

COURSE INFORMATION

INSTRUCTOR

Dr. Ruth Hufbauer

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Office hours: on campus Mon. 10-11:00 or by appointment
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TEACHING ASSISTANT

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Office hours in C028 Plant Sciences or by appointment
Online: Wednesday 6:00-6:30 PM

COURSE OBJECTIVES

Ecologists study the distributions and abundances of organisms and how organisms interact with each other and with their environment. In this course you will have the opportunity to learn about ecological patterns and the mechanisms that generate those patterns. You should come out of this class with an ability to integrate knowledge you've already gained from other courses, as understanding ecological processes requires information and concepts from many areas of biology as well as math, physics, and chemistry. Additionally, you should be able to evaluate popular literature, TV, and radio shows on ecological and environmental issues more critically. If you are interested in ecology and natural resources for your career, this class leaves you well-positioned to take more specialized courses, and to get jobs or internships.

LECTURES Tuesday/Thursday 11:00-12:15 AM, Clark A103

GETTING QUESTIONS ANSWERED

Mike and I love to talk about Ecology. Email is a great way to contact us, either to answer your question directly or to set up a time to meet. We are experimenting this semester with holding evening office hours on RamCT Chat. *If you can't make it to the regularly scheduled office hours, we are happy to meet at other times. Please let us know!*

Ruth: hufbauer@lamar.colostate.edu OR rahufbauer@gmail.com

Mike: mikoontz@gmail.com

When you email us put **Ecology** in the subject line!

REQUIRED TEXTBOOK

The Economy of Nature, Sixth Edition by Robert E. Ricklefs. This class will follow the book closely for some chapters, and for others there will be only small sections assigned. One copy of the text will be on reserve in the library. You should buy the book, however! Apologies that it is expensive. If you prefer, there is a CourseSmart electronic version that is less expensive. The page numbering is exactly the same, so it should work fairly seamlessly. There will be (nearly) weekly, open book reading quizzes on RamCT to encourage you to do the reading.

COURSE WEB PAGE

The class webpage is listed on the **RamCT** site (<https://ramct.colostate.edu/>). The webpage will have quizzes, lecture outlines, additional lecture materials, your grades, study guides, links to

PDFs of required articles, etc.. If you have any troubles accessing it or the materials posted there, please let us know!

LECTURE OUTLINES

Lecture outlines will be available on the course website. They will generally be posted by 4:30 PM the day before. Outlines are NOT sufficient to perform well in this course. If you want to get an A or B in the course, you should come to class. If you miss a class, get notes from someone else, and make sure you understand them. Powerpoint slides will be posted as relevant after class.

iCLICKERS

You are required to use an iClicker remote for in-class participation. As most of you know, iClickers allow you to respond to questions I ask in class. You will be graded on participation. Sometimes things come up that make it difficult if not impossible for you to attend class every day. Taking this into consideration, a 100% iClicker participation score will be awarded for participating in 70% or more of the days that iClicker questions are given (e.g. if I use them on 20 days throughout the semester, 100% credit would be given for 14 days or more. I do it this way to try to balance out rewarding participation with creating a relaxed atmosphere good for learning. Please let us know if you're having technical difficulties with the clickers. We're here to help.

Please take advantage of the clicker questions! Thinking about and answering the questions should help you understand and remember the material, with no risk involved. If you don't yet own a clicker, you can purchase one at the bookstore. In order to receive credit, you will need to register your iClicker remote online within the first week of class. We will be using them **Tuesday Jan. 24**. To register, go to <http://clicker.colostate.edu/registration.aspx>. Login with your eIdentity (eName and password). In the iClicker ID field, enter the ID number (on the back of your remote) and select the "Register" button.

If the number has worn off, bring your clicker to the book store and they can help you recover it. Alternatively, bring it up after class to me.

iClickers will be used fairly frequently in class, and you are responsible for bringing your remote daily. DO NOT bring your friends' clickers on days they can not make it to class. If we catch anyone doing that, you and your friend will get NO iclicker participation points for the entire semester. Remember, 100% is given for participating in 70% of the days!

BEGINNING and END OF SEMESTER KNOWLEDGE BASE "QUIZZES"

At the beginning and at the end of the semester, there will be a quiz to take on RamCT. The first one will enable us to evaluate how much general ecology you already know. The second one will enable us to evaluate how much general ecology you've learned in the semester. You will get **XX** points each time just for taking the quizzes. While we want you to do your best in choosing the correct answers, you will not be graded on the quizzes themselves, just on whether you took them or not.

