

Department of Geography– University of Victoria

Geography 391– Geocaching and the Global Positioning System  
February 2015

COURSE OUTLINE

February 13, 2015

Instructor: Cathryn R. Brandt ([catyrose@uvic.ca](mailto:catyrose@uvic.ca))  
Office: DTB A236  
Office hours: By appointment

Teaching Assistant TBA  
Class Time: Monday-Friday, 9:30 am – 4:20 pm (including 1 hour for lunch)

Classroom: TBA  
Labs: DTB A251/A253  
Exam: In-class(TBA): Friday, February 13: 9:30 am – 12:00 am

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### Course Description

In May, 2000, the United States government removed the “Selective Availability” – the means by which Global Positioning System (GPS) accuracy was intentionally degraded for security reasons. Overnight, the accuracy of civilian GPS systems increased tenfold. Since this time, GPS use has been rapidly integrated into all manners of daily life, including commercial, transportation, and recreational applications. One increasingly popular use of GPS is the activity of geocaching a hightech game of ‘hide and seek’ in which users locate hidden containers using coordinates and GPS receivers.

The goal of this course is to introduce students to the activity of geocaching along with the fundamentals of GPS navigation, and GPS data collection. Emphasis will be placed on geocaching, the history and workings of GPS and associated navigation systems, map datums and coordinate systems, and basics of GPS data management. Students will gain hands-on experience with geocaches on the UVic campus.

This course is suitable for students from any background. Strong participation in a group environment and willingness to be outdoors are fundamental to success in this course.

## Learning Objectives

By the end of this course, students should be able to:

- Explain basic aspects of coordinate systems and map projections.

class time may be given for working on this assignment, but completion will occur on students' own time. Marks will be deducted for not adhering to the word count requirement.

#### Group Geocache Project:

Students will work in small groups to complete a geocaching project. This project will consist of the creation of a "cache" on the UVic campus that highlights or showcases some aspect of the campus. Class time will be given to complete this project. Students will search for the caches of their fellow students on the last afternoon of the course.

#### Readings

Readings will be assigned in class and will consist of short papers or online articles. Students are expected to read and understand readings as test questions will be drawn from this material.

#### Participation

All students are expected to actively participate in class discussions and group projects. Attending class throughout the entire week is integral to successfully completing this course.

#### Late Policy

Due to the condensed nature of this course a strict late policy is being enforced with a 25% deduction for each day late for worksheets. Group projects will not be accepted late.

## Grading Info for Undergraduate Courses\*

Grades	Grade Mark (%)	Description
A+	90-100	An A+, A, or A- is earned by work which is technically superior, shows
A	85-89	
A-	80-84	

## Tentative Course Schedule (specifics may be subject to change)

Monday, February 9th

- Introduction and course outline
- Lecture: Datums and coordinate systems, GPS and Navigation, how to use your GPS
  - Reading: Ishikawa and Takahashi 2013
- Worksheet #1: Using Handheld GPS (due by 4:30 pm)
- Instruction manuals for GPS units will be posted on Course Spaces

Tuesday, February 10th

- Lecture: Introduction to geocaching
  - Readings: Neustaedter et al. 2010, O'Hara 2008, Jatter & Hurd 2005
- Worksheet #2: Managing GPS data (due by 4:30 pm)
- Time to work on assignments

Wednesday, February 11th

- Worksheet #3: Geocaching (due by 4:30 pm)
- Time to work on group project

Thursday, February 12th

- Lecture: Applied GPS
  - Reading: Goodchild 2007, Dobson and Fisher 2003
- Time to work on group project (due by 4:30 pm)

Friday, February 13th

- Exam (9:30 am to 12:00 am)
- Course Evaluation
- Class geocache hunt (finished by 4:30 pm)