

Master Syllabus

GEO 1107 - Introduction to Geographic Information Systems (GIS)

Division: Liberal Arts, Communication and Social Sciences

Department: Geography

Credit Hour Total: 4.0

Lecture Hrs: 3.0 **Lab Hrs:** 2.0

Date Revised: June 2017

Course Description:

Introduction to the basic theoretical as well as practical concepts of Geographic Information Systems (GIS). Students will learn the basics of ArcMap and ArcCatalog and explore how these applications interrelate in a complete GIS software system through exercises, labs and a final project. Three classroom, two lab hours per week.

General Education Outcomes:

- Computer Literacy Competency
- Information Literacy Competency
- Critical Thinking/Problem Solving Competency

Course Outcomes:

Map Creation

Create basic map project and map layout.

Assessment Method: Locally developed exams

Performance Criteria:

Students are expected to score 70% or higher on a multiple choice exam and complete a lab.

Projections

Evaluate and select appropriate projections, coordinate systems and datums.

Assessment Method: Locally developed exams

Performance Criteria:

Students are expected to score 70% or higher on a multiple choice exam and complete a lab.

Data Acquisition

Demonstrate proficiency in the acquisition of spatial data.

Assessment Method: Locally developed exams

Performance Criteria:

Students are expected to score 70% or higher on a multiple choice exam and complete a lab.

Geospatial Concepts

Describe fundamental concepts of geospatial technology.

Assessment Method: Locally developed exams

Performance Criteria:

Students are expected to score 70% or higher on a multiple choice exam and complete a lab.

Thematic Display

Demonstrate efficiency in creating maps including the thematic map display and use of data classification systems.

Assessment Method: Locally developed exams

Performance Criteria:

Students are expected to score 70% or higher on a multiple choice exam and complete a lab.

Data Creation

Demonstrate proficiency in the creation of spatial data.

Assessment Method: Locally developed exams

Performance Criteria:

Students are expected to score 70% or higher on a multiple choice exam and complete a lab.

Spatial Analysis

Perform basic spatial analysis techniques.

Assessment Method: Locally developed exams

Performance Criteria:

Students are expected to score 70% or higher on a multiple choice exam and complete a lab.

Outline:

Introduction to GIS

Earth Basics and Projections

Downloading and Joining Table Data

Data Classification and Color

Creating Spatial Data

Spatial Analysis

Final Portfolio & Map Series