UND Biology **BIOL 332 – General Ecology** **Fall 2005**

Professor: Brett Goodwin **Office:** Starcher Hall 215
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Lectures: Mon., Wed. & Fri. 9:00-9:50, O'Kelly 334
Office hours: Mon. 10:00-11:00, Wed. 11:00-12:00, Fri. 3:00-4:00; or by appointment
Web page: via Blackboard (lecture outlines, announcements, etc.)

Textbook:
Molles, M.C. Jr. 2004. *Ecology: Concepts and Applications, 3rd ed.* McGraw-Hill, New York.

Prerequisites: BIOL 150 and BIOL 151

Course Description and Objectives:
The purpose of this course is to provide a strong foundation in ecology as a scientific discipline. As such, the course will survey the different sub-disciplines practiced in the field of ecology today. First, the course will focus on the ecology of individuals (how do individuals interact with their environment?). Second, we will focus on the ecology of populations (how are populations described? how do they function? how do they interact?). Finally, we will focus on the ecology of communities, ecosystems and landscapes (how are communities of many species described? how do energy and nutrients flow through communities?). Throughout the course we will discuss specific examples and attempt to understand these examples in the light of current ecological theory. Also, we will discuss how ecological knowledge is gained (e.g., the scientific method).

By the end of the course you should be able to describe or explain basic ecological principles, be able to apply ecological theories and knowledge to understand the world around you and be able to assess ecological data and/or knowledge.

Evaluation:			
	Assignments	15%	A ≥ 90%
	Content quizzes (on line)	15%	B ≥ 80%
	Midterm Exams (15% and 20%)	35%	C ≥ 70%
	Final Exam	35%	D ≥ 60%

Assignments: Through out the course we will be actively engaging the material via exercises, mostly in class, such as case studies, analyzing and interpreting data, and short in-class writing assignments. These assignments will be turned in for grade. Assignments will be marked on the following scale: 0 (not handed in or completely inappropriate work), + (good effort or attempt with some flaws), ++ (excellent work). Details as to how those grades will be converted to a portion of the 15% of your grade related to assignments will be posted on Black Board. I will drop the three lowest assignments from the semester.

Content quizzes: There will be short quizzes covering the required reading (administered on-line via Black Board) before we cover the material in class. The quizzes will focus on facts such as definitions, relationships, basic concepts, etc. The quizzes will be announced throughout the semester and there will be a short window of opportunity to take the test (4 to 5 days). I will use the results of these tests both as part of your grade and as way to fine tune what we discuss in lecture. I will drop the lowest quiz from the semester.

Exams: Exams will be a mixture of multiple choice and short-answer questions aimed at assessing your understanding of and ability to use the concepts we have discussed and worked on in class. The midterms will be non-cumulative. Half of the final exam will cover the last third of the course and the other half will cover the entire course.

Tentative Lecture Schedule:

Week of	Topic	Reading Molles
Aug. 22	Introduction, What is ecology?	ch. 1
Aug. 29	The physical world	ch. 2, 3
Sep. 5	**Labor Day (Sep. 5 – no class)** Physiological ecology: Heat	 ch. 4
Sep. 12	Physiological ecology: Water, Energy & Nutrients	ch. 5, 6
Sep. 19	Behavioral Ecology: Foraging & Social Relations	ch. 6, 7
Sep. 26	**Midterm 1 (Sep. 26)** Population Ecology: Distribution, Abundance & Growth	 ch. 9, 11
Oct. 3	Population Ecology: Dynamics	ch. 10
Oct. 10	Population Ecology: Life Histories	ch. 12
Oct. 17	Population Ecology: Competition	ch. 13
Oct. 24	Population Ecology: Exploitation	ch. 14
Oct. 31	**Midterm 2 (Oct. 31)** Community Ecology: Abundance, Richness & Diversity	ch. 16
Nov. 7	Community Ecology: Succession Ecosystem Ecology: Primary Production & Energy **Veteran's Day (Nov. 11 – no class)**	ch. 20 ch. 18
Nov. 14	Ecosystem Ecology: Food webs & Nutrients	ch. 17, 19
Nov. 21	Landscape Ecology **Thanksgiving (Nov. 25 – no class)**	ch. 21
Nov. 28	Geographic Ecology	ch. 22
Dec. 5	Global Ecology **Reading & Review Day (Dec. 9)**	ch. 23
Dec 12	**Final Exam (Dec. 12 at 8:00 am)**	

Policies:
If you have emergency medical information to share with me, if you need special arrangements in case the building must be evacuated, or if you need accommodations in this course because of a disability, please make an appointment with me as soon as possible. If you plan to request disability accommodations, you are expected to register with the Disability Support Services (DSS) office (190 McCannel Hall, 777-3425 v/tty).

Academic dishonesty (see the Code of Student Life) will result in a mark of 0 on the exam/assignment. A second act of academic dishonesty will result in a mark of 0 in the course.

If you are a **graduate** student and wish to take this course for **graduate** credit you need to identify yourself to me immediately.