

CATALOG INFORMATION

Dept and Nbr: NRM 142 Title: ORIENTEERNG WILDRNS
Full Title: Orienteering for Wilderness Users
Last Reviewed: 12/12/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	1.00	17.5	Lecture Scheduled	17.50
Minimum	1.00	Lab Scheduled	1.00	4	Lab Scheduled	17.50
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00

Total Student Learning Hours: 70.00

Title 5 Category: AA Degree Applicable
Grading: Grade or P/NP
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:
Formerly:

Catalog Description:
Compass orienteering, GPS (Global Positioning Systems), topographic map reading and smartphone applications for orienteering for backpackers and wilderness recreation users.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: Compass orienteering, GPS (Global Positioning Systems), topographic map reading and smartphone applications for orienteering for backpackers and wilderness recreation users.
(Grade or P/NP)
Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

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

IGETC:	Transfer Area	Effective:	Inactive:
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CSU Transfer:	Effective:	Inactive:
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UC Transfer:	Effective:	Inactive:
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CID:

Certificate/Major Applicable:

Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Perform basic compass orienteering
2. Perform GPS (Global Positioning Systems)
3. Perform topographically map reading as applied to backpackers and wilderness recreation users.

Objectives:

At the conclusion of this course, the student should be able to:

1. Determine the scale of maps.
2. Interpret contour lines and intervals on a map.
3. Interpret range and township grids on a map.
4. Interpret topographic map symbols and color system on a map.
5. Traverse a set distance along a prescribed compass bearing.
6. Understand the difference between magnetic and true north and how to correct for it when using a handheld compass.
7. Perform basic triangulation using maps.
8. Apply map and compass principles to GPS technology.
9. Perform basic orienteering, maneuvering with map, compass, and GPS.

Topics and Scope:

- I. Map scale
 - A. Ratio (1"=1000 feet or 1:12,000)
 - B. Graphic
- II. Longitude and Latitude
 - A. Degrees
 - B. Minutes
 - C. Seconds
- III. Legal Descriptions
 - A. Base and Meridian

- B. Township and Range
- C. Sections (640 acres), quarter sections (160 acres), sixteenth sections (40 acres) – numbering system of sections
- D. Section corners, K tags (on the ground section line indicators) [very common on federal lands, i.e. National Forests]
- IV. Topographic maps
 - A. Contour lines and intervals
 - B. Symbols
 - C. Color system
 - D. Township/Range/Section lines and numbers
- V. Mechanical/magnetic principles of the hand compass (magnetic north vs. true north)
- VI. Route finding from a known point - Obstacles (steep slopes, watercourses, etc.)
- VII. Basic triangulation for finding location based on bearings to observed points
- VIII. Map and compass principles applied to GPS technology
- IX. Basic orienteering
 - A. With map and/or aerial imagery
 - B. With compass
 - C. With GPS
 - D. With smart phone applications
 - E. Pacing distances (how many steps for 100 feet or one chain [approximately 66 feet] – it differs on different slopes)
 - F. Distance and area measurements (80 chains = one mile, 10 square chains = one acre)

Assignment:

Representative assignments:

1. Reading: brief handouts in lecture sessions.
2. Find five pre-set points using a map, compass, and GPS equipment. (lab)
3. Identify markers, locations, and elevations of those points on a map. (lab)
4. Using a map and compass in the field, orienteer to a series of locations using a new set of coordinates at each destination. (lab)
5. One skills/problem-solving exam: finding locations.

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.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing
0 - 0%

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

Field work (finding pre-set points using a map, compass, and GPS equipment)

Problem solving
40 - 45%

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

Using a map and compass in the field, orienteer to a series of locations using a new set of coordinates at each destination. Skills/problem solving exam.

Skill Demonstrations
40 - 45%

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

None

Exams
0 - 0%

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

Participation and attendance.

Other Category
10 - 20%

Representative Textbooks and Materials:

Instructor prepared materials.

Be Expert with Map and Compass: The Complete Orienteering Handbook. Kjellstrom, Bjorn. Wiley: 1994 (classic)

Introduction to GPS: The Global Positioning System. El-Rabbany, Ahmed. Artech House: 2006 (classic)