

Master of Science Business Analytics

MS



DRIVING CHANGE WITH DATA



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It is very difficult to progress on a data science career path without a master's degree or advanced training. The toolbox of modeling techniques that I acquired at Bentley allowed me to accelerate my career and take on increasingly complex projects.

Given Bentley's emphasis on business, I came out of the program more confident and skilled in breaking down a business problem, understanding client needs, and presenting a compelling storyline.

Through my experience, I have seen that regardless of how accurate a model is, the business will not use your results unless it is explained to them in a way that makes them want to buy in. Nearly every Bentley class had a project to practice modeling and crafting the results into a story. A specialized degree like the MSBA creates many opportunities and companies have a need for someone to advise them on how to put their data to effective use.

The Master of Science in Business Analytics (MSBA) program provides an in-depth understanding of the latest data analytics practices. You'll look at commonly used statistical modeling methodologies, as well as leading state-of-the-art data mining techniques, challenging yourself to not just master data analysis, but to refine and develop strategies for the communication of their findings. Bentley has been a leader in the advanced study of business analytics for more than 25 years, and our expanded program takes this commitment to a new level and is designed to match the needs of a wide variety of employers in the analytics space.

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.
- Its STEM designation increases the employability of international students.
- 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.



BENTLEY UNIVERSITY

McCallum Graduate School
of Business

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

IPM 652 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

GR 602 Business Process Management

HF 730 Visualizing Information

IPM 723 Information Security, Controls and Ethics

IPM 755 Special Topics in Information and Process Management

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.