6375](#) Technology and New Product Development

## **Organizational Behavior**

[OB 6301](#) Organizational Behavior

[OB 6332](#) Negotiation and Dispute Resolution

## **Healthcare**

[HMGT 6320](#) The American Healthcare System

## **Strategy**

[BPS 6310](#) Strategic Management

[BPS 6332](#) Strategic Leadership

## **Operations Management**

[OPRE 6302](#) Operations Management

[OPRE 6304](#) Operations Analytics

[OPRE 6332](#) Spreadsheet Modeling and Analytics

## **Economics**

[MECO 6303](#) Business Economics

## Finance

[FIN 6301](#) Financial Management

## Real Estate

[REAL 6321](#) Introduction to Real Estate

## International Business

[IMS 6304](#) International Business Management

[IMS 6310](#) International Marketing

[IMS 6360](#) International Strategic Management

[IMS 6365](#) Cross-Culture Communication and Management

[IMS 6V92](#) Regional Area Studies: Western Europe

Electives: 18 semester credit hours

Select 18 semester credit hours from electives listed below. As part of the 18 semester credit hours of elective courses, students may also substitute up to six semester credit hours of any master-level courses offered within JSOM as free electives, except for [MIS 6320](#) or [ACCT 6320](#) or [OPRE 6393](#).

[MIS 6009](#) Information Systems Internship<sup>1</sup> (required elective)

[MIS 6204](#) Information Technology for Management

[MIS 6302](#) Managing Digital Strategy

[MIS 6309](#) Business Data Warehousing

[MIS 6313](#) Managing IT in the Analytics Age

[MIS 6316](#) Data Communications

[MIS 6317](#) Healthcare Informatics

[MIS 6319](#) Enterprise Resource Planning with SAP

[MIS 6324](#) Business Analytics with SAS

[MIS 6330](#) Cybersecurity Fundamentals

[MIS 6332](#) ERP Configurations and Implementation with SAP

[MIS 6333](#) Digital Forensics and Incident Management

[MIS 6334](#) Advanced Business Analytics with SAS

[MIS 6337](#) Information Technology Audit and Risk Management

[MIS 6338](#) Accounting Systems Integration and Configuration

[MIS 6339](#) Analytical reviews Using Audit Software

[MIS 6341](#) Applied Machine Learning

[MIS 6343](#) Advanced Cybersecurity Management

[MIS 6344](#) Web Analytics

[MIS 6345](#) High Performance Analytics with SAP

[MIS 6346](#) Big Data

[MIS 6348](#) Digital Governance, Risk, and Compliance

[MIS 6349](#) Digital Consulting Project

[MIS 6356](#) Business Analytics with R

[MIS 6357](#) Advanced Business Analytics with R

[MIS 6360](#) Agile Project Management

[MIS 6363](#) Cloud Computing

[MIS 6369](#) Supply Chain Software with SAP

[MIS 6373](#) Social Media Business

[MIS 6375](#) Technology and New Product Development

[MIS 6378](#) Customer Relationship Management with Salesforce

[MIS 6380](#) Data Visualization

[MIS 6381](#) Electronic Health Records Applications

[MIS 6383](#) Advanced Data Management

[MIS 6384](#) Preparing for Cybersecurity Threats

[MIS 6392](#) Causal Analytics and A/B Testing

[MIS 6V99](#) Special Topics in Management Information Systems

[BUAN 6335](#) Organizing for Business Analytics Platforms

[BUAN 6340](#) Programming for Data Science

## Information Technology Management Tracks

The MS ITM degree program offers opportunities for students to focus in a specific track (optional) to obtain an in-depth knowledge in a specific area depending on their interests.

The **Enterprise Systems** track is recommended for students interested in developing and managing large-scale applications and IT infrastructure.

[MIS 6309](#) Business Data Warehousing

[MIS 6319](#) Enterprise Resource Planning with SAP

[MIS 6332](#) ERP Configurations and Implementation with SAP

[MIS 6338](#) Accounting Systems Integration and Configuration

[MIS 6345](#) High Performance Analytics with SAP

[MIS 6369](#) Supply Chain Software with SAP

[MIS 6378](#) Customer Relationship Management with Salesforce

The **Business Intelligence and Analytics** track is recommended for students interested in managing large-scale data and analyzing them to develop sound business strategies.

[MIS 6309](#) Business Data Warehousing

[MIS 6324](#) Business Analytics with SAS

or [MIS 6356](#) Business Analytics with R

[MIS 6334](#) Advanced Business Analytics with SAS

or [MIS 6357](#) Advanced Business Analytics with R

[MIS 6341](#) Applied Machine Learning

[MIS 6344](#) Web Analytics

[MIS 6345](#) High Performance Analytics with SAP

[MIS 6346](#) Big Data

[MIS 6373](#) Social Media Business

[MIS 6380](#) Data Visualization

[MIS 6392](#) Causal Analytics and A/B Testing

[BUAN 6335](#) Organizing for Business Analytics Platforms

[BUAN 6340](#) Programming for Data Science

[OPRE 6301](#) Statistics and Data Analysis

The **Cyber Security Management** track is recommended for students interested in cyber security risk management.

