



Course Prefix/Number/Title: ENVT 255 Introduction to GIS

Number of Credits: 4

Course Description:

Geographic Information Systems (GIS) is a system of hardware, software, and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially referenced data for solving complex planning and management problems. GIS applications use both spatial information (maps) and databases to perform analytical studies. This course covers underlying geographic concepts including world coordinate systems and projections, vector map topology, tiled and layered maps, standard computer map file formats, urban applications, and emphasis will be given to natural resource applications. This course also provides computer lab tutorials and case studies using the GIS software, ArcGIS 10 from Environmental Systems Research Institute (ESRI).

Pre-/Co-requisites: NA

Course Objectives:

Successful completion of this course enables students to:

- . Demonstrate ability to use ArcGIS 10 Software
- . Demonstrate ability to project data in the form of a map or presentation quality
- . Be able to understand and describe the range of applications of GIS
- . Discuss what a GIS is in terms of its components and functionality
- . Identify sources of spatial data
- . Plan, prepare, and carry out a GIS based investigation

Instructor: Cody Clemenson

Office: NA

Office Hours: NA

Phone: 701-263-5772

Email: cody.s.clemenson@dakotacollege.edu

Lecture/Lab Schedule: Monday & Wednesday 5:00-6:45PM

Textbook(s):

- 1) Getting to Know ArcGIS 10 Desktop ISBN: 9781589482609 Software – ArcGIS 10
- 2) Geographic Information Systems Applications in Natural Resource Management. Second Edition. Michael Wing and Pete Bettinger. Oxford University Press. ISBN: 9780195426106

Course Requirements:

Students are required to complete in class assignments, answer questions from the text, complete lab assignments where they develop maps and answer questions regarding GIS applications in the real world.

Tentative Grade Allocation:

Homework ~500

Projects ~500

Final Exam ~100

Grading will be on the 100-90%= A, 89-80%= B, 79-70%=C, 69-60%= D, Less than 60%= F.

Tentative Course Outline:

You will only be allowed to be a week behind this schedule or else you will receive a 0 for the activities for that week's assignments.

Week 1

Syllabus and Introductions
Chapters 1 and 2

Week 2

Chapters 3 & 4

Week 3

Chapter 5
Chapters 18 & 19

Week 4

Chapters 6 & 7
Map project #1

Week 5

Chapter 8

Week 6

Map Project #2
Map Project #3

Week 7

Chapters 9 & 10
Chapter 11

Week 8

Map Project #4
Presentation of Maps

Week 9

Map Project #5 & #6
Chapter 12

Week 10

Chapter 13

Week 11

Map Project #7
Chapter 14

Week 12

Chapter 15 & 16
Map Project #8

Week 13

Presentation of Maps

Week 14

Chapters 17 & 20

Week 15

PracticeTest Map
Review

Week 16

Final Map

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

Relationship to Campus Focus: NA

Classroom Policies:

This 4 credit course requires the following to build and engage a classroom community of learners:

- Be respectful of other students, technicians, instructors, and guests.
- Show up for class.
- Be involved in classroom discussions.
- Complete and submit coursework on time.
- Late work will only be excepted one week from the course outline or you will earn 0 points.
- Communicate with the instructor.
- Reading the assigned texts is the student's responsibility and is essential to success in this course.
- This academic environment is open and harassment free.

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.