

INTRODUCTION TO GLOBAL POSITIONING SYSTEMS

(GEY 140, Section 601, CRN 30804)

Friday, April 10, 5:00PM-10:00PM & Saturday, April 11, 8:00AM-5:30PM, Room 2573

Instructor: Dr. Eleanor (Ellie) Camann

Office: Room 2572

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Office Hours: Mon 5:00-7:00, Tues 3:00-4:30 PM, Wed 1:00-2:00, or by appointment

General Course Description: Intro to GPS provides instruction on the use and application of hand-held Global Positioning System (GPS) receivers. Course topics include navigation, using GPS with topographic maps, mapping geologic and man-made features using GPS, and exchanging information with computerized digital maps. (1 credit hour)

Course Materials: There are no required textbooks or supplies for this class. A handout of written materials will be provided at the first class session, and other reference materials may be provided on D2L. You will need a pencil for in-class assignments, and will probably want paper for note-taking.

We will be doing several computer activities using Google Earth and websites, and you might also want to access some of the materials that I will post on D2L. Bring your own laptop if you have one. Otherwise, school laptops for this work will be available, so be sure you know your S# and current login information

You will be assigned a nearly new RRCC-owned DeLorme Earthmate PN-60w GPS receiver for use during class time. It is your responsibility to keep this equipment in pristine condition and to return it when told to do so. If it is damaged, lost, or not returned at the end of each day, you will be responsible for buying a replacement for the school. If you have your own handheld mapping-grade GPS receiver (NOT a car navigation unit) and would prefer to use it, you may do so as long as it has the capability of doing everything we cover in class. However, keep in mind that I might not always be able to help you with the mechanics of finding functions if you choose to do this, since I don't know the ins and outs of every model.

Attendance: Attendance for all parts of this class is mandatory. Missing 5 hours or more will result in your receiving an "F" for your final class grade, regardless of your performance on class assignments and the exam. Attendance and participation also count directly as 20% of your grade when calculating your average. In addition, there will be a short graded activity for almost every hour of class time, and there is no make-up for any of these for which you are not present. Missing one part of class also usually makes understanding of the next part difficult or impossible, since most of what we will be doing builds upon previous activities. Furthermore, you need to arrive on time each day - and when we return from breaks - or you will miss important instructions, assignments, or (in the case of outdoor work) even be left behind. Tardiness will result in a reduction of your attendance/participation grade, up to the maximum number of points for the day.

Last day to drop class and initiate a tuition refund: **April 9 ****

Last day to withdraw from class ("W" recorded, no refund): **April 10****

*** Be sure to consult with appropriate offices on campus, particularly if you receive financial aid or are an international student, as dropping or withdrawing from a course may impact your status.*

Per school policy, students who do not attend the first night of class will be dropped from the class.

Class Assignments/Exams: Unless explicitly told otherwise, all of your assignments and exams will be completed INDIVIDUALLY (no collaboration with classmates or anyone else) but will be "open book" for any PRINT notes/references you care to use. Computers or other electronics will be permitted only if I tell you it is OK to use them. Your take-home assignment will be given to you at the end of the day on Saturday, and you will need to submit your work as a .doc, .docx, .pdf, or .rtf document using the DropBox on D2L no later than 9:00PM on Wednesday, April 15. I will have your grades submitted by Saturday the 18th. **No late work will be accepted**, so be sure to start early and get any technical help you need with D2L well in advance of the deadline.

Grading:

Attendance & Participation: 20 points
In-Class Assignments/Quizzes: 25 points
Exam Practical: 30 points
Take-Home Assignment: 25 points
Total = 100 points max

Your total out of the maximum of 100 points will be converted to a percentage and a letter grade will be assigned according to the following scale: 90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; 59% and below = F. Incompletes will not be given. Remember, you will receive **ZERO** points for any missed work, and will fail the class or be dropped if you are absent for more than 5 hours of class time.

Desire2Learn: Please check the course page on “Desire2Learn” (a.k.a. D2L) as soon as you can, to be sure you have no access problems. I will use it to post course documents (such as this syllabus), and you will be using the Drop Box to submit your take-home assignment. You may also use it to check your grades for up to 2 weeks after the last class day. Below are some helpful hints for using the software.

1. Go to the following web site: www.rccc.edu and click on **The Rock** link
2. Login using your S# and self-selected PIN. Click the Desire2Learn link found on the Student Tab

New to **The Rock**?

