Overview

- The curriculum is built around a seven-course core component coupled with three focused electives in one of six clusters: data science, economics, finance, information management, management or marketing.
- Combine data analysis with computer science, and apply it to various business fields. Acquire skills in statistical programming languages R and Python, database language (SQL) and visualization and data storytelling. Gain an understanding of statistical modeling, data mining and machine learning techniques through hands-on projects.
- Take advantage of experiential learning opportunities by utilizing cutting-edge technology and labs such as the User Experience Center and the Computer Information Systems Sandbox. Students can also get involved with Bentley’s Center for Analytics and Data Science which holds regular workshops and networking events.
- The MSBA prepares graduates for such careers as: business intelligence analyst, consultant, data scientist, health care data analyst, marketing analyst, product specialist and senior business analyst.
Curriculum

The MSBA program has a 10-course, 30-credit minimum requirement for degree completion consisting of seven core courses and three electives either in a selected cluster or a series of personalized courses. An evaluation of each student’s background for pre-program foundation course waivers is part of the admission process.

Pre-Program Foundation
GR 521 Managerial Statistics

Core

Seven required courses
CS 605 Data Management and SQL for Analytics
CS 655 Managing with Analytics
MA 610 Optimization and Simulation for Business Decisions
MA 611 Time Series Analysis
MA 710 Data Mining
ST 625 Quantitative Analysis for Business
ST 635 Intermediate Statistical Modeling for Business

Electives

Choose from one of six elective clusters below or three courses outside of these clusters.

Data Science
CS 612 Web-Based Application Development
CS 650 Data Management Architectures
CS 753 Business Intelligence Methods
MA 705 Data Science
MA 706 Design of Experiments for Business
MA 707 Introduction to Machine Learning

Economics
EC 611 The Macroeconomics of Financial Markets
EC 631 Market Structure and Firm Strategy

Finance
FI 623 Investments
FI 635 Fixed Income Valuation and Strategies
FI 640 Equity Valuation
FI 645 Derivatives

Information Management
CS 726 Information, Controls and Ethics
GR 602 Business Process Management
HF 730 Visualizing Information

Management
GR 602 Business Process Management
MG 632 Leading Effective Work Teams
MG 635 Negotiating
MG 645 Leading Change

Marketing
MK 711 Marketing Research and Analysis
MK 726 Customer Data Analysis and Relationship Marketing

Students can also earn elective credit through an internship or special project course:
ST 701 Internship in Business Data Analysis
MA 795 Business Analytics Project Course

For complete degree requirements and up-to-date courses, scan the code.