

Syllabus: Using GPS: Geocaching and Field Mapping

Geography/PE 1054 – Fond du Lac Tribal and Community College – Summer 2022

Syllabus and schedule are subject to changes at the discretion of the course instructor.

Instructor

Dr. Carl M. Lemke Oliver Sack (he/they). I prefer to be called Carl; if you feel more comfortable referring to me by my last name, just use Sack (as in Dr. Sack and Professor Sack).

Contact Information

Email: carl.sack@fdltcc.edu. I reply to all student emails within 24 hours.

Cell Phone: (608) 712-8335. Call or text at any time; you will not bother or disturb me. If you call and I don't answer, please leave a voicemail. I generally reply to voicemails and texts within a few minutes to a few hours.

Office Hours

12-1 PM Tuesdays and Wednesdays or by appointment, in Room W222 on campus, via Zoom at <https://minnstate.zoom.us/j/95030241442>, or by phone at (218) 879-0718.

Class Meetings

Class meetings are 1-5 pm every Tuesday. We will meet in Room 208 on campus at the beginning of each class period. **Come prepared to spend several hours outside.** Wear appropriate attire and rugged footwear (old sneakers or boots) and bring a water bottle, sunscreen, and bug spray. You are also encouraged to bring and use a personal smartphone or mobile device for some class activities; iPads will be provided if you don't have one or can't use yours. Most class periods will involve field trips away from campus; you may ride in a campus vehicle or drive yourself as you prefer.

Course Overview

This course will inform students about the Global Positioning System (GPS) through both conceptual and hands-on applications, such as geocaching and field data collection. GIS software and associated applications will also be introduced. This course satisfies 1 Physical Education credit toward FDLTCC graduation requirements and counts toward the GIS Certificate.

Course Goals

1. Describe the global positioning system and how it works
2. Identify the differences between recreational-grade and map-grade GPS receivers

3. Identify applications of GPS
4. Operate a GPS receiver to locate a geocache
5. Perform responsible geocaching
6. Collect data from the field

Course Expectations

This course should be a fun experience, but it is also a credit-bearing college course with the expectation that you will meet the learning outcomes listed above. Please come prepared to each class period, as described above. Because we only meet eight times, each class meeting is important. If you cannot attend a class period, you must complete equivalent hours of makeup work on your own. **Four missed classes will result in an automatic “F” and request to withdraw from the course.**

Course Structure and Activities

The course is organized into the following components:

Lectures & Classroom Activities

Three lectures will be given over the first two class periods. You will be expected to take notes and ask questions about the material. The lecture sessions will be recorded and videos posted to the D2L course site for later review. Lectures will be accompanied by short, hands-on classroom activities.

Quizzes

Each of the three lecture topics will be accompanied by a quiz on D2L. Quizzes are mandatory and will count toward your grade, but you will be able to take them as many times as you want to improve your score.

Exam

During the last class period, there will be an exam. The exam will have a written component covering all lecture content and a field component where you demonstrate your GPS skills. You will be allowed to bring one, one-sided 3x5 index card with anything you want on it to the exam session.

Field Activities & Assignments

We will engage in several GPS-related outdoor activities as a class, including geocaching and field data collection with various citizen science apps. These will be accompanied by small assignments graded on completion. I will check off the assignments as you do them in the field. Assignment details will be provided in class.

Grading

Percentages of your final grade:

Attendance and Participation: 20%

Quizzes: 20%

Exam: 20%

Assignments: 40%

Final grade breakdown:

A: 90-100%

B: 80-89%

C: 70-79%

D: 60-69%

I reserve the right to curve grades upward based on the class distribution of final grades. You will never get a lower grade based on your score than what is indicated above.

Make-up Work

You will be assigned make-up work for any missed class period consistent with what we did in class. You will be responsible for completing any make-up work on your own time and submitting it before the end of the term. No work will be accepted after Friday, July 22.

Plagiarism

You may not copy or directly paraphrase others' work without attribution, or have others complete your work for you. If you copy text, it must be in double-quotes (""") with citation of the original author and source, and must account for a small minority of your submission.

Plagiarism results in an automatic zero on the affected assignment and a warning email.

Multiple instances of plagiarism will result in an F for this course and be subject to any other disciplinary actions mandated by this institution and the Minnstate system.

Disabilities Notice

Fond du Lac Tribal & Community College is committed to providing equitable access to learning opportunities for all students. Under the Americans with Disabilities Act and Section 504 of the Rehab Act, Fond du Lac Tribal & Community College provides students with disabilities (e.g., mental health, attentional, learning, chronic health, sensory or physical) reasonable accommodation to participate in educational programs, activities or services. Students with disabilities requiring accommodation to participate in class activities or meet course requirements should first complete an intake form and necessary requirements with Nancy Olsen, Disability Services coordinator, to establish an accommodation plan. She can be reached at nancy.olsen@fdltcc.edu or 218-879-0819.

Sexual Violence

Fond du Lac Tribal & Community College is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence, gender or sex-based bullying and stalking. If you or someone you know has experienced gender or sex-based violence (intimate partner violence, attempted or completed sexual assault, harassment, coercion, stalking, etc.), know that you are not alone. Fond du Lac Tribal & Community College has staff members trained to support survivors in navigating campus life, accessing resources, providing accommodations, assistance completing with protective orders and advocacy. For more information regarding the Campus Security Report, the following link will give you a report on the Clery Compliance and Security Report at FDLTCC: <http://fdltcc.edu/about-us/policies-reports/campus-security-policies-reports/>

Please be aware that all Fond du Lac Tribal & Community College employees are required to report any incidents of sexual violence and, therefore it cannot guarantee the confidentiality of a report, but it will consider a request for confidentiality and respect it to the fullest extent possible. If you wish to report sexual misconduct or have questions about school policies and procedures regarding sexual misconduct, please contact Anita Hanson, Dean of Student Services, at 218-879-0805 or anita.hanson@fdltcc.edu.

Course Schedule

Readings and assignments are subject to change.

Class (Date)	Activities
1 (May 31)	<ul style="list-style-type: none">• Course overview• Lecture 1: Global Positioning Concepts• Quiz 1• Coordinate system and map activities• Geocaching with maps – field trip 1
2 (June 7)	<ul style="list-style-type: none">• Lecture 2: Global Positioning Systems• Quiz 2• GPS mobile app download and activities• RTK base station logging• Geocaching with the app – field trip 2
3 (June 14)	<ul style="list-style-type: none">• Lecture 3: Receivers and Data• Quiz 3• Accounts setup• GPS receiver orientation• Campus waypoint and data collection• Geocaching and data collection field trip 3: Basic caches
4 (June 21)	<ul style="list-style-type: none">• Geocaching and data collection field trip 4: Specialty caches

Class (Date)	Activities
5 (June 28)	<ul style="list-style-type: none"> • Geocaching and data collection field trip 5: Intermediate caches
6 (July 5)	<ul style="list-style-type: none"> • Geocaching and data collection field trip 6: Intermediate caches
7 (July 12)	<ul style="list-style-type: none"> • Geocaching and data collection field trip 7: Intermediate caches
8 (July 19)	<ul style="list-style-type: none"> • Final exam in classroom • Final exam in field