IB 203 COURSE SYLLABUS AND POLICIES

INSTRUCTOR

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COURSE INFORMATION

Course website: http://www.life.illinois.edu/ib/203/

Classes: Tuesday & Thursday 12:30-1:50; 228 Natural History Building

Credit: 4 hours and Advanced Composition credit

Prerequisites: IB 150 and MCB 150

REQUIRED TEXTS (at Illini Union Bookstore)

Ricklefs, R.E. 2008. Economy of Nature (6th ed) Freeman, New York
A copy is on reserve in the Undergraduate Library.

Harris, M., G. Taylor, and J. Taylor. 2008. Math and Statistics for the Life Sciences. Freeman, New York.

Augspurger, C.K. 2009. Exercises in Ecology. Course Manual for IB 203.

INTRODUCTION TO IB 203

Welcome! I look forward to getting to know you and to facilitate your learning about ecology. I know that you may or may not be planning to have a career in ecology. However, I feel strongly that you should become "ecologically literate", both in terms of understanding concepts, and in learning how those concepts are generated, i.e. by doing science yourself. Furthermore, you should understand how to apply the concepts to the "real" world.

COURSE/INSTRUCTOR PHILOSOPHY/OBJECTIVES

Ecology is a core course for majors. Therefore, I view it as a major part of your introductory learning in biology and plan the course to be rigorous and with high standards. I expect you to spend more effort on this course than non-major courses. I

believe that you should learn the "products" of science, i.e. the major ecological concepts, but also be able to see their contribution to solving today's environment problems. I feel equally strong that you should have major practice with all aspects of the scientific process. Products of science change over time, while the process doesn't. As a science major, you should be fully capable of contributing to scientific ecological knowledge by means of using the scientific process.

As a science major, you should become able to communicate effectively about science. Therefore, practice with written and oral communications are a key part of the class. As a result, you will satisfy your Advanced Composition requirement by completing assignments in this course.

I believe strongly that your "Lecture" time should maximize your intellectual involvement by engaging your mind actively. I frequently use active learning activities. The goal of these activities is to learn critical thinking skills and to understand concepts, rather than focus on details that you will quickly forget.

TEACHING STRATEGIES FOR LECTURE

Equal weight is given to lecture and lab. Please see LAB EMPHASIS ON SCIENTIFIC INQUIRY to read about the format and philosophy of the laboratory portion of the course.

I expect that you have read the textbook prior to lecture. A lecture outline is posted on the course website prior to each lecture. I start and finish each lecture with an outline of content to be covered. I emphasize key concepts and use several case studies that demonstrate how the concept was developed, while emphasizing the scientific process that led to the development of the concept. Much practice is given in interpreting figures and tables. Attention is placed on developing critical thinking as it applies to solving ecological questions.

At several intervals during lecture, I stop and have you complete an active learning activity. Some are done individually, others with a partner or small group. It is important that you participate fully in these activities. They include answering a series of questions throughout the lecture, summarizing the active learning activity, taking a practice exam question, or turning in a take-home assignment. The goal of all "hands-on" activities is to engage you in actively thinking abut concepts and understanding them better because of your active participation. I also provide multiple examples of exam questions to give you practice prior to taking each exam.

Ultimately, my goal is to have you learn knowledge and skills that you can apply to new situations, i.e. you reach a point where you can use your ecological understanding, as well as logic and critical thinking skills, well after the course is over.

SUGGESTED LEARNING STRATEGIES FOR LECTURE

1. Print lecture outline prior to reading each chapter.
2. Read textbook (following lecture outline) once prior to and once after each lecture.
3. Print power point slides prior to each lecture and add comments to embellish or complete each slide.
4. Participate fully in all active learning exercises.
5. Do all In-Class Activities.
6. Complete practice exam questions. Learn from your mistakes.
7. Look at each vocabulary list to aid in review of concepts.
8. Focus on learning to articulate major concepts. Don't memorize details or vocabulary.
9. Review figures in text and on PP slides to practice generating and interpreting figures. Pay particular attention to understanding how to interpret figures and tables.
10. Focus on those parts of the text that embellish lecture material.
11. Master all components of the scientific process and be able to apply those skills when confronting a new ecological question.

