Introduction:
The Wilderness Navigation class is intended to provide students with the knowledge, skills, and experience required to safely and reliably find their way through wild places using a map and compass. Pursuant to this goal, the course will rely heavily on exercises and techniques developed for the sport of Orienteering. The term “Orienteering” refers to a competitive event in which a map and compass is used to problem-solve a route from marker to marker, through a wild area, in the shortest time possible. Orienteering is an excellent lifetime fitness activity and, in Europe, a very serious competitive sport. For the purposes of this class, Orienteering is an excellent means of developing and perfecting wilderness navigation skills.

Students in this class will have opportunities to learn to read a map, use a compass, use map and compass together, problem solve with a map and compass, use specialized orienteering navigational techniques.

Students must attend all meetings and participate fully. Students are expected to read the assigned readings and take notes during lecture. There will be a written final exam.

Course Outcomes:
Upon completion of the course, students should be able to demonstrate the following:

- Functional ability to interpret landforms and extrapolate "stories" from the map
- Functional ability to perform basic compass operations
- Functional ability to problem-solve using a map and compass
- Functional ability to navigate efficiently off-trail
- They should be functionally “lost-proofed”

Preparation for Field Activities:
For every field session, students need to prepare themselves by dressing appropriately for current and possible weather conditions and be prepared for emergencies including an unplanned night in the woods. All students must come to labs with a daypack. The following gear—or its near equivalent—is strongly recommended: a water bottle plus water purification tablets such as “Potable Aqua”, good rain gear, spare insulating layers, including a warm hat (select hydrophobic fibers as described in the next paragraph), the obvious compass, matches (or a reliable lighter or both), a candle or other fire starter, a knife, a whistle, high-energy snacks, a small flashlight with spare batteries, a rescue blanket and or one or two large “leaf” (garbage) bags, and a modest first aid kit including any prescription and over-the-counter medications you’ll require to get you through the class period, and an unexpected overnight stay. Consider insect repellent, sunscreen,
You will need sturdy shoes or boots that will help to protect you from bruises, ankle injuries, etc. Your insulating layers should continue to insulate when wet. Wool, Capilene, polypropylene, Thermax, and synthetic pile and fleece are examples. A hat is essential for preventing heat loss from the highly vulnerable head/neck region.

**Course Schedule:**

**Week 1**
- **Tuesday:** Lecture/Lab (5 hrs.)
  - Course introduction, Map reading
  - Read Parts 1 and 2
- **Friday:** No Class

**Week 2**
- **Tuesday:** Lecture/Lab (5 hrs.)
  - Map and compass techniques, orienteering methods, profiling a river
  - Read Parts 3 and 4
- **Friday:** Pacing, mini-compass course, orientation to the area (Mt. Valhalla)

**Week 3**
- **Tuesday:** Trail “O” (Mt. Valhalla)
- **Friday:** Short Cross Country “O” (Mt. Valhalla)

**Week 4**
- **Tuesday:** Cross Country "O" (Mt. Valhalla)
- **Friday:** Norwegian "O" (Mt. Valhalla)

**Grading:**
Assessment of students will be based on class involvement, quality of work (subjective on my part; sorry), and performance on the written final exam. Grades in this class will be calculated on a straight percentage basis. This is accomplished by dividing the number of points earned by the total number of points possible. I do not grade on improvement except to the extent that improved scores will bolster the student’s overall point total. Full and enthusiastic class participation is expected of all students and should not be viewed as something extra that can be counted on to compensate for poor performance on written assignments.

The grading scale is as follows: 93-100 A; 90-92 A-; 87-89 B+; 83-86 B; 80-82 B-; 77-79 C+; 73-76 C; 70-72 C-; 67-69 D+; 60-66 D; 0-59 F.

**Attendance:**
Students must understand that attendance is of paramount importance in any activity class. This class meets eleven times. Therefore, if classes are missed, each class will be considered to be worth 13% of the class, and 13% per session missed will be deducted from the final grade.

It is possible to miss, and make up one lecture. If more classes are missed, the integrity of the learning experience will be compromised beyond recovery and the student should drop the course. The alternative would be to suffer the consequences to the final grade, of the −13% per class missed. Misses in lecture may be made up by writing and submitting a paper which covers the material covered in class on the day in question. *Under no circumstances should a student assume that by merely submitting a paper, she/he has made up for 100% of the class missed.* In order to be considered equivalent, the paper must reproduce the content covered on the day missed, and be of adequate length, substance, and quality based on the judgment of the course professor. For purposes of calculating a final grade for the class, the paper will be graded, and the 13% deduction for the absence will be reduced, commensurate with the quality of the make-up assignment. Therefore, the degree to which the paper actually substitutes for the class experiences on the day missed, will be directly reflected in the final grade. The student must meet with the professor to discuss the possible make-up work.

**Orienteering Internet Resources:**
- Badger Orienteering Club
  [http://userpages.chorus.net/kevin/main.html](http://userpages.chorus.net/kevin/main.html)
- Minnesota Orienteering Club
- U.S. Orienteering Federation
  [http://www.us.orienteering.org/Home.html](http://www.us.orienteering.org/Home.html)
- World of “O”
http://worldofo.com/
A & E Orienteering
http://aeorienteering.com/
Suunto Compasses
Silva Compasses
http://www.silva.se/
O Gear
http://www.us.orienteering.org/OGear.html
GeoSTAC On-Line Instruction
http://geology.isu.edu/geostac/
GeoSTAC ON-Line Instruction: Topographic Maps
http://geology.isu.edu/geostac/Field_Exercise/topomaps/index.htm
Topozone
http://www.topozone.com/
Terraserver
http://terraserver.microsoft.com/default.aspx
U.S.G.S.- Home
http://www.usgs.gov/
U.S.G.S.- Map Ordering
http://store.usgs.gov/
OFF ROUTE. COM
http://www.offroute.com/index.asp
Latitudes Map and Travel
http://www.latitudesmapstore.com/template.cfm
Map and Compass Links for Troop 91
http://www.troop91bsa.org/t91_compass.htm

Tick-Borne Diseases
CDC Lyme Disease Pages
http://www.cdc.gov/ncidod/dvbid/LYME/ld_prevent.htm
http://www.cdc.gov/ncidod/dvbid/LYME/Prevention/Id_Prevention_Avoid.htm
http://www.cdc.gov/ncidod/dvbid/Lyme/

Lyme Info.
http://www.lymeinfo.net/protection.html

Prevention: Mayo Clinic

Pesticide Information Center
http://npic.orst.edu/