

Biology 240 Ecology and Evolution Fall 2007

Lecture Time: MWF 12:30pm - 1:20pm

Location: HS G59

Instructor: Dr. Cynthia Kicklighter

Office: HS G36

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Required Text:

Krohne, D.T. 2001. *General Ecology*, 2nd Ed. Thomson Learning, Inc. 459p.

Attendance: Regular attendance is expected and is to your advantage. Material that is not found in the textbook will be covered in class and pop quizzes will occur periodically.

Cell Phones: Please make sure you either turn off or silence your phone before entering class.

Web Resources: Lecture materials (powerpoint files, pdfs, etc.) will be posted to the course BlackBoard web site.

Examinations: There will be three examinations and a final exam (see details below).

Missed Examinations: An unexcused absence will result in a score of 0. If, for some (*important*) reason, you must miss an exam, you must talk to me to make other arrangements.

Academic Honor Code: Suspected violations of the Honor Code will be referred to the Academic Honor Board. For a full description of the code and what constitutes a violation of the code, refer to the Goucher Handbook or online at www.goucher.edu/x1292.xml

Group Presentation: Working in small groups, you will chose and present a primary literature paper. See handout for specific details. Everyone (not just those giving the presentation) will read the paper beforehand and should be prepared to ask questions and participate in discussion.

Review paper: Due 16 Nov. *Note that this course is used to evaluate writing proficiency for the biology major.* You will research an ecological or evolutionary topic of interest and write a ten-page review on the current state of knowledge. The paper should be double-spaced, 12 point Times New Roman font, and one inch margins. The ten pages **does not** include a list of references cited or a cover page. *You must reference at least 10 primary literature articles published in 1985 or later* (citing Wkipedia or websites is not acceptable). Here are some examples, but feel free to come up with your own topic (if you do this, please OK the topic with me beforehand): the role of predation in aquatic/terrestrial/marine systems; mutualistic relationships in aquatic/terrestrial/marine systems; the importance of species diversity; theories of community succession; sexual selection in a particular group of organisms; coevolution; anti-predation strategies of a particular group of organisms; the role

of abiotic factors in influences the distribution and abundance of species, evolution of finches in the Galapagos.

Seminar/presentation synopsis: There will be a number of seminars and presentations on campus this semester. You must attend at least two of these and write a one-page summary of the event. The write-up will be due one week after the seminar. **Note that the talk given by Alan Pounds on the evening of Oct. 23 does not fulfill this requirement.**

Quizzes: Between 7-10 pop quizzes (10 points each) will be given during the semester. Quizzes will be given during the first few minutes of class. If you are late and miss the quiz, you may not make it up at the end of class. The lowest quiz grade will be dropped.

Assigned articles: You will be provided with approximately one primary literature article each week, which you should read and be prepared to discuss. I will usually post a pdfs of the articles on Blackboard. When this is not possible, I will provide you with a copy.

Grades:

Exams: the two top scores will be weighted 20%; the lowest of the three scores will be weighted 15%

Group presentation: 7%

Writing assignment: 15%

Quizzes: 5%

Seminar synopses: 3%

Class participation: 5%

Final exam: 10%

Date	Lecture Topic	Chapter	Reminders
29-Aug	Introduction to the course, Intro to ecology		
31-Aug	Abiotic factors	Ch. 3	
05-Sept	Biomes	Ch. 16 pgs. 409-419; Ch. 17	
07-Sept	Biomes contd.		
10-Sept	Energy flow and trophic structure	Ch. 14	
12-Sept	Biogeochemical and nutrient cycles	Ch. 15	
14-Sept	Demography & population growth	Ch. 4	
17-Sept	Behavioral ecology	Ch. 8	
19-Sept	Sensory ecology	TBD	
21-Sept	Competition	Ch. 9	
24-Sept	Competition contd.		
26-Sept	EXAM 1 (covers material through 24 Sept.)		
28-Sept	Predation	Ch. 10	
01-Oct	Predation contd.		
03-Oct	Mutualism, commensalism		
05-Oct	Community structure		
08-Oct	Community structure contd.	Ch. 11	
10-Oct	Patterns of species diversity	Ch. 12	
15-Oct	Succession	Ch. 13	
17-Oct	Climate change		Review paper topic due
19 Oct	NO CLASS: FIELD ECOLOGY FIELD TRIP		
22 Oct	Alan Pounds lecture		
24-Oct	Intro to evolution, Darwin		
26-Oct	Natural selection		
29-Oct	EXAM 2 (covers material through 26 Oct.)		
31-Oct	Variation	Ch. 2, pgs 18-21	
02 Nov	Genetic drift	Ch. 2, pgs 21-23	
05-Nov	Sexual selection		
07-Nov	What is a species?		
09-Nov	Speciation		
12-Nov	Speciation contd.		
14-Nov	Fitness, life-history strategies	Ch. 7	Group pres. approval
16-Nov	Life-history strategies		Review paper due
19-Nov	Coevolution	Ch. 2, pgs 35-41	
26-Nov	Evolution of genes and genomes		
28-Nov	Macroevolution		
30-Nov	EXAM 3 (covers material through 28 Nov.)		
03-Dec	Group presentations	TBD	
05-Dec	Group presentations	TBD	