3. Your username is your student ID (S#). You can find this number on your schedule or bill.
4. Your password is the first six characters of the PIN you created when you registered online. If you did not register online, the default PIN is your birthday (MMDDYY).
5. You will be prompted to enter a new strong password.
6. Click login and enter your S# and new password. Select Desire2Learn from the Student Tab

Note: Our system performs faster using Mozilla Firefox as the browser. If using Internet Explorer, some files may not open up.

HELPLESK: 1-888-800-9198 or <http://help.cccs.edu>

The 24x7 helpdesk is staffed with people trained to answer questions about: - Log-ins - Registration System - Student email - Desire2Learn

Academic Honesty: Students at RRCC are expected to adhere to the policies for academic integrity and the student conduct code described in the Student Handbook. All students in this class will sign a pledge to be on their honor to do their own work and to follow these policies. Disciplinary action will be taken against any student found guilty of academic dishonesty such as cheating or plagiarism. Although you will often be working with others on activities, all written work for assignments and the exam **MUST** be your own. If your words match those of others, I will assume you copied rather than thinking about the answers yourself. If you are unclear whether or not your actions are acceptable, please ask in advance. Any student guilty of any form of academic dishonesty will receive a grade of ZERO for that assignment or exam and will be subject to additional disciplinary action, up to and including failing the course and/or being expelled from the college.

Students with disabilities: Red Rocks Community College is committed to access for students with disabilities. If you are a student with a disability and need assistance or are interested in requesting accommodations, please contact Accessibility Services. Faculty are not obligated to provide accommodations without proper notification by Accessibility Services and accommodations are not retroactive. Students may contact the Access staff by telephone or email to make an intake appointment at 303-914-6733 or access@rrcc.edu. Accessibility Services is located in Suite 1182 at the Lakewood campus. More information is available at www.rccc.edu/accessibility-services. If you have a disability requiring accommodations, please be sure I have been sent the appropriate paperwork and talk to me about it early on the first night of class.

Classroom etiquette and policies:

1. Be courteous. Treat me, and your fellow students, with respect, and I will do the same.
2. Get to class and return from breaks on time.
3. Mobile devices should be off & silent. Do not use them during class unless you are dealing with an urgent matter. In that case, please quietly leave the room to take/make your call or text.
4. If you use a laptop for anything other than in-class work, you will be asked to turn it off.
5. If you must leave during class for any reason, do not be disruptive when doing so.
6. Refrain from side conversations when the entire class is being addressed by me or by one of your classmates. These are very distracting to everyone.

Students not adhering to these policies are subject to disciplinary action. This may include being asked to leave the class for the day (and not being given the chance to make up what you miss as a result).

Tentative Schedule:

Friday night will mostly take place in the classroom (with just a little time outdoors), but about half of the day Saturday will be spent outside walking around campus. Be sure to wear clothing that is appropriate for changeable weather and footwear suitable for a walking on uneven surfaces.

Sequence of topics to be covered:

1. Introductions and Course Overview
2. What is the Global Positioning System (GPS)?
 - History of GPS
 - Basics of how GPS works
 - Recent developments & options
3. GPS Receiver Introduction
 - Initialization (outside)
 - Overview of controls
 - Recording a position
4. Topographic Map Basics
5. Coordinate Systems
 - Latitude/Longitude
 - Universal Transverse Mercator (UTM)
 - Plotting known coordinates on a map
 - Determining coordinates of a map location
6. Creating Routes in a GPS Receiver
 - Datums
 - Entering coordinates
 - Making a route
7. Navigation Using a GPS Receiver
 - Compass Function
 - Route, Tracks, Backtracking
8. Mapping Activity: RRCC Campus
9. Making Maps
 - Plotting points collected with GPS receiver
 - Data transfer
10. Google Earth (GE) & Online Data
 - Navigating in GE
 - Using GE to obtain coordinates
 - Other data sources (e.g. USGS)
11. Geocaching/Earthcaching
12. Geological/Surveying Applications of High-Precision GPS (if time allows)
13. Exam Practical (using the skills learned throughout the class)

Acknowledgment of the RRCC Student Conduct Code:

"I pledge to abide by the RRCC Student Conduct Code. I will be academically honest in all of my coursework and will not tolerate the academic dishonesty of others."

Signature_____

Date_____

Acknowledgment of Syllabus for this course (GEY 140, Spring 2015):

"I have received the syllabus and understand the work load, grading policy, responsibilities, and expectations for this class."

Signature_____

Date_____