

Graduate Programs in GEOGRAPHIC INFORMATION SYSTEMS



UMBC

THE UNIVERSITIES AT SHADY GROVE



Master's of Professional Studies:
Geographic Information Systems

Post-Baccalaureate Certificate:
Geographic Information Systems

GIS - a professionally-focused, relevant and practical graduate degree

- » With an estimated growth rate of 35-40 percent per year, the GIS job market is in need of qualified and experienced professionals to help design, implement, operate and manage geographic information systems.
- » Geographical Information Science is one of the fastest expanding areas in information technology.
- » A background and knowledge base in GIS can work in a variety of fields including energy, public health, urban planning, civil engineering, environmental science, archaeology and landscape architecture.

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

- » A curriculum that covers all aspects of the GIS profession: web development and cloud computing, GIS application development, spatial databases, and enterprise systems implementation and management.
- » Programs that are led by a distinguished faculty of practitioners in the field.
- » Flexible evening class schedule that accommodates working professionals.
- » Classes offered in a flexible format, designed for busy working professionals, with hybrid and in-person classes offered in the early evening.
- » Wide-ranging resources offered at a top-notch public research university.

Why UMBC?

- » 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.
- » UMBC provides a comprehensive and quality education at a manageable cost.



shadygrove.umbc.edu/gis

For Program Information:

Dr. Erwin Villiger
Program Director
villiger@umbc.edu | 301-738-6087

For Application Information:

sgprofessionalprograms@umbc.edu

Admission Requirements

M.P.S.:

- » B.A. or B.S. in Geography, Computer Science or Information Systems or a bachelor's degree in a related field with GIS-related work experience
- » Working knowledge of Geographic Information Systems
- » Students with a GPA less than 3.0 may be admitted to the MPS program provisionally or to the Graduate Certificate program.
- » GRE is not required

Graduate Certificates:

- » B.A. or B.S. in Geography, Computer Science or Information Systems or a bachelor's degree in a related field with GIS-related work experience
- » Working knowledge of Geographic Information Systems
- » Minimum undergraduate GPA of 3.0 on a 4.0 scale
- » GRE is not required

International Applicants:

Please visit shadygrove.umbc.edu/gis/international for detailed admissions information for international applicants.

- » Please pay special attention to English proficiency and testing requirements

Admission Deadlines

Fall: August 1

Spring: December 1

For detailed application process please visit: shadygrove.umbc.edu/gis

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 (M.P.S.): Geographic Information Systems 30 Credits (10 courses)

Required Courses 18 Credits

GES 670: Advanced Seminar in GIS

GES 671: Spatial Database and System Design

GES 673: Geoprocessing and Spatial Analysis

GES 675: GIS Application Development

GES 678: Project Management of the Enterprise GIS

GES 679: Professional Seminar on Geospatial Technologies

Elective Courses (Select 4) 12 Credits

GES 770: Special Topics in Enterprise GIS

GES 771: Advanced Spatial Data Management

GES 772: Geospatial Web Services and Interoperability

GES 773: GIS Modeling Techniques

GES 774: Spatial Statistics



GES 775: Advanced GIS Application Development

GES 776: GIS Data Sources, Tasking, and Acquisitions

GES 777: Advanced Data Modeling and Editing Techniques

GES 778: Advanced Visualization and Presentation

Certificate Programs

Post-Baccalaureate Certificate: Geographic Information Systems 15 Credits

GES 670: Advanced Seminar in GIS

GES 671: Spatial Database and System Design

GES 675: GIS Application Development

GES 679: Professional Seminar on Geospatial Technologies

Choice of one GIS Elective Course



**All credits earned in this graduate certificate may be applied to the M.P.S.: Geographic Information Systems.*

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/>