



## COURSE OUTLINE: GIS100 - EXPLORING GIS

Prepared: Heath Bishop

Approved: Martha Irwin - Dean

<b>Course Code: Title</b>	GIS100: EXPLORING GIS
<b>Program Number: Name</b>	2095: COMPUTER PROGRAMMING
<b>Department:</b>	COMPUTER STUDIES
<b>Academic Year:</b>	2025-2026
<b>Course Description:</b>	This course introduces Geographic Information Systems (GIS) technology and its applications in various fields such as urban planning, environmental science, natural resource management, public health, and criminology. Using GIS software, students will explore real-world scenarios through spatial analysis by identifying patterns and trends that can lead to solutions and impact future decision-making opportunities.
<b>Total Credits:</b>	3
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	42
<b>Prerequisites:</b>	There are no pre-requisites for this course.
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>	<b>2095 - COMPUTER PROGRAMMING</b>
<b>Please refer to program web page for a complete listing of program outcomes where applicable.</b>	VLO 2 Contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools. VLO 4 Implement robust computing system solutions through validation testing that aligns with industry best practices.
<b>Essential Employability Skills (EES) addressed in this course:</b>	EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.
<b>General Education Themes:</b>	Science and Technology
<b>Course Evaluation:</b>	Passing Grade: 50%,  A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	All assignments are due on the applicable date at the beginning of class. Assignments are to be submitted via the Learning Management System (LMS). Late assignments will have marks deducted based on degree of lateness. Specifics will be



noted on the lab documents.

There are no make-up (additional) opportunities for exams or missed tests / quizzes. If you have extenuating circumstances, please advise the Professor.

**Course Outcomes and Learning Objectives:**

<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>
1. Demonstrate understanding as to how GIS can be used in real-world scenarios to solve complex, spatial problems.	1.1 Identify real-world application areas of GIS. 1.2 Recognize areas of study that can be aided by the use of GIS and spatial data analysis.
<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>
2. Use the ArcGIS Pro software interface effectively and efficiently.	2.1 Load and organize data layers in the map view. 2.2 Symbolize data in a communicative manner. 2.3 Use ArcCatalog to organize datasets.
<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>
3. Work with attribute tables to perform tabular queries and operations.	3.1 Create spatial data from Excel spreadsheets. 3.2 Add, delete and calculate field data. 3.3 Use SQL to perform attribute queries.
<b>Course Outcome 4</b>	<b>Learning Objectives for Course Outcome 4</b>
4. Create and export effective map layouts.	4.1 Manipulate layout aesthetics and create map surrounds. 4.2 Export layouts to .pdf, or other file formats for digital display.
<b>Course Outcome 5</b>	<b>Learning Objectives for Course Outcome 5</b>
5. Recognize how Python code can be integrated with ArcGIS software.	5.1 Identify the role of automation in GIS. 5.2 Create basic Python scripts that can be used in ArcGIS. 5.3 Recognize the relationship between Modelbuilder and Python coding.
<b>Course Outcome 6</b>	<b>Learning Objectives for Course Outcome 6</b>
6. Identify the role of ArcGIS Online and other Apps in the ESRI ecosystem.	6.1 Load data into ArcGIS Online. 6.2 Perform basic analysis and data sharing in ArcGIS Online. 6.3 Perform data collection and integrate with ArcGIS Online/ArcGIS Pro.
<b>Course Outcome 7</b>	<b>Learning Objectives for Course Outcome 7</b>
7. Utilize various editing tools to create and update spatial features and tables.	7.1 Be able to use editing tools effectively. 7.2 Identify and use appropriate tools for specific editing tasks.

**Evaluation Process and Grading System:**

Evaluation Type	Evaluation Weight
Assignments	50%
Exams	40%
Quiz	10%

**Date:**

June 19, 2025



**Addendum:**

Please refer to the course outline addendum on the Learning Management System for further information.

