

EY 581 Ecosystem Ecology

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Web Page: http://www.cnr.colostate.edu/class_info/ey581_billindy/
(Please give us a few days to get this up and running!)

Philosophy: We care enormously about the depth and breadth of your learning, and will invest in every way we can to help you learn. It is important to note that learning is most effective when the learner engages very actively in the process. We are becoming more and more aware that even the best traditional lecturing does not lead to effective learning, and we will likely experiment with different techniques that help you to engage, invest, and ... *work* to learn.

Textbook: Chapin, F. S., P. A. Matson, and H. A. Mooney. 2002. Principles of Terrestrial Ecosystem Ecology. Springer-Verlag. There will also be assigned journal articles, which will be made available on the web page.

Format: 3 - one hour meetings and a 1 hour recitation per week. Class formats will consist of varied activities that will include group learning, lecture, and discussion. *This will require that you study the assigned reading in advance of class sessions.*

Evaluation: You will be evaluated in three ways. First, we will have frequent, exercises in the classroom. The primary goal for this is to enhance your learning! There will be some points awarded for the individual or group work done in the classroom. These exercises, responses to questions about the reading, etc, will:

- a) give you a chance to apply the knowledge you gained in reading/lecture;
- b) allow us to assess how well you are learning so that we can better guide the process; and
- c) provide you with an incentive to stay up to date on readings.

Second, there will be occasional homework assignments that will be designed to reinforce class material.

Finally, there will be a final oral exam to be scheduled during finals week. Our objectives for the oral exam are:

1. to have you provide us with clear, concise explanations of relationships among structures and/or processes in ecosystems; and
2. to provide an opportunity for you to work on your ability to be an effective oral communicator.

Recitation: We will use most of this time to discuss published papers. It will be very important that we all come prepared to each discussion and that each of us are willing to participate. This is where you have the opportunity to exchange ideas with everyone in the class about the discussion paper. You can work on your skills in presenting your ideas and listening to those of others. Discussions can be difficult; good ones are an enormous amount of fun and the others can be excruciating. The more each of us is willing to prepare and to participate, the more likely it is that we will have mostly good ones.

Grades: We will sum the number of points you earned on daily exercises, homework, and the oral exam. Grades will be based on the following:

Grade	%
A	90-100
B	80-89
C	70-79
D	60-69
F	< 60

Topic Schedule:

Note: We expect the class to be a bit fluid in schedule, as we are especially interested in issues that cut across these topics, as well as in keeping an eye on the current literature. So, keep up with daily announcements in class and on the web page!

	Week	Topic
August	21	The Ecosystem Concept
	28	The Atmosphere, Ocean Circulation, and Climate
September	6	Geology and Soils
	13	Production Processes
	20	Decomposition and Carbon Storage
	27	Nutrient Cycling in Soils
October	4	Plant Nutrient Use
	11	Ecosystem Water and Energy Balance
	18	Trophic Dynamics
	25	Species Effects on Ecosystem Processes
	November	1
8		Spatial Variation
15		Ecosystem Comparisons
20		Thanksgiving Break
29		Global Cycles
December	5	Hot Topics and Future Directions

