NRM 280.26 Course Outline as of Summer 2005

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	3	Lecture Scheduled	18.00
Minimum	1.00	Lab Scheduled	0	3	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	18.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 36.00 Total Student Learning Hours: 54.00

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