Master of Science in Business Analytics

36 semester credit hours minimum

Faculty


Clinical Professors: Ranavir Bose, Kutsal Dogan, Forney Fleming III, William Hefley, Peter Lewin, Daniel Rajaratnam, Rajiv Shah, Mark Thouin

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

Clinical Associate Professor: Carolyn Reichert

Assistant Professors: Mehmet Ayvaci, Radha Mookerjee, Shaojie Tang, Zhe (James) Zhang

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

Senior Lecturers: Prithi Narasimhan, Kashif Saeed, Luell (Lou) Thompson

Degree Requirements

The Master of Science in Business Analytics (MS BUAN) is a 36 semester credit hours STEM (Science, Technology, Engineering and Mathematics) degree program that provides students with a broad foundation in the business analytics and data science area. The program prepares students for professions in data science, big data, and analytics space. The core courses are designed to provide the foundation of tools and techniques to be used in the analytics domain whereas the electives allow for business application of the core techniques in Finance, Healthcare, IT, Marketing and operations.

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 business core courses and in aggregate courses to qualify for the MS degree.

Prerequisites

Students pursuing the Master of Science in Business Analytics degree program are required to fulfill one semester credit hour of MAS 6102 Professional Development course. 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: 18 semester credit hours

- BUAN 6312 Applied Econometrics and Time Series Analysis
- BUAN 6320 Database Foundations for Analytics
- BUAN 6324 Business Analytics With SAS
  or BUAN 6356 Business Analytics With R
- BUAN 6337 Predictive Analytics Using SAS
- BUAN 6398 Prescriptive Analytics
- OPRE 6301 Statistics and Data Analysis

Elective Courses: 18 semester credit hours

Students may choose any course with a BUAN prefix, excluding BUAN core courses, or from one or more tracks in the following areas to obtain in-depth knowledge in a specific industry domain. Students may also seek to substitute up to six semester credit hours master-level courses offered within JSOM, including a faculty led trip as electives in the degree plan.

- BUAN 6V98 Business Analytics Internship (Required Elective)

Accounting Analytics Track

- ACCT 6301 Financial Accounting
  or ACCT 6330 Intermediate Accounting I
- ACCT 6336 Information Technology Audit and Risk Management
- ACCT 6343 Accounting Information Systems
- ACCT 6344 Financial Statement Analysis
  or ACCT 6332 Intermediate Accounting II
- ACCT 6384 Analytical Reviews Using Audit Software
  or ACCT 6334 Auditing
- ACCT 6386 Government, Risk Management and Compliance

Data Science Track

- BUAN 6335 Organizing for Business Analytics: A Systems Approach
**Decisions and Operations Analytics Track**

- **OPRE 6302** Operations Management
- **OPRE 6332** Spreadsheet Modeling and Analytics
- **OPRE 6335** Risk and Decision Analysis
- **OPRE 6377** Demand and Revenue Management
- **OPRE 6378** Supply Chain Strategy

**Financial Analytics Track**

- **FIN 6301** Financial Management
- **FIN 6306** Quantitative Methods in Finance
- **FIN 6352** Financial Modeling for Corporate Analysis
- **FIN 6360** Derivatives Markets
- **FIN 6368** Financial Information and Analysis
- **FIN 6382** Numerical and Statistical Methods in Finance

**Healthcare Analytics Track**

- **HMGT 6320** The American Healthcare System
- **HMGT 6323** Healthcare Informatics
- **HMGT 6325** Healthcare Operations Management
- **HMGT 6327** Electronic Health Records Applications
- **HMGT 6334** Healthcare Analytics

**IT for Analytics Track**

- **BUAN 6345** High Performance Analytics
- **MIS 6309** Business Data Warehousing
- **MIS 6334** Advanced Business Analytics with SAS
- **MIS 6344** Web Analytics
MIS 6364 Enterprise Architecture: Modeling the Digital Enterprise
MIS 6373 Social Media Business
MIS 6380 Data Visualization

Marketing Analytics Track

MKT 6301 Marketing Management
MKT 6309 Marketing Research
MKT 6323 Database Marketing
MKT 6336 Pricing Analytics
MKT 6338 Enterprise Systems and CRM

or MKT 6340 Marketing Projects

MKT 6342 Marketing Customer Insights Development
MKT 6343 Social Media Marketing and Insights
MKT 6352 Marketing Web Analytics and Insights

1. Students may substitute BUAN 6v98 with BUAN 6390 Business Analytics Practicum course
2. Requires prior approval of the Marketing program director

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