BIOL 3800 Ecology

INSTRUCTOR:	Dr. Jim Novak
Office:	1162 Life Sciences Annex; 581-6385
Office Hours:	or by appointment
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Lecture Text: **Cain, M. L., W. D. Bowman and S. D. Hacker. 2011. *Ecology, 2nd ed.*, Sinauer.**

Laboratory Text: **Brower, Zar, and von Ende. 1998. *Field and Laboratory Methods for General Ecology,* 4th ed., W.C. Brown.**

Class Time: **Lecture MWF 50 minutes, Lab T or Th 170 minutes. Lecture and Lab may be taught by different instructors.**

Class Location: **Lecture - 2080 Life Sciences Building, Lab - 1071 Life Sciences Annex**

OBJECTIVES:

GENERAL:

Biology 3800 is an introduction to the science of ecology, the study of the interrelationships of living organisms with their biotic and abiotic environments. Ecology is the most encompassing and dynamic of the biological sciences as it deals explicitly with the greatest breadth of levels of biological organization, from individuals through the biosphere. The general objective is to provide an appreciation of the breadth and complexity of ecological science.

SPECIFIC:

(1) To provide a solid introduction to the science of ecology, especially its principles and applications.
   a. This introduction will encompass the breadth of ecology to allow the students to determine if they wish to explore any subdisciplines in other courses.
   b. Ecological terminology and theory will be utilized to provide a structural framework.

(2) To provide an understanding of how ecological information is gathered, analyzed, and interpreted.
   a. Sampling and statistical analysis will be utilized in the context of ecological investigations through examples as well as exercises.

(3) To provide a basis for judging the quality and soundness of ecological information.
   a. Reading and understanding ecological information in both textbook and original research articles will be expected.

GRADES

The course grade will consist of both lecture and laboratory components. The lecture portion of the course will count for 50% of your grade and the lab, the remaining 50%. Your grade will be based on the total number of points you earn, with ≥ 90% = A, 80-89% = B, 70-79% = C, 60-69% = D, and <60% = F. Points from the lecture portion of this course may be earned in the following categories:

Item	Max. Possible Points
2 Hour Exams (100 pts. each)	200
Comprehensive Final Exam (lecture)	200
Total	400

Note that another 400 points can be earned from laboratory assignments (lab reports, papers, exams, etc.). Details concerning these assignments will be outlined in lab, and will vary among the different lab sections.

MISSED EXAMS

Make-up exams will ***not*** be given. Students who miss an exam for a valid reason (illness, death in the immediate family) will have points for that exam ***added to their final exam points*** (thus, if you miss one exam for a valid reason, your final exam will then be worth 300 points).

CLASS ATTENDANCE POLICY

Class attendance is entirely optional (you've paid your tuition…). However, if you choose to attend class (and I hope that you do!), please be on time, be quiet so that everyone can hear, turn cell phones, etc. off, and wait until I end my lecture before beginning to pack up your things. Lab attendance is mandatory.

ACADEMIC HONESTY POLICY

I expect that you will never passively or actively cheat on any of my exams, or those administered by your other instructors. Any documented incidence of cheating or plagiarism will result in an automatic failing grade ("F") for the entire course, and notifications to the Dean's office and Judicial Affairs. Please feel free to speak with me, or consult your Student Handbook, if you have any questions concerning this matter.

CLASSROOM BEHAVIOR

Please turn the ringers on your cell phones off before entering the classroom. If you simply must take or make a call, please leave the classroom. Texting is also not allowed.

DISABLED STUDENTS

Disabled Students should contact the Office of Disability Services (9th St.Hall 2002; x6583) for any arrangements that need to be made in order to ensure that you get the most out of this course. Within reason, I am willing to make whatever accommodations are necessary to facilitate your learning of this material.

FURTHER ASSISTANCE

If you suddenly find yourself with a question that is burning a hole in your brain, and cannot reach me, there are several ways of obtaining the answer. Here are some examples:

1. The authors of your text have thoughtfully provided numerous problems for you to practice your statistical skills. The solutions for some of theses are listed in the Answers to Selected Problems section at the end of the book. The companion CD also has additional solutions.

2. Do not be afraid to use the internet. Google is a powerful search engine and can help you find additional information on topics. BE AWARE THAT THE QUALITY OF INFORMATION VARIES GREATLY FROM SITE TO SITE ON THE INTERNET. If the information on the site conflicts with the book you may want to bring this up in class and we can discuss it.

3. Seek help at the Learning Assistance Center (x6696) or the Counseling Center (x3413) to obtain help with studying for this class.

4. Help each other -- get to know your fellow students! Active learning through testing each other on the material is one of the most effective ways to learn where your weaknesses lie with this subject matter.

LECTURE SCHEDULE

Week	Topic	Reading	Other Info
1	Introduction to Ecology; The Physical Environment	Chap. 1, 2	
2	The Physical Environment	Chap. 2	
3	The Bioshere; Temperature and Water Variation	Chap. 3, 4	
4	Water Variation	Chap. 4	
5	Energy Variation; Evolutionary Ecology	Chap. 5, 6	
6	Life History Analyses	Chap. 7	
7	Population Distribution and Abundance; Population Growth and Regulation	Chap. 8, 9	Exam 1
8	Population Dynamics; Competition	Chap. 10, 11	
9	Competition; Predation and Herbivory	Chap. 11, 12	
11	Predation and Herbivory; Parasitism	Chap. 12, 13	
12	Mutualism and Commensalism	Chap. 14	
13	The Nature of and Change in Communities	Chap. 15, 16	Exam 2
14	Biogeography; Species Diversity	Chap. 17, 18	
15	Production; Energy Flow and Food Webs	Chap. 19, 20	
16	Nutrient Cycling	Chap. 21	

FINAL EXAM

Note: All dates represent my best guess and are subject to change based upon class interest and progress