

CATALOG INFORMATION

Dept and Nbr: NRM 280.26 Title: GLOBAL POSITIONING SYSTM
Full Title: Global Positioning Systems
Last Reviewed: 4/13/2005

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	6.00	6	Lecture Scheduled	36.00
Minimum	1.00	Lab Scheduled	0	3	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	36.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 72.00

Total Student Learning Hours: 108.00

Title 5 Category: AA Degree Applicable
Grading: Grade or P/NP
Repeatability: 04 - Different Topics
Also Listed As:
Formerly:

Catalog Description:

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:

Description: An introduction to the methods, techniques, tools, and applications for GPS. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended:
Limits on Enrollment:
Transfer Credit:
Repeatability: Different Topics

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
IGETC:	Transfer Area	Effective:	Inactive:
CSU Transfer:		Effective:	Inactive:
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:

The student will:

1. Demonstrate the principles of Global Positioning Systems (GPS).
2. Operate with proficiency the GEO Explorer 3 data collector.
3. Demonstrate ability to use Pathfinder software.
4. Apply the ability to download, differentially correct, and export, data collected.
5. Demonstrate in class the ability to create a data dictionary for application in field data collection.
6. Prepare the data for use with Geographic Information Systems (GIS).
7. Submit a portfolio illustrating corrected data collected.

Topics and Scope:

1. Introduction to Global Positioning Systems (GPS)
 - A. What is GPS
 - B. Applications of GPS in Natural Resources Management
 - C. Equipment and software, used for data collection and post-processing
2. Demonstration of Field Data Collection
 - A. Preparing for field collection
 - B. Building a data dictionary
 - C. Satellites position for time, date, and location of data collection
 - D. Equipment inspection
 - E. Collecting data
 - F. Post processing
 - G. Data transfer into Geographic Information Systems (GIS)
3. Types of Date Collectors
 - A. Geo Explorer 3
 - B. Tsc 1
 - C. Additional brands
4. How to Operate GEO Explorer 3

- A. What are features and attributes
- B. Creating a data dictionary
- C. Setting projections
- D. Safety during data collection in the field (class field trips)
- 5. Introduction to Pathfinder software
 - A. Downloading field collected data
 - B. Differential correction
 - C. Editing
 - D. Printing plot map
 - E. Exporting to various applications, GIS
- 6. Student Collection, Post-Processing and Exporting, Assignments
 - A. Portfolio development and submittal

Assignment:

The student may be required to complete:

- 1. Reading assignments totaling forty pages and written reports.
- 2. In class assignments including tracking and mapping locations using GPS unit.
- 3. Project report including print out of mapping data.
- 4. Written homework will be assigned.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, Term papers

Writing
10 - 45%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving
0 - 0%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances

Skill Demonstrations
10 - 40%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion

Exams
10 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and class participation

Other Category
15 - 35%

Representative Textbooks and Materials:

GPS - A GUIDE TO THE NEXT UTILITY

Author: Jeff Hurn for Timble Navigation, 1989