

UNIVERSITY OF OREGON • PE & REC • Outdoor Pursuits Program
PEO 356 - Backcountry Navigation Syllabus

Course Description

This is a two-credit course consisting of classroom sessions and a three-day backpacking outing in the Oregon Cascades. The classroom sessions are structured to prepare students for the outing. Classroom topics include clothing and equipment needs, map and compass practice, Global Positioning System (GPS) use, backcountry safety practices and protocols, leave no trace travel and camping ethics, fitness requirements, and trip planning and preparation. Students are required to complete a navigation worksheet and complete a 2-mile run in less than 18 minutes during an in-class fitness test prior to participating in the outing component of the course.

The focus of this outing is on developing efficient backcountry navigation skills. We follow an exciting and challenging route in rugged country that requires the use of intermediate and advanced map and compass and GPS navigation skills. The route is mostly off trail, in the southern portion of the Three Sisters Wilderness Area. The route begins at an elevation of about 4400', and the first campsite is at an elevation of approximately 6200'. The campsite on Saturday evening is at an elevation of approximately 6000'. The overall route is long and can be physically demanding, especially in foul weather.

Prerequisites/Corequisites

Prerequisites: PEO 285 - Wilderness Survival (no exceptions)
PEO 351- Backpacking (or equivalent experience at the discretion of the course instructor)

Learning Outcomes

The Outdoor Pursuits Program emphasizes safe and responsible participation in outdoor activities. In addition to meeting the learning outcomes of prerequisite courses, upon completion of this course participants should be able to:

1. Select and use the clothing and equipment necessary to safely and comfortably participate in a multi-day, off-trail backpacking outing in the OR Cascades in potentially demanding conditions (foul weather, rugged, and potentially snow-covered terrain).
2. Accurately interpret a route designated by the instructor on a topographic map, and evaluate the route in terms of travel difficulty, transit time, hazards, escape routes and suitability for foot travel.
3. Efficiently perform the following map and compass techniques: estimating point elevation, estimating trail distance factoring in the effects of slope error, measuring and plotting bearings, and performing resection and triangulation.
4. Demonstrate an understanding of the Universal Transverse Mercator (UTM) and Public Land Survey (PLS) grid systems.
5. Operate a Global Positioning System (GPS) unit including: Setting basic features, inputting map datum, getting satellite readouts, setting waypoints, and following UTM coordinates to a set destination.
6. Pinpoint location on a topographic map using GPS readouts.
7. Explain the limitations of using wired devices (e.g. GPS units, cell phones, etc.) for backcountry navigation and emergency response.
8. Demonstrate an understanding of how to travel and camp using Leave No Trace (LNT) techniques specific to the Oregon backcountry.
9. Explain the risks and hazards associated with traveling in the Oregon backcountry during hunting season, and methods, techniques and behaviors critical to minimizing these risks and hazards.
10. Demonstrate an adequate fitness level for safely participating in the outing component of this course.

Evaluative Criteria

This is a P/NP course. Students enrolled for credit will be graded in the following areas. All of the following evaluative criteria must be met for a passing grade:

30% *Attendance and Participation*

- a. *Classroom* - attending the required sessions identified on the course schedule, being on time and actively participating in classroom sessions, and contributing to the group effort.
- b. *Backcountry Outing* - complying with OPP Outing Policies; maintaining a positive and supportive attitude; making an effort to be organized, efficient, and on time for all outing events; contributing to the group effort; and arriving at the meeting point for the outing with all of the required items of clothing and equipment.

40% *Competence* - must be demonstrated in the following areas:

- a. *Map reading* - estimating elevation, calculating trail distance, and identifying landform features on a topographic map.
- b. *Map and compass* - measuring and plotting bearings, orienting a map with a compass, resection and triangulation.
- c. *GPS use* - inputting settings, retrieving satellite information, setting waypoints, and transferring UTM readouts to a topo map.
- d. *Backcountry camping and travel skills* - packing a pack; hydrating and eating at regular intervals; maintaining comfort while hiking, during teaching events, and while camping; setting up and using a shelter; using a backpacking stove; and practicing Leave No Trace (LNT) camping and travel techniques.
- e. *Backcountry Risks and Hazards* – demonstrating an understanding of the behaviors, skills and techniques essential for safety during hunting season in the Oregon backcountry.
- f. *Fitness*- running two miles in 18 minutes or less during an in-class pre-outing fitness test.

