Course Syllabus

Department: Conservation
Date: October 25, 2012

I. Course Prefix and Number: WFS 100

Course Name: Land Navigation

Credit Hours and Contact Hours: 1 credit hour and 1 contact hour

Catalog Description including pre- and co-requisites: supporting data required for grade prerequisite of ‘C’ or higher. This course will provide students with hands-on experience in the fundamentals of map and compass utilization. Emphasis will be placed on topographic map interpretation and field navigation techniques. In addition to the standard orienteering compass, students will learn how to navigate by Global Positioning System (GPS).

Relationship to Academic Programs and Curriculum including SUNY Gen Ed designation if applicable:

This course is a requirement for students in the Wildland Fire Suppression Certificate Program. It may be taken as a general elective by any student who desires to develop skills in map, compass and GPS orienteering.

II. Course Student Learning Outcomes: State the student learning outcome(s) for the course (e.g. Student will be able to identify…)

Students will:

1. Interpret topographic maps to estimate features of the landscape such as slope, aspect, acreage and distances. (professional competency, information resources)
2. Utilize a map and compass to navigate in a field situation. (professional competency, information resources).
3. Demonstrate navigation techniques using a global positioning system. (professional competency, computer literacy)

College Learning Outcomes Addressed by the Course: (check each College Learning Outcome addressed by the Student Learning Outcomes)

- [ ] writing  
- [ ] oral communications  
- [ ] reading  
- [ ] mathematics  
- [x] critical thinking  
- [x] computer literacy  
- [ ] ethics/values  
- [ ] citizenship  
- [ ] global concerns  
- [x] information resources
III. Assessment Measures (Summarize how the college and student learning outcomes will be assessed): For each identified outcome checked, please provide the specific assessment measure.

<table>
<thead>
<tr>
<th>List identified College Learning Outcomes(s)</th>
<th>Specific assessment measure(s)</th>
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<tbody>
<tr>
<td>Information Resources</td>
<td>A worksheet is provided to the students were they must determine landscape features such as slope, aspect, etc. using a ruler, topographic map and dot grid. In the classroom, the students will determine bearings from one location to another using a topographic map and compass. Students will take this information into the field and use it to successfully navigate an orienteering course.</td>
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<tr>
<td>Computer Literacy</td>
<td>Students will use a global positioning system unit, and associated software, to navigate from one location to another in the field. They will collect coordinates of a given location, save them, and then later use the GPS unit to return to the original location. They will also enter coordinates of an unknown location and navigate to that location.</td>
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IV. Instructional Materials and Methods

Types of Course Materials:

Students may purchase a Map and Compass Orienteering Handbook. The Conservation Department will provide copies of compass and GPS owner’s manuals for students. The department will also provide maps, compasses and GPS units for class use. Students may be encouraged to purchase USGS Topographic maps applicable to their professional/personal interests that could be used in class.

Methods of Instruction (e.g. Lecture, Lab, Seminar ...):

This course is hands-on based; however, lecture, demonstrations and class participation are an important part of the course. Applicable films may be incorporated into the course.
V. General Outline of Topics Covered:

Map Unit:
- Symbols and Colors
- Reading Directions
- Measuring Distance
- Land Shape Determination

Compass Unit:
- Taking and Following Bearings
- Navigating in the Outdoors using a map and compass

GPS Unit:
- Waypoint Creation
- Pointer Utilization
- Map Creation
- Saving Waypoints and Track Logs
- GOTO function