



MASTER COURSE OUTLINE

Prepared By: Ethan Tonnemaker

Date: April 2021

COURSE TITLE

Geographic Information Systems (GIS) II

GENERAL COURSE INFORMATION

Dept.: GIS

Course Num: 210

(Formerly:)

CIP Code: 15.0405

Intent Code: 21

Program Code: 640

Credits: 5

Total Contact Hrs Per Qtr.: 55

Lecture Hrs: 55

Lab Hrs:

Other Hrs:

Distribution Designation: GE

COURSE DESCRIPTION (as it will appear in the catalog)

This second course in geographic information systems (GIS) focuses on spatial data analysis, including the use of interpolation, contours, data intersections, and overlay analysis. Students will be introduced to the latest GIS software tools, including performing analysis of real-world data collected from Unmanned Aircraft Systems (UAS).

PREREQUISITES

GIS 110 or Instructor Permission

TEXTBOOK GUIDELINES

Introductory textbook determined by Unmanned Systems faculty (Example: Chang, K.T., 2012. Introduction to Geographic Information Systems (Sixth Edition). McGraw Hill).

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.

1. Determine the correct GIS software application(s) for specific types of UAS data collection and analysis
2. Find, obtain, download and prepare GIS datasets for further use and analysis
3. Interpret and analyze metadata
4. Evaluate data for qualitative and quantitative uncertainty and limitations
5. Critically analyze existing maps and supporting data
6. Create professional, informative, clear, and cartographically correct maps
7. Develop and present GIS findings to simulated user audiences

INSTITUTIONAL OUTCOMES

IO3 **Human Relations/Workplace Skills:** Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

COURSE CONTENT OUTLINE

1. GIS datasets
2. Metadata interpretation and analysis
3. Data uncertainty and limitations

4. Map analysis
5. Map development/creation
6. Map/data presentation formatting/development
7. Report generation

DEPARTMENTAL GUIDELINES

The syllabus must contain evaluation/grading guidelines, class environment/expectations/rules, course learning outcomes, and a disability services statement. A schedule must be provided to students that contains content covered (text chapters, topics, etc.), tentative test dates (to include final date/time).

DIVISION CHAIR APPROVAL

DATE