

Geography 86 – GPS for Geographic Info. Systems.

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Course Description

You'll learn the theory and practice of GPS specifically related to GIS through lectures, numerous tutorials and worksheets. Then we apply this knowledge to hands-on training with the professional Trimble GPS units -- both Junos and GeoXT/XH units. You will receive a solid introduction to the industry standard software called *TerraSync* for the data collectors and *Pathfinder Office* for office work, including post-processing, data transfer and exporting data to GIS maps.

Course Goals & Objectives

By the end of this class, the student should be able to recognize major concept of how GPS works and the technology driving it. Modules include: GPS Fundamentals, Equipment setup, Software tutorials, and Advanced Concepts covered in the Trimble on-line / software tutorial broken down into five (5) steps.

Texts and Materials

- Yellow - Geography 86 packet (includes "Trimble Orientation Guide")
- Blue - Trimble GPS Tutorial (also provided on lab computers)
- Provided in class - Professional Trimble GPS Units

Attendance, Expectations and Classroom Decorum

- You are expected to come to class both days in their entirety. Likewise, you must complete all tutorials, worksheets, quizzes and final project to receive a passing grade. Any uncompleted work will be treated as a zero (0). Note: you may take this "class pass / fail," but this process is through Admissions and Records not the instructor.
- Electronic device are to be silenced in a lecture / lab academic setting.
- You may work in groups and will be randomly assigned a partner. However, after the worksheets are graded, you may NOT share your answers with others. I will attempt to grade (with your help) worksheets before you take the quizzes.

Course Student Learning Objectives

Course Student Learning Objectives (CSLO's) are key topics that are even more specific than goals and general concepts. They have specific outcomes or "answers" that are measurable. That is, you will probably be tested on these topics (and more) with questions on a test. Here is the list for this course:

CSLO 1 - List 5 core steps on how a GPS works.

CSLO 2 - Determine and identify critical setup items needed before field collection of GPS.

CSLO 3 - Develop data dictionary on scratch paper then computer software keeping in mind an iterative process.

CSLO 4 - Mark and navigate to GPS waypoints.

CSLO 5 - Differential correct collected field data.

Assignment	Points
GPS Tutorial – Worksheet 1	10 points
GPS Tutorial – Worksheet 2	20 points
GPS Tutorial – Worksheet 3	20 points
GPS Sheet A – Fundamentals	30 points
GPS Sheet B – GPS Setup	15 points
GPS Sheet C – TerraSync	15 points
Quiz 1a – Tutorial 1, 2, A	20 points
Quiz 2b – Tutorial 1, 2, A	20 points
Quiz 3a – 3, B, C	20 points
Quiz 4 - GPS checkout	20 points

Assignment	Points
Final Project / Skill Level Assessment	60 points
Total	250 points

Grades
A = 90% to 100%
B = 80% to 89%
C = 70% to 79%
D = 60% to 69%
F = below 60%
<p>Note: Grades posted within 2 weeks on <i>MySierra</i>. For pick-up materials kept in office for the semester.</p>