

# 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.

Whether you are a recent graduate, a career changer with little or no technical background looking to gain a foothold in the rapidly digitizing business world, or an experienced professional seeking to update your knowledge and skill set, the STEM-designated MSDI program will prepare you for success in a host of cutting-edge industries.

## Program Features


- Designed to hone your expertise in such areas as digital strategy, artificial intelligence, application development and data architecture, transforming your career and providing immediate value to your organization.
- Provides a wide range of industry-tested skills and knowledge in analytics and business intelligence, data management, project management 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.
- Hone your skills in solving real business problems.

## Hands-On 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

- Business analyst and consultant
- Business intelligence analyst
- Security consultant
- CIO/CTO
- Enterprise architect
- IT auditor
- 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

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### Core (7 courses)

#### Analytics Core

**CS 605** Data Management and SQL for Analytics

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**IPM 652** Managing with Analytics

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**ST 625** Quantitative Analysis for Business

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#### Digital Innovation Core

**CS 602** Data-Driven Development with Python

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**CS 607** Cybersecurity

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**CS 610** Enterprise Architecture

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**CS 620** Software Project Management

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### 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

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**CS 612** Cloud-Based Enterprise Applications

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**CS 650** Data Analytics Architectures with Big Data

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**CS 680** Mobile Application Development

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**CS 703** Looking into the Future:  
Automation and Digital Technologies

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**CS 733** Artificial Intelligence Techniques and Applications

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**CS 753** Business Intelligence Methods and Technologies

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**CS 795** Special Topics Seminar

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**CS 881** MSDI Internship

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For complete degree requirements and most up-to-date course options, visit [admissions.bentley.edu](https://admissions.bentley.edu).

[bentley.edu/graduate/digital-innovation](https://bentley.edu/graduate/digital-innovation)

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