Sinclair Community College
444 E. Third St.
Dayton, OH 45402

# 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:** January 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. Three classroom, two lab hours per week.

## General Education Outcomes:

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

## Course Outcomes:

**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.

**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.

**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.

**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.

## Outline:

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