[MIS 6316](#) Data Communications

[MIS 6330](#) Cybersecurity Fundamentals

[MIS 6333](#) Digital Forensics and Incident Management

[MIS 6337](#) Information Technology Audit and Risk Management

[MIS 6343](#) Advanced Cybersecurity Management

[MIS 6384](#) Preparing for Cybersecurity Threats

The **Digital Product Management** track is recommended for students interested in managing the creation, design, and delivery of digital software products.

[MIS 6393](#) Foundations of Digital Product Management

[MIS 6313](#) Managing IT in the Analytics Age

[MIS 6349](#) Digital Consulting Project

[MIS 6360](#) Agile Project Management

[MIS 6375](#) Technology and New Product Development

[MIS 6380](#) Data Visualization

[MIS 6396](#) User Experience Design

The **IT Consulting and Services Management** track is recommended for students interested in IT consulting and project management.

[MIS 6204](#) Information Technology for Management

[MIS 6302](#) Managing Digital Strategy

[MIS 6313](#) Managing IT in the Analytics Age

[MIS 6348](#) Digital Governance, Risk, and Compliance

[MIS 6349](#) Digital Consulting Project

[MIS 6360](#) Agile Project Management

[MIS 6363](#) Cloud Computing

[MIS 6375](#) Technology and New Product Development

[BPS 6360](#) Management and Organizational Consulting: Theory and Practice

The **Healthcare Systems** track is recommended for students interested in managing IT in the healthcare domain.

[HMGT 6320](#) The American Healthcare System

[MIS 6305](#) Healthcare Analytics

[MIS 6317](#) Healthcare Informatics

[MIS 6330](#) Cybersecurity Fundamentals

[MIS 6381](#) Electronic Health Records Applications

[MIS 6393](#) Foundations of Digital Product Management

## Graduate Certificate in Healthcare Information Technology

9 semester credit hours

### Faculty

FACG> jsom-healthcare-information-technology-cert-g

**Associate Professor:** Mehmet Ayvaci



## Overview

The Graduate Certificate in Health Information Technology emphasizes practical concepts in healthcare IT and hands on experience gained using electronic medical records (EMR) software. The focus will be on identification and understanding the key information required for managing and working with healthcare information systems. It also demonstrates the use of analytics and software tools related to healthcare information to develop sound healthcare decisions, particularly the core functionalities of the EMR software platform, including how to support clinical information workflows in a paperless environment, and the interconnectivity with other clinical and business systems.

Courses required for graduate certificate in health information technology (9 semester credit hours)

[MIS 6317](#) Healthcare Informatics

[MIS 6305](#) Healthcare Analytics

[MIS 6381](#) Electronic Health Records Applications

## Graduate Certificate in Enterprise Systems

9 semester credit hours

### Faculty

FACG> jsom-enterprise-systems-cert-g

**Associate Professor:** Atanu Lahiri

**Clinical Assistant Professor:** Judd Bradbury

**Senior Lecturers:** Mary Beth Goodrich, Luell (Lou) Thompson, nxi100630

## Overview

The Graduate Certificate in Enterprise Systems emphasizes theoretical concepts in enterprise resource planning and hands on experience using SAP software. It provides broad exposure to various SAP functional modules such as sales and distribution, supply chain management, customer relationship management, procurement, human capital management, accounting, and data warehousing. Furthermore, the certificate program provides students with an opportunity to

get an in-depth knowledge of two of these modules.

[MIS 6319](#) Enterprise Resource Planning with SAP

and choose two of the courses listed below:

[MIS 6309](#) Business Data Warehousing

[MIS 6332](#) ERP Configurations and Implementation with SAP

[MIS 6338](#) Accounting Systems Integration and Configuration

[MIS 6345](#) High Performance Analytics with SAP

[MIS 6369](#) Supply Chain Software with SAP

[MIS 6378](#) Customer Relationship Management with Salesforce

## Graduate Certificate in Business Intelligence and Data Mining

12 semester credit hours

### Faculty

FACG> jsom-business-intelligence-and-data-mining-cert-g

**Professors:** Huseyin Cavusoglu, Syam Menon, Zhiqiang (Eric) Zheng

**Associate Professors:** Jianqing Chen, Atanu Lahiri

**Assistant Professors:** Radha Mookerjee, Zhe (James) Zhang

**Clinical Assistant Professors:** Judd Bradbury, Ravi Narayan, Nassim Sohaee

**Senior Lecturer:** Abu Naser Islam

### Overview

The Graduate Certificate in Business Intelligence and Data Mining provides students with an understanding of how to analyze large complex data sets in order to solve business problems. It emphasizes theoretical concepts and clinical knowledge associated with the design, delivery and

use of business intelligence and data mining techniques in organizations.

Required courses: 12 semester credit hours

[MIS 6309](#) Business Data Warehousing

[MIS 6324](#) Business Analytics with SAS

or [MIS 6356](#) Business Analytics with R

[MIS 6334](#) Advanced Business Analytics with SAS

or [MIS 6357](#) Advanced Business Analytics with R

[OPRE 6301](#) Statistics and Data Analysis

1. Students may use MIS 6009 only for their first internship and any additional internship must be completed as MIS 6V98 (3 semester credit hours maximum). Students may also substitute MIS 6009 with MIS 6V98 or MIS 6349 to fulfil internship requirement.

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