

**Course Prefix/Number/Title:** Ecology – BIOL 230

**Number of Credits:** 4

**Course Description:** A study of terrestrial and aquatic succession from communities through biomes. Basic concepts of the interrelationships of grassland, desert, arctic and marine environments. This course consists of three one-hour lectures and one two-hour lab each week.

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

**Course Objectives:** After taking this course, students will be able to:

- 1.) Understand and explain information essential to a broad knowledge of ecology.
- 2.) Utilize scientific methods of inquiry
- 3.) Understand current scientific views of natural phenomena
- 4.) Appreciate the historic development of science
- 5.) Practice safe and sensible laboratory techniques
- 6.) Recognize the relationship between science and technology
- 7.) Apply scientific information and principles to everyday life

**Instructor:** Michelle Cauley

**Office:** Molberg 20

**Office Hours:** T / TH – 8:00 – 10:00 a.m.

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**Lecture/Lab Schedule:** Lecture M,W,F – 1:00 – 1:50 Nelson Science Center Rm 103  
Lab Friday -- 2:00 – 3:50 Nelson Science Center Rm 103

**Textbook(s):** Ecology, Concepts and Applications, Molles, 9<sup>th</sup> Edition

**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. Students may need to travel for field work and lab work during the semester. Points in this class will come from these assessment tools:

Assessment Tool:	Percentage of your Grade:		Grading Scale
Quizzes	10%		A = 90 – 100%
Labs	30%		B = 80 – 89.9%
Assignments / Homework	10%		C = 70 – 79.9%
Unit Tests / Final Exam	40%		D = 60 – 69.9%
Professionalism	10%		F = 0 – 59.9%

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.

Lab Work: Labs in this class are a privilege. Violation of school procedures regarding student conduct will not be tolerated. Many of the labs are all day or partial day field trips and you will be exempt from other classes on these occasions. However, this does not exempt you from the work that is missed for those classes. All missed work from classes missed because of this lab will need to be made up per arrangements with other instructors.

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 10% 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: (Timeline is subject to change)

<b>Week</b>	<b>Over Arching Topics / Chapters</b>	<b>Test / Quiz Schedule</b>
August 21 – 25	Introduction Chapter 1: What is Ecology	Chapter Quiz
August 28 – September 1	Chapter 2: Life on Land	Chapter Quiz
September 4 – 8	Chapter 3: Life in Water	Chapter Quiz
September 11 – 15	Chapter 4: Population Genetics and Natural Selection	Exam 1 (Ch. 1-4)
September 18 – 22	Chapter 5: Temperature Relations Chapter 6: Water Relations	Chapter Quiz
September 25 – 29	Chapter 7: Energy and Nutrient Relations Chapter 8: Social Relations	Chapter Quiz
October 2 – 6	Chapter 9: Population Distribution and Abundance Chapter 10: Population Dynamics	Chapter Quiz
October 9 – 13	Exam Review	Midterm / Exam 2 (Ch. 5 – 10)
October 16 – 20	Chapter 11: Population Growth Chapter 12: Life Histories	Chapter Quiz
October 23 – 27	Chapter 13: Species Interaction and Competition	Chapter Quiz
October 30 – November 3	Chapter 14: Exploitative Interactions	Chapter Quiz

	Chapter 15: Mutualism	
November 6 – 10	Chapter 16: Abundance and Diversity Chapter 17: Species Interactions / Community Structure	Exam 3 (Ch. 11 – 17)
November 13 – 17	Chapter 18: Primary / Secondary Production Chapter 19: Nutrient Cycling	Chapter Quiz
November 20 – 24	Chapter 20: Succession and Stability	No Quiz this week
November 27 – December 1	Chapter 21: Landscape Ecology Chapter 22: Geographic Ecology	Chapter Quiz
December 4 – 8	Chapter 23: Global Ecology	Chapter Quiz
December 11 - 15	Review for Final	Finals Week! (Ch. 18 – 23)

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

1. Demonstrates an understanding of the natural environment.
  - a. 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 addresses the campus focus by consistently utilizing the biological diversity of the region: the Turtle Mountain Forest, the prairie pothole region, the J. Clark Salyer National Wildlife Refuge, the International Peace Garden, and Lake Metigoshe. Using these as natural laboratories to strengthen the educational experience and continuously expanding academic and career programming, Dakota College at Bottineau integrates technology to prepare students not only for the present but also to go beyond and improve the future.

**Classroom Policies:**

- Students are expected to be polite and respectful of the instructor, other students, and any guests in our class.
- 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. Be prepared and have outlines ready for class.
- 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 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.