Course Outline: Ecology (3100:217)
Spring 2011

Lecture T,Th 10:45-12:00 ASEC 120.
Dr. Randy Mitchell, ASEC E508; 972-5122,
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http://www3.uakron.edu/biology/mitchell/ecology
Office Hours: T 2-3, ~~W~~Th ~~2-3~~12-1, or by appt.
Text - Molles, MC. Ecology. Concepts and Applications**.**
5th Edition. WCB-McGraw Hill 2010

Week of:	Special Days	Topic	Reading (Chapters)
Jan 11		Introduction, Physiological Ecology	1, Skim 2&3
Jan 18		Physiological Ecology	5, 6
Jan 25		Resources and Energy	7
Feb 1		Distribution, Niche	9; *also pg 5th 291-293 ;(4th ed see pg302-305)*
Feb 8		Experiments, Population Dynamics	10, 1; *also pg 304 (4th ed see pg 315)*
Feb 15		Population Dynamics & Growth	
	17th	**EXAM I**	
Feb 22		No class 2nd – President's day	11
March 1		Life Histories, Populations	12
March 8		Human Populations , Competition	13
Mar. 15	break	**SPRING BREAK**	
Mar. 22		Competition	
Mar. 29		Exploitative Interactions	14
April 5		Mutualism	15
	7th	**EXAM 2**	
April 12		Diversity, Food Webs	16, 17
April 19		Productivity	18, 19
April 26		Nutrient Cycling , Succession	20, parts of 22 & 23
	May 3	***FINAL EXAM 12:00-1:55***	

This class is intended to familiarize biology majors with the concepts of modern ecology. Bio 112 is a prerequisite. This course is NOT intended to cover ALL the facts about ecology. Instead, along with a selected set of important facts, the course will emphasize how we know what we know, and why it matters. The goal is to give you the tools necessary to deal with ecological questions in your later careers as biologists and informed members of the human community.

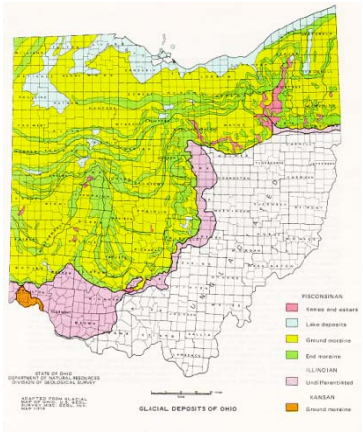
Attendance is an important part of this course, in part because there will be in-class activities and pop quizzes. We will use the **CPS "clicker**" system to facilitate some of these activities – see course website and cps handout for more (**Class key: N64974C555).**
Exams will be based primarily on the lectures and the summary points in the textbook. You will receive a review sheet detailing exactly what you will be tested on at least a week before the exam.

You'll probably get the most out of lecture if you skim the text BEFORE class; then read it again more carefully after lecture. Such "pre-skimming" will not only help you get more out of lecture, but will also allow you to do better on the in-class exercises. The "Summary Concepts" at the end of each chapter are a good guide to important topics for the exam. I often use the examples in the book in exam questions, so a general familiarity with them will help your grade. Old exams are posted on the course website. NOTE – the content of the course varies among years.

There will be **short take-home assignments** throughout the course. DO NOT NEGLECT THEM! Failing to turn in assignments can lower your overall grade by a full letter or more!

Grading

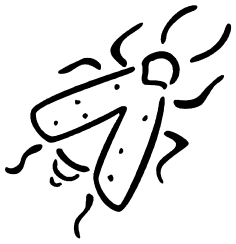
Item	Proportion of Grade
Midterm 1	25%
Midterm 2	25%
Final Exam (cumulative)	25%
Assignments & Quizzes	25%



Unless otherwise arranged, makeup exams will be held on the day after the final. You **must** arrange makeup exams with the instructor at least a week beforehand. All corrections and reevaluations of the exam score must be brought up within 10 days of the exam.

