

Bemidji State University

GEOG 3231: Introduction to Geographic Information Systems

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

This course develops a proficiency in basic GIS skills for those new to GIS. The premise of the course revolves around analytical problem solving using spatial data and techniques. The course also focuses on graphic communication of quantitative data including cartographic mapping concepts and data classification. This course concentrates on learning to navigate the current version of ArcGIS software at a beginner's level and developing and creating maps as communication tools. Liberal Education Goal Area 4.

B. COURSE EFFECTIVE DATES: 05/14/2014 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Analytic Problem Solving and Methods
2. Basic Map Design

D. LEARNING OUTCOMES (General)

1. communicate effectively about the history and contemporary practices and applications of Geographic Information Systems.
2. understand and manipulate Coordinate Systems and coordinate geometry.
3. be able to categorize and organize numeric data using standard classification schemes.
4. be able to develop basic modeling processes in a GIS framework.
5. be able to effectively analyze and communicate the findings of geospatial analysis using graphical tools such as graphs and maps and other cartographic methods.
6. be able to independently develop analytical problem-solving strategies in a GIS framework.
7. be able to understand, use and analyze both raster and vector data models.
8. become proficient in utilizing map algebra and vector analysis as analytic frameworks to solve problems in a GIS.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 04 - Mathematical/Logical Reasoning

1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Apply higher-order problem-solving and/or modeling strategies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted