Master Syllabus

GEO 1107 - Introduction to Geographic Information Systems (GIS)

Division: Liberal Arts, Communication and Social Sciences

Department: Geography

Credit Hour Total: 5.0   **Lecture Hrs:** 4.0 **Lab Hrs:** 2.0

Date Revised: February 2014

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 computer lab tutorials and homework assignments, students will learn to use ArcGIS. Four classroom, two lab hours per week.

General Education Outcomes:

◻ Written Communication
◻ Critical Thinking/Problem Solving
◻ Values/Citizenship/Community
◻ Computer Literacy
◻ Information Literacy

Course Outcomes:

Geocoding
Demonstrate ability to transform a description of a location—such as an address, or a name of a place—to a location on the earth's surface and create maps.

    Assessment Method: Locally developed exams
    Performance Criteria: Students will be given multiple choice and/or short answer exams. Students must achieve a score of 70% or higher.

    Assessment Method: Portfolios
    Performance Criteria: Students will also be given projects and assignments to complete. Students must achieve a score of 70% or higher.

Geodatabases
Demonstrate ability to store, organize, and work with different types of spatial data and convert them from one format to another and build spatial databases.

    Assessment Method: Locally developed exams
    Performance Criteria: Students will be given multiple choice and/or short answer exams. Students must achieve a score of 70% or higher

    Assessment Method: Portfolios
    Performance Criteria: Students will also be given projects and assignments to complete. Students must achieve a score of 70% or higher.

GIS & ArcGIS Desktop
Demonstrate fundamental knowledge of the theoretical and practical skills in Geographic Information Systems.

    Assessment Method: Locally developed exams
    Performance Criteria: Students will be given multiple choice and/or short answer exams. Students must achieve a score of 70% or higher.

    Assessment Method: Portfolios
    Performance Criteria: Students will also be given projects and assignments to complete. Students must achieve a score of 70% or higher.

Spatial Analysis
Demonstrate ability to use spatial elements, measurements, locations and references to develop graphic and numerical awareness.

    Assessment Method: Locally developed exams
    Performance Criteria: Students will be given multiple choice and/or short answer exams. Students must score of 70% or higher

    Assessment Method: Portfolios
    Performance Criteria: Students will also be given projects and assignments to complete and must achieve a score of 70% or higher.

Digitizing and Map Creation
Demonstrate the ability to use ArcGIS to convert features on a paper map into digital format. Use ArcGIS presentation tools to create maps with associated map elements and demonstrate the importance of scale, resolution, accuracy, and map projections.

    Assessment Method: Locally developed exams
    Performance Criteria: Students will be given multiple choice and/or short answer exams. Students must achieve a score of 70% or higher

    Assessment Method: Portfolios
    Performance Criteria: Students will also be given projects and assignments to complete. Students must achieve a score of 70% or higher.

Outline:

Displaying Spatial Data
Analyzing Spatial Data
Building Geodatabases
Geocoding
Digitizing
Editing Spatial Data