

Bemidji State University

GEOG 2232: Techniques In Geographic Information Systems

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

A hands on approach to understanding both raster and vector based Geographic Information Systems.
Prerequisites: GEOG 1224, GEOG 2231, or consent of instructor.

B. COURSE EFFECTIVE DATES: 02/13/2004 - 08/24/2014

C. OUTLINE OF MAJOR CONTENT AREAS

1. ∩ Reintroduce Structural Query Language, Geodatabases and attribute data management
 - ∩ Develop geographic representations using both raster and vector data
 - ∩ Spatial Data Input and Editing (aka digitizing)
 - ∩ Vector and Raster Data Models: spatial data analysis
 - ∩ Geometric Transformation and Georeferencing
 - ∩ GPS Use and Data Collection
 - ∩ If time permits
 - o Explore the use of Network Analyst
 - o Introduce TIN and DEMs
 - o Geocoding and Dynamic Segregation
 - o Introduce GIS modeling and 3D analysis

D. LEARNING OUTCOMES (General)

1. 5. The student will develop a GIS vocabulary and be able to apply and use it effectively in a professional environment or future GIS courses
2. The student will continue to enhance his/her understanding of the GIS System and Science through weekly assignments
 1. The student will continue to improve his/her proficiency using advanced GIS spatial analysis
 2. The student will continue to improve his/her skills in problem solving
 3. The student will be able to capitalize on a well-established understanding of cartographic principles to prepare quality geographic representation
 4. The student will continue to develop quality and transportable collaborative project management skills through the use of geodatabases

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted