GEOGRAPHIC INFORMATION SYSTEMS, CAPSTONE CERTIFICATE

Admissions to the Geographic Information Systems Capstone Certificate have been suspended as of fall 2018. If you have any questions, please contact the department (gispp@geography.wisc.edu).

The Department of Geography offers a one-year GIS certificate program intended to provide a mix of GIS theory and practical experience for many possible applications and fields such as: agriculture, archaeology, conservation, demography, economics, emergency management, law enforcement, marketing, natural resource management, public health, transportation, urban planning, wildlife ecology, and more.

Geographic information systems (GIS) is a discipline devoted to the acquisition, storage, management, analysis, and visualization of spatial data. GIS provides the ability to integrate and analyze spatial and non-spatial information for mapping, planning, and decision-making.

The primary goal of the capstone certificate program is to ensure that students become sufficiently grounded in theoretical underpinnings of GIS to make informed use of existing GIS applications and gain skills needed to construct new applications in the physical or social realms. The full range of GIS capabilities is covered, including data capture, analysis, modeling, and cartographic representation. Through hands-on exposure in the form of lab exercises, course projects, and an internship or independent project, experience will be acquired with major GIS software packages, including ArcGIS. By teaching concepts and hands-on use, the program differs from a typical short course designed for GIS training in a particular software package.

The program is intended to serve:

• recent graduates who wish to acquire technical expertise to support the topical knowledge gained in their undergraduate major
• returning students who wish to acquire specialized training to meet current (or future) job requirements calling for GIS knowledge

This program consists of 4 core courses, a minimum of 1 elective and an independent capstone project. Students must complete a minimum of 16 credits while in the program. It may be possible to transfer in 4 credits of required coursework taken previously (approval needed if taken at another institution).

The 2-credit capstone project is tailored to individual backgrounds and interests. The program welcomes work-related projects by students who are presently employed. The capstone project can be taken any semester but should be taken in conjunction with or after taking G578 (Applications of GIS).

Please note: Students entering in spring semesters may need three semesters to complete coursework since the GEOG 578 is not offered in the fall and requires GEOG/CIV ENGR/ENVIR ST 377 as a prerequisite.

No certificate courses are offered in the summer.

HOW TO GET IN

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REQUIREMENTS

• Must have a minimum GPA of 3.000

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEOG 370</td>
<td>Introduction to Cartography</td>
<td>4</td>
</tr>
<tr>
<td>GEOG/CIV ENGR/ENVIR ST 377</td>
<td>An Introduction to Geographic Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 560</td>
<td>Advanced Quantitative Methods</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 578</td>
<td>GIS Applications</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 602</td>
<td>Internship</td>
<td>2</td>
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Total Credits: 20-21

LEARNING OUTCOMES

1. Become grounded in the conceptual underpinnings of GIS technology in order to make informed use of current GIS applications.
2. Acquire the technological skills needed to construct new GIS applications in a wide variety of disciplines.
3. Use common GIS techniques to collect, analyze, process, and display geographic data.
4. Apply GIS to solve real-world problems.
5. Gain experience with common commercial and open-source GIS software.