Common Course Outline
GEOA 150
Remote Sensing and Global Positioning for GIS
3 Credits

Community College of Baltimore County

Description

GEOA 150 - Remote Sensing and Global Positioning for GIS introduces the concepts of remote sensing, use of the Global Positioning System (GPS) and interpretation of the collected information by the use of Geographic Information Systems. It covers sensors operating in the visible, infrared, and microwave range of the electro-magnetic spectrum. The use of imaging GIS software for manipulation and image processing of digital satellite data is also emphasized.

3 Credits: 2 lecture and 3 laboratory hours

Co-requisite: GEOA 110 or consent of instructor

Overall Course Objectives

Upon completion of this course students will be able to:
1. utilize basic remote sensing techniques;
2. describe and define the relative merits of digital and analog remote sensing;
3. identify and explain the basic components of a map created from photogrammetry;
4. explain photo acquisition and mission planning;
5. identify and explain the characteristics of map projections;
6. explain the electromagnetic spectrum;
7. employ basic Global Positioning System (GPS) devices and techniques;
8. identify and symbolize point data;
9. identify and symbolize line data;
10. identify and symbolize polygon data;
11. explain the differences between point, line and polygon data; and
12. transfer photo, satellite and GPS data into a GIS program.

Major Topics

I. Introduction to Remote Sensing
II. Aerial Photography
III. Ground Truth using GPS devices
IV. Map Design, Projections, Scale
V. Symbolizing Data: Lines, Points, and Areas

VI.   Introduction to GIS software

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams
- A minimum of 2 exams (mid-term and final)
- A minimum of 4 quizzes
- A minimum of two graded map projects and 1 oral presentation

Written Assignments: Students are required to use appropriate academic resources. The individual faculty member will determine specific writing assignments.

Other Course Information
This course is taught in a computerized environment.

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

Date Revised: 01/11/2017