

Course Outcome Guide (COG)

| Course: | GIS 105 – Fundamentals of GIS | Credits: | 3 | Instructor: | Gerald (Mack) McGillivray |
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| Course Description: | An introduction to Geographic Information Systems (GIS), a tool for integrating and analyzing spatial data to visualize relationships, seek explanations, and develop solutions to problems. Emphasis is placed on the nature of geographic information, and the ways in which digital methods support geographic analysis and modeling. Course will be divided between lecture and lab sessions. This course is open to GIS and on-GIS majors. Introduction to Computer (CSCI 101) or a working knowledge of Microsoft Windows is required. | | | | |
| Concepts and Issues | Process Skills | Assessment Tasks | Intended Outcomes | | |
| | | | Course | General Education or Program | Institutional |
| Data structures GIS analysis Charts and graph analysis GIS analysis procedures GISMaps and Cartography Map Construction with GISArcView GIS ArcView GIS Views and Themes ArcView GIS TablesUse of ArcView to create and edit themes Spatial query and analysis with ArcView Use of ArcView to create and edit shapefiles Use of ArcView to geocode addresses Use of ArcView to create layouts ArcView GIS extensions | Written results of class labs and exercises Completion of a midterm ArcView GIS mapping project Completion of a final mapping project utilizing ArcView GIS Identify the important elements of map design. Identify and define GIS/ArcView terminology. Identify the historical events and people that pioneered GIS. Use ArcView to display data in a view. Use ArcView to create and | *Participate in class discussions and activities demonstrating knowledge of subject matter. *Complete examinations demonstrating acceptable skill level of concept and process. *Complete textbook readings, questions and problems (both individually and collaboratively) demonstrating acceptable skill levels of concept and process. * Design, construct and test your final project. | Demonstrate a basic understanding of map principles and map design. Demonstrate an understanding of GIS/ArcView terminology. Demonstrate a basic understanding of the history of GIS. Demonstrate a basic understanding of what GIS is and how it works. A. Demonstrate an understanding of the basics of ArcView | 1.Mathematics-including numeration literacy and the knowledge and use of statistical and logical processes. 2.Analytical-gathering, organizing, and evaluating information 3.Analogical-using former knowledge to help comprehend and explain new situations 4.Critical Thinking-the ability to identify and define criteria, understand biases, and construct objective judgments. 5.Problem solving-the ability to analyze situations and synthesize solutions. | 1. Students will demonstrate effective communication skills. 2. Students will use reasoning skills to analyze and solve problems. |

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| | <p>edit themes.</p> <p>Use ArcView to query a database.</p> <p>Use ArcView to create and edit shapefiles.</p> <p>Use ArcView to create maps for presentation.</p> | | GIS. | | |
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