GEOG C170: MAP INTERPRETATION AND ANALYSIS

Item	Value
Curriculum Committee Approval Date	04/23/2021
Top Code	220600 - Geography
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

Introduction to maps, images, and geographic techniques. Technologies include map and aerial photograph interpretation, tabular data, spatial statistics, cartography, Global Positioning Systems (GPS), Internet mapping, remote sensing, and Geographic Information Systems (GIS) that aid in data collection, analysis, and presentation. Transfer Credit: CSU; UC. C-ID: GEOG 150.**C-ID:** GEOG 150.

Course Level Student Learning Outcome(s)

1. Interpret and analyze maps, map concepts, and map data to solve geographic questions.
2. Utilize geographic technologies to collect, analyze and display geospatial data.

Course Objectives

- 1. Describe the major modes of geographic inquiry.
- 2. Demonstrate an understanding of mapping concepts and the ability to interpret maps and mapped data.
- 3. Describe geographic technologies and their use in collecting, analyzing and displaying geospatial data.
- 4. Demonstrate the ability to use geographic technologies in collecting, analyzing and displaying geospatial data.
- 5. Interpret displays of tabular data in spatial visualizations.

Lecture Content

Introduction The scientific method as applied to spatial analysis Data (types, collection methods, potential for misuse) Importance of maps for communication and decision-making purposes Foundations in Maps, Survey, and Cartography Map formats Scale Direction and distance Coordinate systems Projections Geodesy Survey of Mapping Technologies Current Internet-based mapping applications Global Positioning Systems (GPS) Remote sensing Geographic Information Systems (GIS) Traditional Data Collection, Processing, and Analysis Tabular recording of field-generated data Basic statistical analysis Display tools for numeric data Geospatial Data Collection, Processing, and Analysis GPS technology and field application Collection, creation, and analysis of spatial data in a GIS Aerial imagery interpretation Basic cartography and display of data

Method(s) of Instruction

- Lecture (02)
- DE Online Lecture (02X)

Instructional Techniques

1. Lectures 2. Video, slides, and PowerPoint presentations. 3. Map exercises. 4. Group discussions

Reading Assignments

Assigned from textbook and supplemental materials.

Writing Assignments

Class discussions. Substantial essay exam questions on the midterm and final exams. Written assignments related to class topics.

Out-of-class Assignments

Required research paper and written assignments.

Demonstration of Critical Thinking

Objective examinations covering text and materials. Written papers exploring issues related to Map Interpretation and Analysis. Map exams. Evaluation of written material based on readings and the study of Map Interpretation and Analysis.

Required Writing, Problem Solving, Skills Demonstration

Objective examinations covering text and materials. Short essays exploring issues related to Map Interpretation and Analysis. Map exams Evaluation of written material based on readings and the study of Map Interpretation and Analysis.

Eligible Disciplines

Geography: Masters degree in geography OR bachelors degree in geography AND masters degree in geology, history, meteorology, or oceanography OR the equivalent OR see interdisciplinary studies. Masters degree required.

Textbooks Resources

1. Required Kimerling, A.; Buckley, A.; Muehrcke, P.; Muehrcke, J. Map Use: Reading Analysis, Interpretation, 8th ed. Esri Press, 2016 Rationale: Map Use: Reading, Analysis, Interpretation, eighth edition, is a comprehensive, foundational textbook designed for the college curriculum. Updated with a new chapter highlighting map design, including web maps, the new edition also adds information about whats going on with cartography today, including the use of imagery, remote sensing, and web concepts. Map Use provides students with the knowledge and skills to read and understand maps and offers professional cartographers a thorough reference resource. Nearly 600 full-color maps, photographs, and graphs illustrate the concepts behind communicating with maps, while an extensive glossary helps define key topics. Accommodating new developments in mapping, GPS, and geographic information system (GIS) technology, this newest edition renders basic cartographic principles accessible to all, from students of cartography and map design to those without a formal education in geography. Legacy Textbook Transfer Data: Legacy text

Other Resources

1. Coastline Library