The Community College of Baltimore County

Course Outline
GEOA 210
Decision Making Using Geographic Information Systems (GIS)
4 Semester Hours (3 lecture, 3 lab)

Description

Decision Making Using Geographic Information Systems (GIS) builds on the skills developed in GEOA 101 and GEOA 110. Case studies and applications examine real-world situations and evaluate and incorporate data into a GIS project using ArcGIS extensions such as Spatial Analyst and 3D mapper. Students gain an understanding of how to apply GIS software to aid in evaluating problems in a wide range of areas.

Prerequisites: GEOA 110 or consent of instructor
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Overall Course Objectives

Upon completion of this course the student will be able to:
1. describe the steps in developing a GIS project;
2. work with a non-GIS professional to determine a specific objective that can be fulfilled using GIS;
3. collect appropriate data;
4. identify inconsistencies, omissions and redundancies in data;
5. incorporate graphical information from various sources into a GIS project;
6. evaluate source data using the appropriate application (Spatial Analyst, 3D mapper, etc,);
7. develop and apply Structured Query Language (SQL) inquiries;
8. apply tools for spatial analysis;
9. create charts and graphs from GIS data;
10. evaluate charts and graphs with respect to the GIS project; and
11. develop and present a final project report.

Major Topics

I   Evaluation of a data collection plan
II   Incorporate Quality Assurance/Quality Control in a GIS project
III Base map sources and characteristics
IV   ArcGIS: Spatial Analyst
V   ArcGIS: 3D Mapper
VI   Evaluation of problems
VII Case Studies in Applied GIS

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following:
- A. Exams: a minimum of 2 exams (mid-term and final)
- B. Quizzes: a minimum of 4 quizzes
- C. Map projects and presentations: a minimum of two graded map projects and 1 oral presentation

Writing: The individual faculty member will determine specific writing assignments.

Other Course Information

This course is a GEOA core course.
This course is taught in a computerized environment.
This course is the third course in a required five course sequence.
GEOA 150 may be taken concurrently with GEOA 210

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in this Outline.

3 lecture hours
3 laboratory hours