Grading scale for exams: >90% = A, >80% = B, >70%= C. >60%=D; <60%= F. I may lower these cutoffs depending on the difficulty of the tests and performance of the class. Plus/minus grading will be used within these groupings. You may also earn up to 3 percentage points of **extra credit** by, for example, attending and reporting on up to three ecology seminars listed on the course web page. More information will be forthcoming. Be warned- I have very high standards on the extra credit assignments.

The administration has asked me to state that "students whose names do not appear on the university's official class list by the third week of class will not be permitted to participate (attend class, take exams, or receive credit)."



Policy on Academic Dishonesty

Diana Hacker writes, "To borrow another writer's language or ideas without proper acknowledgment is a form of dishonesty known as plagiarism" (1997. A Pocket Style Manual, 2nd Edition. Bedford Books, Boston, p. 91). The University of Akron regards **plagiarism** as a grave academic offense, and it will not be tolerated. You will be guilty of committing plagiarism if you use, without proper acknowledgment, paragraphs, single sentences, clauses, or ideas of others, regardless of the source (scientific publications, books, pamphlets, newspapers or newsletters, commercial "term paper" services, electronic media [including **information on the Internet**], papers previous students have submitted for this or other courses, and the like). If you have **any** questions about what constitutes plagiarism, be sure to inquire before submitting your work! The goal is to teach you to properly attribute your sources.

If you are found to have committed plagiarism or are caught cheating on any graded portion of this class, you will be reprimanded to the full extent outlined in the student handbook. This includes one of the following actions: reduction of course grade, disciplinary probation, suspension, or outright dismissal from the University. More information is available at:
http://www.uakron.edu/libraries/bierce_scitech/help/help_detail.dot?id=654079

Useful books for more details. *These books are in the library*

Wilson, EO, WH Bossert. 1971. *A primer of population biology.* Sinauer Associates, Inc. Sunderland, USA. Good explanations of the mathematics of population growth, competition, predation, and community equations (also of population genetics).

Gotelli, NJ. 1995. *A Primer of Ecology*. Sinauer Associates Inc. Sunderland, USA. Good explanations and details about the derivation and interpretation of mathematical aspects of population biology, with some community information as well.

Begon, M, JL Harper, C. R. Townsend. 1990. *Ecology. Individuals, populations, and communities..* Blackwell Scientific Publications, Cambridge, USA. More detailed coverage of the information in this course, many excellent examples. The other texts listed in the library catalog also may be useful.

For further (optional and recreational) reading:

Darwin, C. 1859. *The Origin of Species*. Aside from outlining the basics of current evolutionary thought in language everyone can understand, Chapter 3 is still one of the best explanations of the power and potential of exponential growth, and of the importance of ecological interactions for evolution.

Leopold, A.1949. *A Sand County Almanac*. Oxford University Press. The 1st conservationist writes eloquently about humanity's ecological place and need for wilderness.

Quammen, David. 1996. The Song of the Dodo: Island Biogeography in an Age of Extinctions. Scribner, NY. Illuminating and often hysterically funny exploration of biodiversity. A must-read.

Silvertown, Jonathan. 2005. *Demons in Eden: The Paradox of Plant Diversity*. University of Chicago Press. Engaging, readable, and brief discussion of what maintains diversity in plant communities. Brings the subject alive.

Weiner, J. 1994. *The Beak of the Finch*: *a story of evolution in our time*. Alfred A. Knopf, Inc. Publishers, NY USA. Fun reading about exciting new research on ecology and evolution. This book really captures the thrill of field research.

Wilson, E.O. 1992. *Biodiversity*. W.W. Norton & Company, Inc, NY. USA. Concise and easy-to-read summary of the diversity and ecology of life on earth. Also, read "Naturalist" by the same author for an enjoyable and personal account of how he came to be one of the foremost biologists of the century.

(image from http://online.sfsu.edu/%7Ewebhead/lrl.html)

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