

At UMass Dartmouth, the **Data Science** program offers undergraduate and graduate interdisciplinary degrees which integrates mathematics and computer science with business, engineering, healthcare planning, science, and sociology. Offered jointly by the Computer Science department in the College of Engineering and the Mathematics department in the College of Arts & Sciences, the curriculum covers topics such as data visualization and matrix methods for data mining as well as traditional courses in computer and information science and mathematics.

Curriculum overview

Graduates will acquire skills in computer programming, statistics, data mining, machine learning, data analysis, and visualization needed to solve challenging problems involving large, diverse data sets.

As a data science major, you will build a strong foundation in information theory and in the methods and tools of mathematics and computer science. You'll gain skills in complex problem solving, data-driven discovery, decision support, machine learning, predictive and visual analytics, and statistics.

For the **BS in Data Science**, you will complete 73 credits in core data science courses, computer and information science, and mathematics. A total of 120 credits are required for the degree.

During your senior year, you will complete a team capstone project that focuses on real-world, industry-specific challenges. Our students have classified gravitational wave signals, analyzed attendance patterns at NBA games, and classified and predicted the effectiveness of cancer drugs.

Graduate opportunities at UMassD

Continue your education at UMass Dartmouth with an accelerated **BS/MS Data Science** degree program for qualified undergraduates that can be completed in five years.

The master's degree program in Data Science prepares you for leadership positions in data analytics, information management, and knowledge engineering. It is jointly offered by the departments of computer science in the College of Engineering and mathematics in the College of Arts & Sciences. Students can also elect a **graduate certificate in Data Science**.

The **PhD program in Engineering and Applied Science** emphasizes the interdisciplinary nature of modern research at the interface of engineering, the applied sciences, and technology.

Sample internship sites

UMassD students intern with renowned companies, agencies, and institutions, including:

- Brown University
- CVS Pharmacy
- Worcester Polytechnic Institute
- Tracelink
- Vertex Pharmaceuticals

Data Science careers

The Bureau of Labor Statistics considers data science one of the top 20 fastest growing occupations and projects a growth rate of 31% over the next 10 years. Data scientists hold positions in business, government, healthcare, industry, the sciences, and occupational fields where they are needed to explore and explain complex information.

Sample careers include:

- Data Scientists (average salary \$96,501)
- Business Intelligence Analysts (average salary \$69,579)
- Data Analysts (average salary \$61,456)
- ECommerce Analysts (average salary \$54,939)
- Information Management Professionals (average salary \$75,896)

You will be prepared for leadership positions in data analytics, discovery informatics, information management, and knowledge engineering. Our recent graduates have secured jobs at:

- Capital One
- Citizens Financial Group
- New England Survey Systems
- Pratt & Whitney
- Eversource
- Dell EMC
- Day Zero Diagnostics

Data Science opportunities

- Co-op and internship program
- Undergraduate research and experienced research faculty
- International study
- Center for Scientific Computing and Visualization Research
- Big Data Club



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UMass Dartmouth
Data Science
undergraduate and
graduate degree
options**

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