



**Course Prefix/Number/Title:** ENVT 110- Introduction to GPS

**Number of Credits:** 2

**Course Description:**

The Global Positioning System (GPS) is a system of hardware, software, and procedures designed to support the capture, management, manipulation of spatially referenced data for solving complex planning and management problems. GPS applications use data collectors to locate positions and to guide navigation. This course covers GPS applications related to recreation, navigation and engineering.

**Pre-/Co-requisites:** None

**Course Objectives:**

Successful completion of this course enables students to:

- . Demonstrate ability to use handheld GPS units.
- . Demonstrate ability to collect data in the field for use in computer applications.
- . Be able to understand and describe the range of applications of GPS
- . Discuss what GPS is in terms of its components and functionality
- . Identify the components of the GPS system and sources of data discrepancies
- . Plan, prepare, and carry out a GPS based data collection
- . Demonstrate ability to use a standard GPS unit.

**Instructor:** Cody Clemenson

**Office:** NA

**Office Hours:** NA

**Phone:** 701-263-5772

**Email:** cody.s.clemenson@dakotacollege.edu

**Lecture/Lab Schedule:** Tuesdays 7:00-8:30 pm

**Textbook(s):** NA

**Course Requirements:**

Students are required to complete in class assignments, answer quiz questions, complete lab assignments where they collect data and answer questions regarding GPS applications in the real world.

Tentative Grade Allocation

- In class assignments ~ 200
- In class quizzes ~100
- Projects ~100
- Test ~ 100
- Total of ~500 possible points for the course.

**Tentative Course Outline:**

- . An overview of Global Positioning Systems (GPS)
- . GPS hardware, GPS terminology
- . Data collection; sources, accuracy and error propagation
- . GPS segments and structure
- . Map projections, datums, coordinate systems, structures and scale
- . Review of current GPS issues and events

- Integration of Global Positioning Systems (GPS) field measurements into GIS databases
- Legal issues concerning GPS data collection
- Data transfer/exchange from GPS to the computer
- GPS activities (Geocaching)

**General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):** NA

**Relationship to Campus Focus:** NA

**Classroom Policies:**

All students will respect the classroom environment which will allow for maximum interaction between students and the professor. All cell phones, iPods, and related technology are discouraged in the classroom at all times. Food and beverages are allowed in the classroom; make sure to clean up after.

**Student Email Policy:**

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

**Academic Integrity:**

According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

**Disabilities or Special Needs:**

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

**Title IX:**

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.