

## Ecology BIO 366-002 Fall 2014

3 credits, Tuesdays/Thursdays 8:00-9:15, Dobo 103

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Office Hours: by request  
CMS 2338/Friday Hall 1002A

### Course Description

An introduction to basic ecological principles as they pertain to individual organisms, populations, communities and systems. Partially satisfies University Studies III: Thematic Transdisciplinary Cluster/Modeling and Foundations for Systems Thinking.

### Course Objectives

1. Understand and apply key concepts in ecological thought.
2. Develop quantitative and analytical skills, including interpretation of graphically presented data and statistical results; graphical and symbolic analysis of simple dynamic models
3. Develop critical thinking and reading skills

### Teaching Philosophy

I believe that teaching at the university level should strive towards the following goals: 1) cultivation of curiosity and enthusiasm for learning; 2) development of scholarly skills that will be used throughout the students' lives as informed and rational citizens; and 3) training in foundational concepts that form the basis of the students' field of specialization. My teaching style is rigorous but friendly and enthusiastic. I expect students to work at mastering the subject matter, but also to dig deeper, since the process of discovery is the most exciting part of both learning and scientific research. I am looking forward to sharing my love of ecology with you!

Assigned Text: Smith and Smith's Elements of Ecology (2012, 8<sup>th</sup> Ed.). \$131.98 new at Amazon.com (more expensive at bookstore). They also have used books and books to rent if you would like. This edition has been noticeably revised since the 7<sup>th</sup> edition. Towards the end of the course, assigned readings will be from the primary scientific literature, and I will make sure that they are available online through the UNCW Library.

### Grade Breakdown (Percent)

Quizzes/In-Class Assignments	10%
Exam 1	20%
Exam 2	20%
Exam 3	20%
Final Exam (Comprehensive):	30%
<b>Total:</b>	<b>100%</b>

### Grading Scheme

<u>% Course Points</u>	<u>Grade</u>
>93	A
90-93	A-
88-89	B+
83-87	B
80-82	B-
78-79	C+
73-77	C
70-72	C-
68-69	D+
63-67	D
60-62	D-
<60	F

## Lecture and Reading Schedule

Please read the assignments for each week ahead of lecture: you will understand the material better when you have read it, and you will be prepared for pop quizzes. I will not test you on material that I do not cover in class, but the book will give you good background material.

<u>Date</u>	<u>Topic</u>	<u>Readings</u>
	<b>Abiotic Factors in Ecology</b>	
August 21	Introduction	Ch. 1
August 26	Climate	Ch. 2
August 28	Photosynthesis and light energy	Ch. 6, Sec. 4.2
September 2	Physiological ecology	Ch. 5, Ch. 7
September 4	Soils and weathering	Sec. 4.3-4.10
September 9	Nutrients and biogeochemical cycles	Ch. 23
September 11	Terrestrial biomes	Ch. 24
September 16	Aquatic systems	Ch. 3, Ch. 25, Ch. 26
September 18	Marine systems, Climate Change	Ch. 3, 25, 26, 30
September 23	<b>EXAM I (Abiotic Factors)</b>	
	<b>Biotic Factors in Ecology</b>	
September 25	Populations, growth & regulation	Ch. 8, Ch. 9
September 30	Life history	Ch. 10
October 2	Intraspecific competition	Ch. 11
October 7	Interspecific competition	Ch. 13, Ch. 14
October 9	<b>EXAM II (Population Biology)</b>	
(October 14 – Fall Break, No classes)		
October 16	Predation	Sec. 15.1-15.11, 15.15
October 21	Herbivory	Ch. 15.12-15.14
October 23	Parasitism and mutualism	Ch. 16
	<b>Communities and Ecosystems</b>	
October 28	Communities	Ch. 17, Ch. 18, Ch. 19
October 30	Communities	
November 4	<b>EXAM III (Community Ecology)</b>	
November 6	Landscape Ecology	Ch. 20
November 11	Ecosystems and energy flow	Ch. 21, Ch. 22
November 13	Ecosystems and energy flow	
November 18	Population growth & sustainability	Ch. 28
November 20	Conservation, Introduced Species	Ch. 29; Reserve readings
November 25	Paleoecology	Reserve readings
(November 27 – Thanksgiving, No classes)		
December 2	Current research in estuarine ecology	Reserve readings
<b>December 11</b>	<b>COMPREHENSIVE FINAL EXAM, 8-11 AM</b>	

Attendance Policy: Students are expected to be present at all regular class meetings and examinations for the courses in which they are registered. Students who miss the first class may be dropped if enrollment is full and there are students waiting to enroll. Pop quizzes or in-class assignments will be a regular occurrence, and students who do not complete these due to absences will be given a zero. Likewise, no make-up exams will be given if they are missed, unless the absence is excused. Absences due to illness or family emergencies must have a formal letter of excuse. A student who expects to miss class because of participation in a university-sponsored activity must notify the instructor in advance of the absence. For all excused absences, arrangements with the instructor must be made to complete all

missed work and, if necessary, to do any compensatory projects which the instructor assigns.

#### Classroom Management

Studies have shown that students retain the most information by taking notes by hand, so no laptop note-taking! I do not permit laptops, phones, or other electronic devices to be used during class. Read before class, listen, write, absorb, ask questions, and you will learn at your best. Repeated late arrivals or other class disruptions will be penalized by downgrading your participation grade for the day. This is a class of adults, and I expect respect and courtesy to be shown by all.

**I strongly support the Academic Honor Code and will not tolerate academic dishonesty of any type.** Cheating, plagiarism, turning in an assignment with someone else's name, and using electronic devices during exams are all Honor Code violations. You are also required to inform me if you become aware of a classmate cheating. All violations of the Honor Code will be given a zero on the assignment, and the Department Chair and Dean of Students will be informed. Review the Honor Code at [http://uncw.edu/odos/documents/Honor Code 12-13.pdf](http://uncw.edu/odos/documents/Honor_Code_12-13.pdf).

#### Disabilities:

I am happy to make accommodations to those students with disabilities. Students should first contact the Office of Disability Services in Westside Hall (3746). After obtaining your referral from this office, please contact me.