

Graduate Programs in DATA SCIENCE



UMBC



Master's of Professional Studies and Graduate Certificate:

Data Science

Data Science - a professionally-focused and relevant graduate degree

- » Develop an in-depth understanding of the basic computing principles behind data science in areas such as, data ingestion, curation and cleaning and the 4Vs of data science: Volume, Variety, Velocity, Veracity, and the implicit 5th V -- Value.
- » Learn how to apply principles of data science to the analysis of problems within a wide range of interdisciplinary domains.
- » Gain practical, hands-on experience with state-of-the-art data science tools.

When you choose UMBC Professional Programs, you can count on:

- » Courses developed and taught by industry experts and designed to address real-world applications of data analytics.
- » Programs that use case-based studies to bring student and faculty experiences into the classroom.
- » Curriculum that provides students with an understanding and fundamental building blocks of the skills needed to gain insights from large amounts of data.
- » Flexible evening class schedule that accommodates working professionals.

Why UMBC?

- » UMBC provides a comprehensive and quality education at a manageable cost.
- » UMBC is uniquely positioned to provide education and training that respond to the growing regional and national demand for professionals with data science knowledge, skills, and abilities.
- » The 2017 *U.S. News & World Report Best Colleges* guide ranks UMBC in the top five on its closely-watched Most Innovative Schools list and has recognized UMBC as a global leader in higher education.



Offered in
Catonsville:
datascience.umbc.edu
Rockville:
umbc.edu/datasciencesg

For Program Information:

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Graduate Program Director
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For Application Information:

Catonsville:
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Rockville:
sgprofessionalprograms@umbc.edu

Admission Requirements

M.P.S. & Certificate:

- » An undergraduate degree in any subject
- » Students must have completed the following courses at the undergraduate or graduate level:
 - One semester of statistics
 - Calculus I
 - Candidates must have academic or professional experience equivalent to basic programming courses.
 - Students who do not have formal undergraduate programming courses or on-the-job training are encouraged to use MOOCs or Khan Academy.
- » Minimum undergraduate GPA of 3.0 on a 4.0 scale

Admission Deadlines

Fall: August 1

Spring: December 1

For detailed application process please visit:
datascience.umbc.edu

Office of Professional Programs

UMBC's Office of Professional Programs offers a broad array of professionally focused master's degree and certificate programs that address industry needs while anticipating future opportunities.
professionalprograms.umbc.edu

Master's Program

Master's of Professional Studies: Data Science 30 Credits (10 courses)

Required Core Courses (21 credits)

DATA 601*: Introduction to Data Science**

DATA 602*: Introduction to Data Analysis and Machine Learning

DATA 603*: Platforms for Big Data Processing

DATA 604*: Data Management

ENMG 652: Management, Leadership and Communication

DATA 605: Ethical and Legal Issues in Data Science

DATA 606: Capstone in Data Science

* Indicates courses needed for Data Science Certificate.

** Must be taken in 1st semester



Pathway Courses: Select 3 Courses (9 credits)

Project Management

Catonsville and Shady Grove Campus

(in collaboration with the College of Engineering and Information Technology)

Spatial Analytics

Shady Grove Campus Only

(in collaboration with the Department of Geography and Environmental Systems)

Data Science Analytics

Catonsville Campus Only

(in collaboration with the Department of Information Systems)

Management Science

Catonsville and Shady Grove Campus

(in collaboration with the College of Engineering and Information Technology)

Policy Analysis

Catonsville Campus Only

(in collaboration with the Public Policy Department)

Cybersecurity

Catonsville and Shady Grove Campus

(in collaboration with the MPS in Cybersecurity Program)

Bioinformatics

Shady Grove Campus Only

(in partnership with Foundation for Advanced Education Services @ NIH)

Healthcare Analysis

Catonsville Campus Only

(in collaboration with the MPS in Health Information Technology Program)

Advanced Computing & Analytics

Catonsville Campus Only

(in collaboration with the Department of Computer Science and Electrical Engineering)

Note: Students pursuing the Project Management and/or Cybersecurity pathways are eligible for the respective certificate in Project Management and/or Cybersecurity Operations upon completion.

Please consult datascience.umbc.edu for typical schedule and exact courses and course descriptions.

This academic program is a participant in the U.S. Department of Education Gainful Employment program.

For more information, <https://gradschool.umbc.edu/resources/careers/gainfulemploy/>