

Master of Science in Digital Innovation

Bentley's Master of Science in Digital Innovation (MSDI) prepares you for the new era of automation. Our combination of technical knowledge, analytical skills, business acumen, and communication skills gives you the tools you need to become a digital innovator with the expertise to shape, build, and lead the ongoing automation revolution.

Rather than focusing on only technology development, the Bentley MSDI brings business and technology together in ways that create distinctive value.

Program Features

- Designed to hone your expertise in such areas as digital strategy, artificial intelligence, application development and data architecture, providing immediate value to your organization and transforming your career.
- Provides a wide range of industry-tested skills and knowledge in analytics and problem solving, data management, globalization and communication.
- Learn advanced technologies (AI, cloud computing, cybersecurity, and Agile methods) and programming languages (Python, Java, SQL/No-SQL), and gain hands-on experience with integrating those technologies into organizational systems to enable innovative business practices.
- STEM designation, including employability of international students due to three years of OPT (optional practical training).


Experiential Learning

The CIS Sandbox, Bentley's technology social learning space, offers informal learning and networking opportunities for MSDI students. Here, you'll learn to use cutting-edge tools and technologies across analytics and IT platforms and applications, including Python, Java, cloud-based software, mobile application development, artificial intelligence applications, SQL and source control.

Career Outcomes

This program will prepare you for success in a host of cutting-edge careers:

- Business analyst and consultant
- Business intelligence analyst
- Security consultant
- CIO/CTO
- Enterprise architect
- IT audit
- Software engineer
- Data engineer



“You need to be educated in technology to be effective in whatever field you pursue.”

Paul Brassil

Vice President
Information Technology at the Federal Reserve Bank of Boston

Curriculum

Foundation (1 course)

All applicants will be evaluated for foundation waivers.

GR 521 Managerial Statistics

Core (7 courses)

Analytics Core

CS 605 Data Management and SQL for Analytics

IPM 652 Managing with Analytics

ST 625 Quantitative Analysis for Business

Digital Innovation Core

CS 602 Data-Driven Development with Python

CS 607 Cybersecurity

CS 610 Enterprise Architecture

CS 620 Software Project Management

Electives (4 courses)

Students will choose from 600, 700 and/or 800-level electives, two from CIS and two unrestricted electives.

Sample of elective courses:

CS 603 Algorithmic Thinking with Java

CS 612 Cloud-Based Enterprise Applications

CS 650 Data Analytics Architectures with Big Data

CS 680 Mobile Application Development

CS 703 Looking into the Future:
Automation and Digital Technologies

CS 733 Artificial Intelligence Techniques and Applications

CS 753 Business Intelligence Methods and Technologies

CS 795 Special Topics Seminar

CS 881 MSDI Internship

For complete degree requirements and most up-to-date course options, visit bentley.edu/graduate.

bentley.edu/graduate/digital-innovation

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