

# GEOGRAPHIC INFORMATION SYSTEMS (GIS) - CERTIFICATE



## AGIS

This certificate program provides students with hands-on experience collecting and mapping spatial data using online and desktop Geographic Information Systems (GIS) software. Students will learn how these systems are created and used in a variety of fields, including disaster preparedness, environmental sciences, transportation, public safety, education, coastal management, natural resources, and many more. Upon completion of this certificate, students will be able to independently complete basic to intermediate level mapping and geospatial analyses, organize and collect data for use in solution-based decision making, and enhance their skills in reporting data.

This program is geared towards students without prior experience working with GISs who could use this skill to complement their education and/or career, or for those who have some experience and are looking to refresh their skills using GIS software. This certificate can be completed in one year, starting in the fall semester.

## Program Learning Outcomes

Upon completion of this program, a student will be able to:

1. Demonstrate proficiency in using GIS software by applying GIS data and tools to solve real-world problems.
2. Summarize the applications of GIS, the ethical responsibilities of mapmaking, and the types of research conducted using GIS.
3. Demonstrate organizational skills in file and database management.
4. Employ cartographic techniques to produce customized maps depending on the audience(s) to present and display GIS data.
5. Use basic computing, problem-solving, and project management skills to perform spatial analyses and present GIS data.

## Certificate Requirements

Code	Title	Hours
AGIS 1000	ArcGIS I: Introduction to ArcGIS	4
AGIS 1500	ArcGIS II: Data Management and Spatial Analysis	4
AGIS 2000	ArcGIS III: Field Data Collection and Web Applications	4
GEOG 1010	Introduction to Geography	3
Choose ONE of the following:		3-4
ARTS 1020	Color	
ASTR 1010	The Solar System	MSCI; Critical Thinking; Scientific Reasoning
BIOL 1050	Humans and the Environment	MSCI; Written Communication; Critical Thinking
BUSN 2060	Principles of Marketing	
COMI 1300	Introduction to Data Analytics	
EMER 1000	Fundamentals of Emergency Management	
GEOL 1010	Introduction to Geology - How the Earth Works	MSCI; Critical Thinking; Scientific Reasoning
HIST 1030	World History I	SSCI; Critical Thinking; Diverse Perspectives

HIST 1040	World History II	SSCI; Critical Thinking; Diverse Perspectives
OCEN 1040	Introduction to Oceanography (Formerly OCEN 1010 and 1030)	MSCI; Critical Thinking; Quantitative Literacy
POLS 1030	State and Local Government	SSCI; Written Communication; Critical Thinking
<b>Total Hours</b>		<b>18-19</b>

## Recommended Course Sequence

Course	Title	Hours
<b>Year 1</b>		
<b>Semester 1</b>		
AGIS 1000	ArcGIS I: Introduction to ArcGIS <sup>1</sup>	4
AGIS 1500	ArcGIS II: Data Management and Spatial Analysis <sup>1</sup>	4
GEOG 1010	Introduction to Geography	3
<b>Hours</b>		<b>11</b>
<b>Semester 2</b>		
AGIS 2000	ArcGIS III: Field Data Collection and Web Applications	4
Choose ONE of the following:		3-4
ARTS 1020	Color	
ASTR 1010	The Solar System	
BIOL 1050	Humans and the Environment	
BUSN 2060	Principles of Marketing	
COMI 1300	Introduction to Data Analytics	
EMER 1000	Fundamentals of Emergency Management	
GEOL 1010	Introduction to Geology - How the Earth Works	
HIST 1030	World History I	
HIST 1040	World History II	
OCEN 1040	Introduction to Oceanography (Formerly OCEN 1010 and 1030)	
POLS 1030	State and Local Government	
<b>Hours</b>		<b>7-8</b>
<b>Total Hours</b>		<b>18-19</b>

<sup>1</sup> Seven-week course