ECOLOGY

In this course, we will examine both abiotic (non-living) and biotic (living) elements of the environment that influence the distribution and abundance of organisms. We will cover topics in the areas of individual, population, community, and ecosystem ecology, as well as human effects on natural systems. The topics will continually build on themselves, and the emphasis will be on understanding concepts and synthesizing scientific information. This course is meant to prepare you to apply your critical-thinking ability to ecological observations and questions encountered both inside the classroom and outside in 'real life'.

Lectures: MTWTh 8-9:40 in Shillman Hall, Rm. 315

Instructor: Dr. Cascade Sorte, email: c.sorte@neu.edu

Office hours: M & Th 9:45-10:30 @ _____ *or by appointment*

Textbook: "Ecology" by Cain, Bowman, and Hacker

Online materials: Course materials and updates will be posted on the Blackboard website.

Grading: Final grades will be calculated as follows:

Quiz 1 (5/26)	10%
Quiz 2 (6/21)	10%
Exam 1 (5/19)	20%
Exam 2 (6/9)	20%
Popular Science Project (6/23)	15%
Lab Exercises	25%

Extra credit: Details about extra credit opportunities (total of up to 3% additional) will be announced in lecture throughout the term.

Quizzes & Exams:

- Quizzes & exams will be a combination of multiple choice, matching, short answer, and essay questions. Example questions will be given throughout the term during pre-lecture practice quizzes.
- On quiz, exam, & project presentation days, make sure you have a back-up wake-up plan (e.g. wake-up call from a roommate or friend) and transportation (e.g. leave enough time so that if you have car trouble or the trains are delayed, you can get a cab to campus).
- Make-up quizzes and exams *may* be given *only* in extenuating circumstances, depending on the situation. To explore this possibility, you must contact me (Cascade Sorte) via email *before the exam starts*. Official and appropriate documentation will be required. If given, make-ups will be all short answer and essay questions.

Popular Science Projects:

One of the goals of this course is for you to leave better able to critically evaluate science that you encounter on a day-to-day basis. For the final project, you will work in **groups of 4** to explore the ecology underlying a popular science article or news report. By **June 6** you should contact me to confirm your topic and group members. More details will be provided in lecture.

Finally, it is imperative that we *ALL*:

- Come to class on time. Class starts at **8:00**.
- Avoid disruptions: turn computers to mute and cell phones to silent.
- Treat everyone in the class as you would want to be treated. Listen. Encourage. Have fun.

SCHEDULE

Date		Topic	**Reading** Chapter
T	5/10	Introduction to Ecology & Popular Science Projects	1
W	5/11	The Abiotic (Physical) Environment	2
Th	5/12	The Biosphere	3
M	5/16	Coping with Variation in Temperature & Water Availability	4
T	5/17	Coping with Variation in Energy	5
W	5/18	Evolution, or How It Got To Be This Way	6
Th	5/19	**EXAM 1** on the Environment & Abiotic Interactions	
M	5/23	***Ecology in Context* Week:** Effects of Biodiversity on Biotic Interactions and Plant Fitness - *Sean Kent*	TBD
T	5/24	Impacts of Protecting Large Grazers and Predators on Ecosystem Health in Florida Estuaries - *James Douglass*	TBD
W	5/25	Genetics and the Evolution of the Rough Periwinkle - *Meredith Doellman*	TBD
Th	5/26	Synthesis & **QUIZ 1** on *Ecology in Context* Discussions	TBD
M	5/30	**HOLIDAY - NO CLASS**	
T	5/31	Life History: Individuals to Populations	7
W	6/1	Population Distribution and Abundance	8
Th	6/2	Population Growth and Dynamics	9,10
M	6/6	Competition	11
T	6/7	Exploitation (Predation, Herbivory, & Parasitism)	12,13
W	6/8	Positive Interactions	14
Th	6/9	**EXAM 2** on Populations & Biotic Interactions	
M	6/13	Community Interaction Webs	15
T	6/14	Community Development and Diversity	16,18
W	6/15	Biogeography	17
Th	6/16	Production, Energy Flow, & Food Webs	19,20
M	6/20	Nutrient Cycling & Global Change	21,24
T	6/21	Synthesis & **QUIZ 2** on Communities & Ecosystems	
W	6/22	Conservation Ecology & Ecosystem Management	22,23
Th	6/23	**POPULAR SCIENCE PROJECT PRESENTATIONS**	