DAKOTA COLLEGE AT BOTTINEAU

COURSE SYLLABUS

Course Prefix/Number/Title: Introduction to Soil Science - SOIL 210 (online)

Number of Credits: 3

Course Description: Principles of plant nutrition and soil nutrient availability; soil testing and fertilizer recommendations and management. Macronutrient emphasis.

Pre-/Co-requisites: None.

Course Objectives: By the end of this course, students will be able to:

1.) Understand the physical and chemical nature of soils
2.) Explain how to manage soil in a sustainable manner to maximize production and profitability
3.) Apply conservation methods when working in agriculture
4.) Explain and demonstrate proper soil sampling and testing techniques
5.) Understand how pivotal soil is to our local economy and ecosystems

Instructor: Michelle Cauley

Office: Molberg 20

Office Hours: M/W/F 2:00 – 3:00 PM
*Available to meet online during this time as well or by appointment

Phone: 701-228-5498

Email: Michelle.cauley@dakotacollege.edu

Lecture/Lab Schedule: TBD

Textbook(s): Plaster, Edward J. 2014. Soil Science and Management. 6th Edition. Delmar, Cengage Learning.

Course Requirements: This is an introductory course that allows for building a foundation in many learning areas. Students are expected to read the text and come to class prepared to listen and participate in lectures, activities, and labs. Attendance is crucial for connecting learning and clearing up questions. Points in this class will come from the following assessment tools:

Assessment Tool:	Percentage of your Grade:		Grading Scale
Quizzes	10%		A = 90 – 100%
Labs	30%		B = 80 – 89.9%
Assignments / Homework	20%		C = 70 – 79.9%
Unit Tests	30%		D = 60 – 69.9%
Final Exam / Project	10%		F = 0 – 59.9%

Quizzes: There will be a series of about 16 quizzes throughout the semester from various chapters. The two lowest scores will be dropped from your grade. All quizzes must be attempted – no scores of 0 will be dropped. Quizzes are open-note and open-book. They are not timed.

Labs: There will be a series of labs in this online course. Some items may be shipped directly to you in lab kits to complete whereas other activities may involve you completing tasks online or at home. Labs are meant to be more of a hands-on activity to connect your book learning and lectures to real life situations.

Assignments / Homework: There will be a combination of assigned readings, in-class worksheets, and traditional assignments. Homework must be submitted on time to receive full credit.

Unit Tests and Final Exam: There will be three unit-based tests throughout the semester. These will be available to be completed online through Blackboard. Unit Tests will be open for one week (approximately 7 – 10 days) and you will have unlimited time to take them within the testing window. These unit tests are not timed and are open -note and open -book tests.

Final Exam and Project: Your final exam will be a cumulative review of the main topics of the course. You will have approximately a week (7 – 10 days) to complete the exam. It is not timed. Your final project will be posted approximately three weeks before the end of the semester to allow appropriate time to finish.

Late Work Policy: All assignments must be turned in and completed on time to receive full credit. Any assignments, homework, or quizzes turned in late will receive a 10% total points deduction for every week they are late. Unit Tests, Final Exam and Project, and Labs will not be accepted after a week past the submission deadline.

Tentative Course Outline:

Week	**Over Arching Topics / Chapters**	**Exam / Quiz Schedule**
January 8 - 12	Chapter 1 – Importance of Soil Welcome, Class Overview, Syllabus	Syllabus Quiz
January 15 - 19	Chapter 2 – Soil Origin and Development	Chapter Quiz
January 22 - 26	Chapter 3 – Soil Classification and Survey	Chapter Quiz
January 29 – Feb 2	Chapter 4 – Physical Properties of Soil	**Exam 1 (Ch. 1 –4)**
February 5 -9	Chapter 5 – Life in Soil	Chapter Quiz
February 12 - 16	Chapter 6 – Organic Matter	Chapter Quiz
February 19 - 23	Chapter 7 – Soil Water	Chapter Quiz
February 26 – Mar 1	Chapter 8 – Water Conservation	**Midterm / Exam 2 (Ch. 5-8)**
March 4 – 8	Spring Break – No Readings / Assignments	
March 11 - 15	Chapter 9 – Drainage and Irrigation	Chapter Quiz
March 18 - 22	Chapter 10 – Soil Fertility	Chapter Quiz
March 25 - 29	Chapter 11 – Soil pH and Salinity	Chapter Quiz

April 1 - 5	Chapter 13 – Soil Sampling and Testing	**Exam 3 (Ch. 9-11, 13)**
April 8 - 12	Chapter 14 - Fertilizers	Chapter Quiz
April 15 - 19	Chapter 16 – Tillage and Cropping Systems	Chapter Quiz
April 22 - 26	Chapter 18 – Soil Conservation Chapter 20 – Government Agencies and Programs	Chapter Quiz
April 29 – May 3	Review for Final	**Finals Week! (Ch. 14, 16, 18, 20)**

General Education Competency/Learning Outcome(s) <u>OR</u> CTE Competency/Department Learning Outcome(s):

1. Demonstrates an understanding of the natural environment.
    a. Chooses best management practices for sustainability of the natural environment.
    b. Explains the impact of human activity on the environment.
2. Applies the Scientific Methods of Inquiry
    a. Utilizes the scientific process to solve problems.
3. Applies scientific information in everyday life.
    a. Recognizes the role of science in nature and society.

Relationship to Campus Focus: This course supports the Campus Focus of "Nature, Technology, and Beyond" by fostering the skills and knowledge necessary to utilize natural, human, and technological resources successfully and confidently for use in student's futures.

Classroom Policies:

- Students are expected to be polite and respectful of the instructor and other students in their actions and communications via the online platform.
- All assignments are due in a timely fashion. Work can be completed up to a week late for up to 70% credit.
- If a student is to miss an exam or quiz, it must be taken ahead of time for full credit.
- When in doubt – communicate! Email and office hours are the easiest ways to let your instructor know of any issues or emergencies that arise.

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 vital 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.

A note on the use of Artificial Intelligence (AI): Understanding how and when to use generative AI tools is going to be an important skill for your chosen career path. To preserve the integrity of the course, students are not permitted to submit text that is generated by artificial intelligence (AI) systems for any classwork or assessments. **It is a violation of the DCB student policy on plagiarism to misrepresent work that you submit from an AI generator as your own to your instructor.** This includes using AI to generate answers to assignments, exams, or projects, or using AI to complete any other course-related tasks. Using AI in this way undermines your ability to develop critical thinking, writing, or research skills that are essential for this course and your academic success. Students may use AI as part of their research and preparation for assignments, or as a text editor, but text that is submitted must be written by the student. For example, students may use AI to generate ideas, questions, or summaries that they then revise, expand, or cite properly. Students should also be aware of the potential benefits and limitations of using AI as a tool for learning and research. AI systems can provide helpful information or suggestions, but they are not always reliable or accurate. Please ask me if you have questions about the appropriate use of AI in this course.

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.