30% *Worksheet* – submitting a fully completed worksheet by the date specified by the instructor. A score of 80% or better is required for a passing grade.

To be considered for a passing grade, participants must:

1. Attend and fully participate in ALL required classroom sessions specified on the course schedule.
2. Participate fully in the three-day outing.
3. Submit the navigation worksheet by the deadline specified on the course schedule.
4. Attain a score of 80% or higher on the combined evaluative criteria.

Outing Demands, Requirements, Expectations, and Policies

Late fall weather in the Oregon Cascades can change rapidly. Sunny, summer like days can quickly change to heavy rain, and below-freezing temperatures with strong winds and blowing snow are not unusual. We encounter significant snow on approximately half of our Backcountry Navigation outings.

Backpacking off trail with a large pack can be physically and mentally demanding. The terrain encountered during the outing component of this course is heavily forested, with many fallen trees and other obstacles to negotiate. There is dense brush in some areas. There are several steep cliffs and rocky area, and many small lakes and ponds, which may or may not be covered in snow and ice. The ground may be free of snow, or there may be snow deep enough to require snowshoes (which the program will provide at no additional cost if appears that they may be needed). The ascent of Irish Mountain (weather permitting) involves travel over very steep and sometimes icy terrain, using ropes that we will place for security.

The outing area, like most of the Cascade Range, is open to hunting during the fall months. Therefore, everyone is required to use bright clothing pack covers and/or orange safety vests (provided by the program) at all times during the outing except when inside of a shelter. The risk from hunters is small but real - you will be expected to minimize your risk by being alert to the possibility of hunters in the area, and taking appropriate action to make yourself visible at all times.

Safe travel in these conditions requires proper clothing and equipment, careful navigation and route selection, and constant self-monitoring one's physical condition. It's imperative that you understand what is required of you in terms of preparation, fitness, physical comfort, attitude, and conduct. MOST IMPORTANT! Safety is our first concern and must be yours as well. Participate in the outing only if you feel mentally and physically prepared and are willing and able to assume full responsibility for your own safety. Never assume that the leadership team knows everything, always make good decisions, or can solve every problem for

you. Your safety depends upon your alertness and good sense. We encourage you to maintain a questioning attitude! If you are unsure of something, ask!

A. Prior to participation in the outing component of the course you are required to:

1. Attend the required classroom sessions.
2. Submit the map and compass worksheet on time and in acceptable (passing) form.
3. Meet the course fitness requirements by running 2 miles in less than 18 minutes during a pre-outing classroom session (or meet director approved alternative criteria).
4. Read, understand, and sign the Statement of Risk, Assumption of Risk, and Release of Liability document, Health Information form, and Outing Policies document, allowing enough time to thoroughly read each document and bring any questions you may have to the course instructor. It is your responsibility to provide your instructor with information regarding injuries, surgeries, medications, or other special considerations that may affect your participation in this course.
5. Arrive at the outing departure point on time and with all of the required clothing and equipment. Gear and clothing requirements will be detailed during class sessions. To avoid loss of credit, fees, and the experience of the outing, make sure that you understand the requirements and verify the acceptability of required items well in advance of the departure date. The Outdoor Pursuits Program maintains a limited supply of certain items for student use at no charge. You must provide your own equipment unless we happen to have the items you need. Rentals are available locally. You must also provide your own food. Transportation is covered in the cost of the course.

