GEOGRAPHIC INFORMATION SYSTEMS, GRADUATE CERTIFICATE (COLLEGE OF LETTERS AND SCIENCE)

The Certificate in Geographic Information Systems is designed for those individuals seeking careers as GIS specialists, providing geographic data management, spatial analysis, and GIS system management support to professionals in a broad range of disciplines, such as criminal justice, health services, city and regional planning, civil and environmental engineering, transportation, and marketing. Certificate holders will seek employment in positions such as "GIS Specialist," "GIS Analyst," or "GIS Coordinator."

The School of Architecture and Urban Planning in the College of the Arts & Architecture and the College of Letters and Science jointly offer the certificate. The core courses (12 credits) focus on the structure of geographic data, components for managing geographic information systems, spatial analysis, and delivery of geographic information through maps and displays. Students select the remaining 6 credits for the certificate from electives, which may include an internship, in areas such as remote sensing, map-making, and data management systems.

Upon completion of the certificate courses, a student is awarded the certificate which qualifies for 5 credential points in the GIS Certification Institute's standards for professional certification in GIS.

Admission Requirements

Application Deadlines

Application deadlines vary by program, please review the application deadline chart (http://uwm.edu/graduateschool/program-deadlines/) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (https://uwm.edu/onestop/dates-and-deadlines/).

Application

- Admission to a graduate certificate program requires formal student application through the Graduate School admissions application (https://uwm.edu/applygrad/) system, including the required admissions application fee.
- Certificate programs will inform the Graduate School of their admission recommendation for an applicant. The final admission decision is made by the Graduate School.
- Early application to the certificate program is recommended; late application is possible, but may incur delays for certificate conferral related to time required for credit tracking.
- Applicants must possess a baccalaureate degree and have a minimum 2.75 cumulative undergraduate grade point average to be admitted into a certificate program.

Admission

Applicants must submit the following materials for application:

- Reason statement: This statement should outline the applicant's academic background, their goals for pursuing the certificate, and other relevant professional and research experience. The statement should not exceed one single-spaced page.
- Transcripts: Transcripts should be from a bachelor's degree program at the minimum.

Credits and Courses

A minimum of 6 credits each in Urban Planning and Geography courses are required for completion of the certificate. To earn the Certificate, one must complete six semester-long courses (with a minimum of 18 credits), satisfy graduate school criteria for successful completion and maintain at least a B (3.00) average in all courses. No more than 3 credits of Internship or Independent Study will be counted towards the Certificate. The program requirements are as follows:

Code	Title	Credits
Required		**12**
Tier 1 (select one course)		
GEOG 726	Geographic Information Science	
URBPLAN 791	Introduction to Urban Geographic Information Systems for Planning	
Tier 2 (select one course)		
GEOG 826	Intermediate Geographic Information Science	
URBPLAN 792	Using Urban Geographic Information Systems (GIS) for Planning	
Tier 3 (Select two courses)		
GEOG 704	Remote Sensing: Environmental and Land Use Analysis	
GEOG 705	Cartography	
URBPLAN 793	Applied Projects in Urban Geographic Information Systems	
URBPLAN 794	Internet Geographic Information Systems (GIS)	
ANTHRO 562	Techniques and Problems in Archaeology	
BUS ADM 749	Data and Information Management	
Electives		**6**
Select six credits in courses from the list below:		
GEOG 716	Watershed Analysis and Modeling	
GEOG 747	Spatial Analysis	
GEOG 798	GIS/Cartography Internship	
GEOG 804	Advanced Remote Sensing	
GEOG 999	Independent Work (with appropriate topic)	
URBPLAN 692	Special Topics in Urban Planning:	
URBPLAN 791	Introduction to Urban Geographic Information Systems for Planning	
URBPLAN 792	Using Urban Geographic Information Systems (GIS) for Planning	
URBPLAN 793	Applied Projects in Urban Geographic Information Systems	
URBPLAN 794	Internet Geographic Information Systems (GIS)	
URBPLAN 991	Legislative/Administrative Agency Internship	
URBPLAN 999	Independent Study	
ANTHRO 380	Anthropological Applications of GIS	

ANTHRO 562	Techniques and Problems in Archaeology
ANTHRO 768	Topics in Advanced Research Design in Anthropology
BUS ADM 749	Data and Information Management
CRM JST 520	Analysis Oriented Technology: Spatial Data Analysis; Crime Mapping; ArcGIS
INFOST 465	Legal Aspects of Information Products and Services
INFOST 691	Special Topics in Information Science:
INFOST 714	Metadata
Other courses as approved by the GIS Certificate Subcommittee [1]	
Total Credits	**18**

[1] Tier 1, 2, or 3 courses may count as electives once the Tier requirements have been satisfied.

Advising

Students will be advised by the Geography and Urban Planning faculty who teach GIS courses.

Additional Requirements

Transfer Credit

No more than 20% of the required credits may be taken at an institution other than UWM. To be eligible for transfer, the course must have been completed within the last two years. These courses are subject to Graduate School transfer policy and must be approved by the director of the certificate program.

Grade Point Average Requirement

A minimum cumulative 3.00 grade point average in certificate courses taken at UWM is required.

Articulation with Degree Programs

1. Credits and courses required for a certificate may double count toward meeting UWM graduate degree requirements subject to the following restrictions:
   - Degree programs must approve the courses from certificates that can double count toward the degree.
   - All credits taken in completion of certificate requirements may count towards a UWM graduate degree as long as they do not contribute more than 90% of the total credits needed to obtain the degree. (Note: Students in PhD programs must still complete the minimum residency requirements)
   - Certificate courses used toward meeting degree requirements must be completed within the time limit for transfer credit.
2. Courses completed for a degree may be counted toward a subsequent certificate, subject to all certificate policy requirements.
3. A course may count toward no more than one certificate and one degree.
4. Students may not earn a certificate subsequent to a concentration in the same area.

Time Limit

Certificate program time limits shall be established as follows:

- 18 or fewer credits/Three years from initial enrollment in the certificate sequence.
- 19 or more credits/Four years from initial enrollment in the certificate sequence.

For certificates that are designed as add-ons to degree programs and are awarded concurrent with the degree, the time limit shall be the same as that of the degree program.

Gainful Employment Disclosure Information

- UWM Financial Aid Gainful Employment (https://uwm.edu/onestop/finances/receiving-financial-aid/non-degree-students/#primary)
- Gainful Employment Disclosure Information (https://uwm.edu/gis-certificate/wp-content/uploads/sites/323/2019/06/gis-cert-gedt-2019.pdf)