DATA SCIENCE - A PROFESSIONALLY-FOCUSED AND RELEVANT GRADUATE DEGREE

» Learn the latest data science tools and machine learning techniques to work with data at scale, derive insights from structured and unstructured data in different formats, and solve real-world problems.
» Gain skills to build predictive/prescriptive models and neural networks, run evaluations, and interpret results.
» Develop effective presentation skills and visualization methods to communicate data-driven findings to executive stakeholders.
» Understand legal and ethical implications of data privacy, data security, and bias.

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 science.
» Programs that use case-based studies to bring student and faculty experiences into the classroom.
» Curriculum that prepares students for careers in data science, analytics, predictive modeling, business intelligence, and data mining in data-driven industries including finance, healthcare, biotechnology, and sports.
» Flexible evening and online 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.

For program information:  
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Graduate Program Director  
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For application information:  
Catonsville:  
Faith Dinh | Program Coordinator  
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**Admissions Requirements**

- An undergraduate degree in any subject
- Students must have prior coursework to include college-level math, statistics, and programming.
- Students who do not have prior coursework or industrial experience should take online courses in statistics, linear algebra, and programming.
- Minimum undergraduate GPA of 3.0 on a 4.0 scale.

**Admissions Deadlines**

- **Fall:** August 1
- **Spring:** December 1

For detailed application process please visit [datascience.umbc.edu](http://datascience.umbc.edu)

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**Master’s of Professional Studies (M.P.S.): 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

**Pathway Courses**

Select 3 courses (9 credits)

- **Project Management**
  - Catonsville and Shady Grove Campus
  - (in collaboration with the College of Engineering and Information Technology)

- **Data Science Analytics**
  - Catonsville Campus Only
  - (in collaboration with the Department of Information Systems)

- **Policy Analysis**
  - Catonsville Campus Only
  - (in collaboration with the Public Policy Department)

- **Bioinformatics**
  - Catonsville and Shady Grove Campus
  - (in partnership with Foundation for Advanced Education Services @ NIH)

- **Spatial Analytics**
  - Shady Grove Campus Only
  - (in collaboration with the Department of Geography and Environmental Systems)

- **Management Science**
  - Catonsville and Shady Grove Campus
  - (in collaboration with the College of Engineering and Information Technology)

- **Cybersecurity**
  - Catonsville and Shady Grove Campus
  - (in collaboration with the MPS in Cybersecurity Program)

- **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)

- **Economics/Econometrics**
  - Catonsville Campus Only
  - (in collaboration with the Department of Economics)

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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/](https://gradschool.umbc.edu/resources/careers/gainfulemploy/)