DAKOTA COLLEGE AT BOTTINEAU

COURSE SYLLABUS

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

Number of Credits: 3

Course Description: Physical, chemical, and biological properties of soils related to use, conservation, and plant growth

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 22 **Office Hours**: MW 10:00 a.m. – 12:00 p.m. (or by appointment)

Phone: 701-228-5498 **Email:** Michelle.cauley@dakotacollege.edu

Lecture/Lab Schedule: 8:00 – 8:50 a.m. MWF

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, 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	15%		A = 90 – 100%
Weekly Labs	30%		B = 80 – 89.9%
Assignments / Homework	20%		C = 70 – 79.9%
Unit Tests / Final Exam	20%		D = 60 – 69.9%
Final Soils Presentation	10%		F = 0 – 59.9%
Professionalism	5%		

Quizzes: There will be a series of 12 quizzes throughout the semester from various chapters. These will be open book/note quizzes designed to identify gaps in the lectures and learning. The two lowest scores will be dropped from your grade. For a score to be dropped, the quiz still must be attempted. No zeroes will be dropped if the quiz hasn't been attempted.

Labs: Labs are still very much a part of this online course. Be prepared to be outside and actively involved in scientific research and learning. All students should purchase a **Soil Testing Kit** at the beginning of the semester for work in their final lab presentation and for other labs. More information on this will be posted in Weeks 2-3, but it is easily findable online.

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. Late homework will be accepted with a 5% deduction per day late.

Unit Tests and Final Exam: There will be three unit-based tests and one final exam throughout the semester. These will be available to be completed online through Blackboard. Unit Tests and your Final Exam will be open for one week (seven days) and you will have unlimited time to take them within the testing window.

Professionalism: Your grade will also be determined by your professionalism in this course. Attendance, timeliness in meeting deadlines, participation, engagement in learning, respectful actions, communication – these will all be factored into your final grade in this course. Just like in the real world, professionalism matters.

Tentative Course Outline:

Week	**Over Arching Topics / Chapters**	**Exam / Quiz Schedule**
August 25 – 29	Chapter 1 – Importance of Soil	Syllabus Quiz
September 1-5	Chapter 2 – Soil Origin and Development	Chapter Quiz
September 8 – 12	Chapter 3 – Soil Classification and Survey	Chapter Quiz
September 15 – 19	Chapter 4 – Physical Properties of Soil	**Unit 1 Exam (Ch. 1 –4)**
September 22 -26	Chapter 5 – Life in Soil	Chapter Quiz
September 29 – October 3	Chapter 6 – Organic Matter	Chapter Quiz
October 6 – 10	Chapter 7 – Soil Water	Chapter Quiz
October 13 – 17	Chapter 8 – Water Conservation	**Unit 2 Exam (Ch. 5-8)**
October 20 – 25	Chapter 9 – Drainage and Irrigation	Chapter Quiz
October 27 – 31	Chapter 10 – Soil Fertility	Chapter Quiz
November 3-7	Chapter 11 – Soil pH and Salinity	Chapter Quiz
November 10 – 14	Chapter 13 – Soil Sampling and Testing	**Unit 3 Exam (Ch. 9-11,13)**
November 17 – 21	Chapter 12 and 14 – Plant Nutrition and Fertilizers	Chapter Quiz
November 24 – 28	Chapter 16 – Tillage and Cropping Systems	Chapter Quiz
December 1 -5	Chapter 18 – Soil Conservation	Chapter Quiz
December 8 – 12	Chapter 19- 20 –Urban Soils, Government Agencies and Programs	Chapter Quiz

December 15 - 19	Finals Week	Final/ Unit 4 Exam

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

1. Implement problem-solving techniques.
    a. Identify components that make a healthy soil
    b. Identify how adjustments in the environment will change physical and chemical properties of soil
    c. Assess various soil's health and environmental impacts on small and large scales

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, other students, and any guests in our class.
- Earbuds are expected to be out of ears, phones on silent. If you have a phone call, please take it outside of the classroom.
- Lecture outlines are available from the course shell. The outlines can be used to guide you in the understanding of material and are useful in notetaking.
- All assignments are due in a timely fashion. Each day an assignment is not turned in, 5% of the total score is lost.
- 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. Are you reading this section? No one ever really does – but if you are reading it, congrats. Send an email to your instructor with a picture of your favorite dinosaur – because as adults we should all have a favorite dinosaur. Send the email, get 10 extra credit points to be added to your first exam. Hurry, this offer only stands until September 1. 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.

AI Student Policy:
Unless otherwise indicated in the course syllabus, or in individual instructions for course assignments, or in the absence of the express consent of the course instructor, students are not allowed to utilize generative AI to help produce any of their academic work. Any violation of this policy will be considered an act of academic dishonesty as outlined within the Dakota College Code of Student Life.

RESPONSIBILITIES

Students	• Responsible for following the syllabus and assignment instructions regarding use of generative AI for all academic work. • Obtain permission of the instructor prior to the use of generative AI that is outside of the syllabus or assignment instructions. Provide appropriate rationale for how the use of generative AI will enhance the learning experience for the assignment. • In instances where generative AI is permissible, appropriately cite the generative AI program used and indicate where in the assignment it was used, in a brief submission statement.
Faculty	• Determine if the use of generative AI could enhance student learning in any assignment of project. • Clearly indicate in all course syllabi if generative AI is allowable for any academic work. • If allowable, give specific parameters for how and when generative AI may be used. • If a violation of generative AI for the individual course/syllabus is suspected, discuss the concern with the student. If violation is still suspected, inform the appropriate semester coordinator/program director.

- **AI Tools in this Course:** Artificial Intelligence tools like ChatGPT and other copilots are **not** prohibited in the course. In fact, we will explore their uses (and potential issues) throughout the semester. Keep in mind that:
    - You must submit original work (not generated by AI) for all assessments in this course. That means citing if you use AI-generated text and how you apply it in your work.
    - Large language models (LLM) like ChatGPT have been known to supply inaccurate information and fake citations. Use your information literacy skills to corroborate AI information if you are using it in your research. Failure to cite your use of AI or fabricated information could result in your violation of the Academic Integrity Policy (see above).

- Different assignments will allow different levels of AI use. Read directions and prompts carefully. AI is useful but does not take the place of the human elements of critical thinking and emotion.