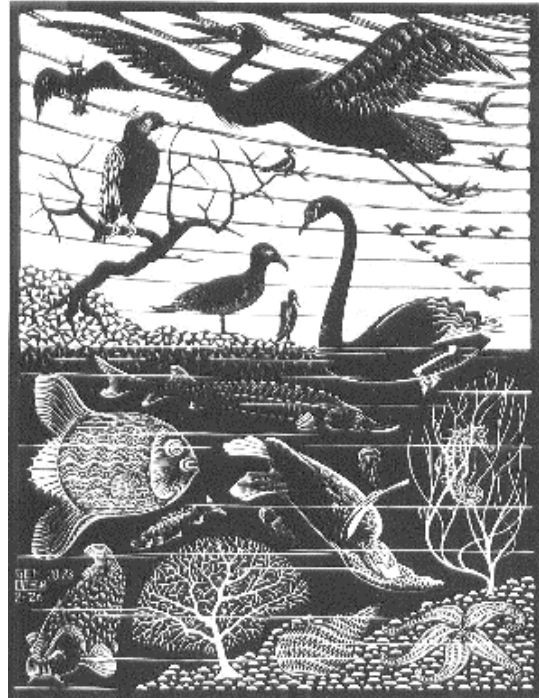


Ecology Laboratory Biology 229 Spring 2009

Professor Drew Kerkhoff
Office 301 Higley Hall
Phone 427-5734
Email kerkhoffa@kenyon.edu
Office Hours
Monday 1:00 – 2:00
Wednesday 2:00 - 4:00
Thursday 9:00 – 10:00

Also by appointment; please don't hesitate to ask for help.



General Course Goals and Expectations

Through this course you will learn to:

1. Study ecological interactions and processes at multiple scales and levels of organization, through observation, experimentation, and modeling.
2. Develop and test hypotheses that explain and predict patterns in the distribution and abundance of organisms and their interactions with their environment.
3. Design observational and experimental studies appropriate to the dynamic and interdependent nature of ecological systems.
4. Hone your skills in reading primary literature, and writing in a scientific style.
5. Make careful observational notes and conduct field research.

These skills will be achieved through laboratory, field, simulation, and modeling studies. We will spend a substantial fraction of our time **outside**, so it is very important that you come prepared and **appropriately attired for class in the field**. Cold temperatures, snow, and rain will not generally keep us from working outside.

At the same time, due to the vagaries of nature and living things, this syllabus is necessarily tentative. The sequence of topics may evolve through the semester.

Course Outline and Calendar (subject to change)

Week	Dates	Topics	Readings / Assignments
1	1/13	Class Intro, Tree i.d. & GIS basics	
2	1/20	Field Trip – Bishop’s Backbone 1	
3	1/27	Competition design & set-up	
4	2/3	Forest Ecology, Function, and Sampling Methods	Readings:
5	2/10	Darwin Day Class! Bird Predation on Gall-making Flies	Reading:
6	2/17	Forest Survey 1	Gall Report Due
7	2/24	Competition analysis & modeling	Lab Notebook Check
8	3/3	SPRING RECESS	
9	3/10		
10	3/17	Forest Survey 2	Competition Report Due
11	3/24	Soil Ecosystems: Field Respiration Measurements	Reading:
12	3/31	Soil Ecosystems: Lab Respiration Studies	
13	4/7	Soil Ecosystems: Arthropod Communities	Reading:
14	4/14	Forest Project Workday	Soil Report Due
15	4/21	Forest Project Draft Discussion	Final Project Draft Due
16	4/28	Field Trip – Bishop’s Backbone 2	Final Project Due Lab Notebook Due

Grades

Your course grade will be based on the following categories and their respective weights.

Attendance, Participation, and Enthusiasm (10%)

Lab/Field Notebook (25%)

Project Reports (40%)

Final Project Report (25%)

Attendance Policy

Class attendance is **mandatory** and unexcused absences will negatively affect your grade. Being unprepared and improperly attired amounts to missing class, so while, to paraphrase Woody Allen, “Half of life is just showing up,” in this class you need to show up **prepared!**

If you must miss class, please contact me **before** the class (email or voice mail messages included). If you are an athlete or a member of another organization that travels, it is **your responsibility** (not your coach’s or advisor’s or mine) to make arrangements with me concerning missed classes **well in advance, and by January 27 at the latest**. Failure to do so will result in unexcused absences. Coursework missed due to unexcused absences may not be made up.

Note also that this part of your grade includes **participation and enthusiasm**. Field ecology often takes place under less than ideal pedagogical conditions (especially in Ohio in the spring) so we all need to work together to remain focused on our tasks and enthusiastically engaged in our scientific pursuits.

Lab and Field Notes

Notebooks will be submitted at the last week of February, and again at the end of the semester. Notes should be kept in a 3-ring binder. They may be **legibly** hand-written or word-processed. Within the notebook, your notes should be organized by project, with each project clearly identified. All entries should be dated. For each project you should have notes, when appropriate, on:

- background provided in class
- hypotheses and predictions (if appropriate)
- description of study sites and organisms
- experimental design and methods
- data tables
- data analysis, including sample calculations
- observations and reflections on results
- future questions

Project Reports

Three Project Reports will be due over the course of the semester. To a greater or lesser extent, these will have the format of a standard scientific paper (Intro, Methods, Results, Discussion), though some sections will be de-emphasized for specific projects. All Reports will be word-processed, paginated and stapled, and they should follow the standard format outlined in your Biol 109-110 lab manual.

Final Project – Ecological Analysis of Kenyon’s Forests

As part of our work this semester, we are going to address the ecological role played by Kenyon’s forests. Research teams will work to address specific aspects of forest ecology, with the goal of providing a “white paper” resource for the sustainable management of the forested lands of Kenyon College. We will

organize this project further over the course of the semester, and projects may require additional work outside of class. My hope is that we can share this resource with the college faculty, administration, and community as a step toward developing a more intentional and sustainable management strategy for Kenyon's forests.

Work Standards

Assignments must be turned in at the beginning of the class period on the assigned due date. Late work will be penalized 1/3 grade (i.e. ~4%) per day. All work should conform to the following standards or it will be returned for revision without a grade (and thus considered late).

- Assignments (except lab/field notes) must be typed and the title, author, and date must be clearly stated.
- Assignments with multiple pages must be paginated and stapled.
- Assignments must include a properly formatted list of references (unless none were used).
- Assignments must be proofread and reviewed for spelling, grammatical, and mathematical errors.

Academic Honesty

Acquaint yourself with Kenyon's policy on academic honesty, printed in the *Student Handbook*. Adherence to standards of academic honesty is the responsibility of the student. If you have any questions or are unsure of appropriate conduct, please contact me. You will often work together to analyze data and construct figures, but I expect you to do all of your own writing. Make sure that you cite any help you receive in the Acknowledgements section – including the TA, lab partners, or anyone else, and be specific but concise.

Accommodating Disabilities

If you feel that you may have need for some type of accommodation(s) in order to participate fully in this class or to take exams, please feel free to discuss your concerns with me in private. Also identify yourself to Erin Salva, Coordinator of Disability Services at 427-5453 or via e-mail at salvae@kenyon.edu. All information is confidential.