

Syllabus for PLAN 3430 – GIS I

Course Name:

Geographic Information Systems I

Course Prefix and Number:

GEOG 3430

Course Section Number:

601

Course Description (from catalog):

Computer-based decision support systems. Involves integration of spatially referenced data in problem-solving context. Concepts and application of GIS include data capture, storage, analysis, and display.

Required Course Materials for Purchase:

GIS Fundamentals: A First Text on Geographic Information Systems (7th Edition)

Paul Bolstad and Steven Manson (2022)

Student Learning Outcomes or Objectives:

- ☐ Explain how GIS represents the real world using vector features and raster cells and use these data to examine geographic patterns and relationships.
- ☐ Create, manage, and edit spatial datasets in Esri's ArcGIS Pro, including vector and raster data, attribute tables, and associated metadata.
- ☐ Select and apply coordinate systems, map projections, and datums so that geographic datasets are spatially aligned and appropriate for mapping, measurement, and analysis.
- ☐ Apply vector- and raster-based spatial analysis methods to answer geographic questions and interpret patterns, relationships, and change across space.
- ☐ Evaluate and communicate geospatial information by considering data quality, scale, resolution, and uncertainty and by producing clear maps and visualizations for technical and non-technical audiences.

Assessment of Student Performance – Grading Scale:

A (97–100), A- (90–93), B+ (87–89), B (83–86), B- (80–82), C+ (77–79), C (73–76), C- (70–72), D+ (67–69), D (63–66), D- (60–62), F (below 60)

Assessment of Student Performance – Major Assignments and percentage of final grade:

Student performance is assessed through Knowledge Checks (30%), Idea Exchanges (20%), and Data Labs (50%).

Assessment of Student Performance – Attendance/participation if portion of final grade:

N/A

Statement of Engagement with Diverse Scholarly Perspectives

This course aligns with the intent of the university to engage diverse scholarly perspectives to develop critical thinking, analysis, and debate. The inclusion of a course reading does not imply endorsement.