B. As a participant in the outing component of this course, you are expected to:

1. Monitor your health and comfort, eat and drink regularly, and inform your instructor if you become uncomfortable or exceed your limits of personal safety. Your enjoyment of the course will be improved by maintaining a positive attitude and by being mentally prepared for a new set of challenges each day.
2. Know and practice minimum impact camping techniques specific to the season and environment.
3. Refrain from using illicit drugs and alcohol, carrying firearms, and bringing pets of any kind. Our outing participation policies regarding alcohol, illicit drugs and firearms are "zero tolerance". Do not anticipate lenience or exceptions. Failure to abide by these policies may result in a permanent grade of "F" or "NP" in the course and and/or a formal complaint registered with the Office of Student Conduct and Community Standards.
4. Wear a seat belt AT ALL TIMES while riding in State vehicles.
5. Remember that you are participating in a tax-supported public program. Help us maintain a good image by being sensible in attire and behavior when near members of the public.
6. Comply with the Program's policy on use of cell phones, music players and other personal electronic devices. Policies regarding the use of personal electronics will be discussed during class sessions.

C. You will not be allowed to participate in the outing component of this course if you:

1. Miss any required classroom sessions.
2. Fail to submit the required worksheet(s) and/or written assignments.
3. Fail the fitness test.
4. Arrive at the outing with inadequate equipment or if, in the instructor's opinion, your participation (for whatever reason) could compromise your or the group's safety.

*D. You participate at your own risk. **You are strongly encouraged to obtain health insurance prior to participation in the outing component of this course.** You may be asked to secure a physician's statement clearing you to participate in this course.*

Additional Information

1. IMPORTANT! The three-day outing requires that you miss ALL other class sessions scheduled on the Friday of the outing. It is your responsibility to contact your professors/instructors well in advance of the outing to determine if your absence will be permitted. NOTE: Your professors/instructors are under no obligation to release you from your responsibilities in order to participate in this outing. Attending Friday classes and driving on your own to the outing location later in the day is NOT PERMITTED.

2. Course readings, articles and notes are available on the OPP website: <http://opp.uoregon.edu/bpk/backpacking.html>
3. A color map of the outing location is required for classroom sessions. The instructor will announce where to procure the map.
4. Laptop and cell phone use (including text messaging) is prohibited during class sessions!
5. In compliance with University policies, an "I" can be given only when a relatively minor part of a course is not completed. Therefore, if you do not participate in the outing component, an "I" is not an option. If you cannot attend the outing, drop the course as soon as possible.
6. If participation is disallowed due to failure to meet the requirements for participation specified above, or because you chose not to participate in the outing for any reason, fees will NOT be refunded. Refunds are subject to the refund schedule established by the Registrar's Office.
7. This OPP conducts this outing according to the requirements of a Special Use Permit administered by the United States Forest Service.

Instructor

Anne Borland aborland@uoregon.edu Office: Base SRC 039 "Base Camp" hours: Wednesday 2-2:50pm

Schedule

DATE	TOPIC	NOTES
WEEK 1	Introduction to Course Course demands/expectations Backcountry Hazards Leader Meeting #1	Refer to the website for readings/resources
Readings Course Syllabus - distributed in class and available on the course website Sharing the Woods safely - available on the course website		
WEEK 2	Gear and Clothing Requirements Fitness Test	Available on the course website Bring running gear to class
WEEK 3	Map and Compass Review Grid Systems Introduction to GPS Use	Map and compass worksheet distributed Bring your compass to class
Readings Map and Compass Field Techniques - available on the course website UTM Grid and GPS Basics - available on the course website		
WEEK 4	Outing Preparation Leader Meeting #2	Map and compass worksheet due - late submissions not accepted -
BACKCOUNTRY NAVIGATION OUTING – DATE TBA – IRISH MOUNTAIN MEET AT THE OPP STAGING AREA AT (__TBA__)		
WEEK 5	Outing Debrief and Evaluation Leader Meeting #3	

ALL class sessions are required for a passing grade. If you miss a pre-outing class session, you will be required to drop the course. If you miss the post-outing session, you will not receive a passing grade in the course.