CARTOGRAPHY AND GEOGRAPHIC INFORMATION SYSTEMS: THESIS, M.S.

This is a named option within the Cartographic and Geographic Information Systems M.S. (http://guide.wisc.edu/graduate/geography/cartography-geographic-information-systems-ms/)


Information about facilities, supporting faculty and staff, and program requirements for all graduate programs in the department can be found in the Geography (http://guide.wisc.edu/graduate/geography/) listing in this catalog.

The M.S. (Thesis) in Cartography and Geographic Information Systems provides a broad foundation in the theory and application of mapping and geographic information sciences. Students who earn the M.S. (Thesis) degree are prepared to continue on for the Ph.D. in geography or for positions in government agencies, planning organizations, environmental agencies, nongovernmental organizations, and private industry.

ADMISSIONS

Please consult the table below for key information about this degree program’s admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program’s website.

Graduate admissions is a two-step process between academic programs and the Graduate School. Applicants must meet the minimum requirements (https://grad.wisc.edu/apply/requirements/) of the Graduate School as well as the program(s). Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Deadline</td>
<td>December 15</td>
</tr>
<tr>
<td>Spring Deadline</td>
<td>The program does not admit in the spring.</td>
</tr>
<tr>
<td>Summer Deadline</td>
<td>The program does not admit in the summer.</td>
</tr>
<tr>
<td>GRE (Graduate Record Examinations)</td>
<td>Not required.</td>
</tr>
</tbody>
</table>

English Proficiency Test
- Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements (https://grad.wisc.edu/apply/requirements/#english-proficiency).

Other Test(s) (e.g., GMAT, MCAT) | n/a

Letters of Recommendation Required | 3

FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM RESOURCES

See “How Does Funding Work?” at the Geography Master’s FAQ (https://geography.wisc.edu/graduate/graduate-programs-faq/).

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

NAMED OPTION REQUIREMENTS

MODE OF INSTRUCTION

<table>
<thead>
<tr>
<th>Mode of Instruction</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.
Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirement Detail</th>
<th>Minimum Credit Requirement</th>
<th>Minimum Residence Credit Requirement</th>
<th>Minimum Coursework Required</th>
<th>Overall GPA Requirement</th>
<th>Graduate GPA Requirement</th>
<th>Other Grade Requirements</th>
<th>Assessments and Examinations</th>
<th>Language Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Credit Requirement</td>
<td>30 credits</td>
<td></td>
<td>16 credits</td>
<td>15 credits</td>
<td>3.00 GPA required</td>
<td>n/a</td>
<td>A formal thesis is required.</td>
<td>No language requirement.</td>
</tr>
<tr>
<td>Remaining Credits</td>
<td></td>
<td>Students take courses numbered 300 and up in consultation with their advisor to meet the 30 credit minimum.</td>
<td>30 credits</td>
<td>1</td>
<td>3-5</td>
<td>GEG 970 must be taken for 3 credits.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

POLICIES

GRADUATE SCHOOL POLICIES

The Graduate School’s Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

NAMED OPTION-SPECIFIC POLICIES

PRIOR COURSEWORK

Graduate Work from Other Institutions

With program approval, students are allowed to count no more than 6 credits of graduate coursework from other institutions. Coursework earned five or more years prior to admission to a master’s degree or earned ten years or more prior to admission to a doctoral degree is not allowed to satisfy requirements.

UW–Madison Undergraduate

No credits from a UW–Madison undergraduate degree are allowed to count toward the degree.

UW–Madison University Special

With program approval, students are allowed to count no more than 6 credits of graduate coursework as defined above taken as a UW–Madison Special student. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

PROBATION

The Department of Geography expects graduate students to progress through a sequence of benchmarks within prescribed time periods. These benchmarks constitute a reasonable rate of accomplishment for full-time students holding teaching or research appointments. The department recognizes that individual circumstances vary, and not all students progressing toward their academic goals will hit the benchmarks exactly. Thus a student’s progress is considered unsatisfactory only after a period of time elapses following an unmet benchmark. A student not making satisfactory progress is placed on probation. For detailed information about these benchmarks and triggers for probationary status,

REQUIRED COURSES

Program Breadth Requirements

Most students complete the coursework for breadth requirements prior to entering the program. Students who begin the program lacking one or more of the breadth courses are expected to complete such coursework during the master’s program. One course taken for breadth can also be used to fulfill degree requirements. Typically, these courses are not seminars. Students must complete the equivalent of one undergraduate-level course in quantitative methods, two courses in mathematics, and two intermediate or advanced geography courses.

Coursework

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEG 765 &amp; GEG 766</td>
<td>Geographical Inquiry and Analysis: An Introduction and Geographical Inquiry and Analysis: Techniques</td>
<td>4</td>
</tr>
<tr>
<td>GEG 370</td>
<td>Introduction to Cartography</td>
<td>4</td>
</tr>
<tr>
<td>GEG/CIV ENGR/ENVIR ST 377</td>
<td>An Introduction to Geographic Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>GEG 378</td>
<td>Introduction to Geocomputing</td>
<td>4</td>
</tr>
<tr>
<td>GEG 970</td>
<td>Seminar in Geographic Information Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6-8</td>
</tr>
<tr>
<td>GEG 572</td>
<td>Graphic Design in Cartography</td>
<td></td>
</tr>
<tr>
<td>GEG 573</td>
<td>Advanced Geocomputing and Geospatial Big Data Analytics</td>
<td></td>
</tr>
</tbody>
</table>

GEOG 574  Geospatial Database Design and Development
GEOG 575  Interactive Cartography & Geovisualization
GEOG 576  Geospatial Web and Mobile Programming
GEOG 578  GIS Applications
GEOG 579  GIS and Spatial Analysis

**ADVISOR / COMMITTEE**

The chair (or co-chair) of a Master’s student’s committee is the student’s advisor. This individual must be graduate faculty in Geography or affiliated with Geography. The committee must have at least three members, two of whom must be graduate faculty (or former graduate faculty up to one year after resignation/retirement). Two of the three members must be affiliated with the Geography Department. The third member may be a qualified individual from within or outside UW-Madison. Inclusion of committee members who are not UW-Madison graduate faculty must be approved by the student’s advisor.

**CREDITS PER TERM ALLOWED**

15 credits

**TIME LIMITS**

This program follows the Graduate School’s Time Limits policy (https://policy.wisc.edu/library/UW-1221/).

**GRIEVANCES AND APPEALS**

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
- Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
  - Dean of Students Office (https://doso.students.wisc.edu/) (for all students to seek grievance assistance and support)
- Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departamental or school/college grievance decisions)
- Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

Students should contact the department chair or program director with questions about grievances. They may also contact the L&S Academic Divisional Associate Deans, the L&S Associate Dean for Teaching and Learning Administration, or the L&S Director of Human Resources.

**OTHER**

n/a

**PROFESSIONAL DEVELOPMENT**

**GRADUATE SCHOOL RESOURCES**

Take advantage of the Graduate School’s professional development resources (https://grad.wisc.edu/pd/) to build skills, thrive academically, and launch your career.

**PEOPLE**

**Faculty**

Department Chair: John (Jack) Williams


Associate Professors: Asligül Göçmen, Qunying Huang, Jenna Loyd, Sarah Moore, Stephen Young

Assistant Professors: Christian Andresen, Song Gao, Ken Keefover-Ring, Almita Miranda, Jen Rose Smith