GRADING AND ASSIGNMENTS

Grading (or How to Keep Score):

Grades are assigned based on the % of points accumulated: 90-100% = A, 80-89% = B, 70-79% = C, 60-69% = D, <60% = F. Minus (- = 90-92, 80-82, etc.) and plus (+ = 88-89, 78-79, etc.) grades will be given within each grade range. Points can be earned as follows:

Examinations + In-Class Activities (50%)	Points	%
Exam 1	100	10
In-Class Activities 1	30	3
Exam 2	140	14
In-Class Activities 2	30	3
Exam 3	160	16
In-Class Activities 3	40	4
Subtotal	500	50
Labs (50%)		
1) Participation (14 labs) (5 points each)	70	7
2) Homeworks 1-10 (10 points each)	100	10
3) Student-Generated Project 1	150	15
4) Student-Generated Project 2	180	18
Subtotal	500	50
Total	1000	100

Examinations: (40% of grade)

Each exam will be non-cumulative. All material covered in lectures, text readings that apply to lecture, homeworks, and labs will be eligible for inclusion. I assume you can memorize information, so in exams I try to evaluate how well you understand that information by problem solving and applying it to new situations. All exams must be written in ink. You may bring basic scientific calculators (no palm pilots, cell phones or other computers) in exams. Any requests to regrade questions must be submitted in writing to Dr. Augspurger within one week after hourly exams are returned to the class.

Make a note of the exam and lab dates. The only excuse for missing labs or exams is personal illness or tragedy in your immediate family. Notify your TA before the lab or Dr. Augspurger before the exam if you have a problem. Travel, weddings, jobs, other courses, etc., must be planned around the lecture, laboratory, and final exam schedule. If you have any questions regarding these policies, please see Dr. Augspurger.

In-Class Activities: (10% of grade)

Lecture attendance is highly recommended. Students with regular attendance, on average, receive one full grade higher than those who do not attend regularly. Point-earning activities occur in lectures.

Lab Participation: (7% of grade)

The laboratory experience is an essential part of this course (50% of grade). You must come to all labs to do well in this course. Skipping labs is unacceptable. Many labs are interconnected and many homeworks are completed in labs. Your work on group projects and your presence is essential for your group to function well. Laboratories can be made up only if you can attend another section that week. Arrangements must be made well in advance with your TA and can be done only for a good reason. Excuses are given only for medical reasons or tragedy in your immediate family and will be given for a maximum of two laboratories. If your health causes you to miss multiple labs, you should drop the course.

Homework: (10% of grade)

Homework is meant to help you with the quantitative aspects of the course and to prepare you for doing the data analyses and writing for your Student-Driven Projects. The due dates for the homework are in the Course Syllabus and Laboratory and Homework Schedule. Homework should be submitted at your laboratory session and will be corrected and returned to you by your TA the following week.

Student-Driven Projects: (33% of grade)

In small groups, you will complete two major field projects, each lasting multiple weeks. These are designed to increase your experience with all the steps in completing

scientific research from generating a research question to completing a scientific manuscript and giving an oral presentation. They constitute a substantial part of your total grade. It is important that you stay on top of these projects by completing the weekly homework and by being a responsible contributor to the group effort. The due dates and details for SDP assignments are in the Lab and Homework Schedule.

COURSE POLICIES

General:

This course will follow all policies in the *Student Code*.
http://www.admin.uiuc.edu/policy/code/index.html

Accommodations:

If you require special accommodations, please tell me at once. All accommodations will follow the procedures as stated in Article 1-110 of the *Student Code* (http://www.admin.uiuc.edu/policy/code/article_1/a1_1-110.html).

Academic Integrity/Plagiarism:

This course will follow Article 1 Part 4 (1-401 through 1-406) of the *Student Code* (http://www.admin.uiuc.edu/policy/code/article_1/a1_1-402.html). This rule defines infractions of academic integrity, which include but are not limited to cheating, fabrication, and plagiarism. To learn about possible penalties for such a violation, see http:admin.uiuc.edu/policy/code/article_1/a1_1-403.html. You are responsible for being knowledgeable about what the infractions are for not following these guidelines. Plagiarism while writing the scientific manuscripts will be monitored closely. If you don't feel that you fully understand what constitutes plagiarism, please consult with your TA or Dr. Augspurger.