READING QUIZZES

There will be (nearly) weekly quizzes on the readings for you to take on RamCT. They are due before class on Thursday, and they are open book.

IN-CLASS EXERCISES

There will be several in-class exercises worth 1-2 points each. Most exercises will use writing or drawing graphs. For these exercises, we expect that you will do your best to write in grammatically correct, complete sentences, but we will not grade the writing, just the content. Regarding the content, generally we will be asking questions that focus on having you formulate your understanding in words or in graphics. We will not grade these exercises as right or wrong, but rather on how thoughtful your response is, on a plus, check, minus basis.

-**Plus** means great job, thanks for putting in the effort (2 points)

-**Check** means good job, but you could put in a little more effort next time (1 points)

- 0 points for not being present or for not putting any effort in

PARTICIPATION

Research shows that when people hear something, they may or may not remember it. If they hear it and write it, chances of remembering it increase. If they hear it, write it, plus read and talk about it, they're pretty likely to remember it down the line. In this class, despite the size, I will ask you to participate in several activities. I know that not everyone learns best this way, but it does help most people if they make an honest effort at participating. Even if you're one of the rare people who can sit and listen and absorb it all passively, I bet you'll find you get even more out of the class if you take notes and participate fully in activities.

HOMEWORKS

There will be 4 homework assignments that will give you practice with some of the mathematical components of the course, and greater familiarity with conceptual issues. **LATE HOMEWORK WILL NOT BE ACCEPTED.** Late is defined as any time after the BEGINNING of class on the due date.

EXAMS

Exams will contain mostly short-answer and multiple-choice questions, with 1-3 short essays or problems to work. Essays will be graded on the quality of your answer. The quality of your writing (organization, clarity, grammar) matters in that if we don't understand what you are trying to say, we may not be able to reward your knowledge. There will be **three** exams during the semester. Exams will be given during the regularly scheduled class period. **THERE WILL BE NO MAKE-UP EXAMS** unless there is clear documentation 2 or more weeks in advance of an academic conflict, or a doctor's written confirmation of a medical emergency. Make-up exams typically will be in an essay format. The lowest of the three exam scores may be replaced by doing the optional seminar assignment described below.

The final will be cumulative. It will focus about half on the material from the end of the semester, and about half on material presented throughout the semester. The final is scheduled for **May 16th at 6:20 PM (!), in the regular classroom.**

OPTIONAL SEMINAR ASSIGNMENT

You may replace your lowest exam grade with three seminar write-ups (see below for details) **OR** you may replace your lowest homework grade with two seminar write-ups. Attend seminars off the approved list posted on RamCT and write up a one-page essay about each seminar. Each essay will be graded out of 25 points. Guidelines are on RamCT.

Essays are due two weeks after the seminar that you attended, or the day of the final (May 16), whichever is earlier.

Many of the seminars are at the beginning of the semester. If you think you would like to take this opportunity, then don't wait until after the second exam to attend seminars. To get credit for a seminar, first sign up with Mike by email. A maximum of 15 to 20 people can get credit for a single seminar (depending upon the size of the room).

There will be more detailed information about the assignment and when appropriate seminars will be held posted on RamCT once the seminar schedules for the relevant departments are known. If you hear about a seminar that isn't on the list, but that you think might be appropriate, please just ask, as we might not have heard of it yet.

COURSE GRADING

	Points Each	Total Points	Approx. Percent
On-Line Pre- and Post- Knowledge Surveys (2)	10	20	2.9
Homeworks (4, lowest score can be replaced by your grade from the optional 2-seminar assignment)	50	200	29.0
In-Class Exercises (Approx. 5)	2	10	1.5
Class Participation (iClickers)	70% gives full credit	35	5.0
Syllabus and reading quizzes (10-12 total)	5-10	~100	14.5
Exams (3, lowest score can be replaced by your grade from the optional 3-seminar assignment)	75	225	32.6
Final (~50% cumulative, ~50% last part of course)	100	100	14.5
Total		~645	100

Letter grades will be calculated as percentages of the total. A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F < 60%. I will use a +/- to distinguish between grades in the ranges. The bottom 2% in a range will get a minus, and the top 2% will get a plus (e.g. A- is for scores between 90% and 92%, while an A+ is greater than 98%). I will use strict cut-offs.

Re-grading. We will gladly re-grade any question(s) you feel are needed; however, it is your responsibility to follow these rules:

1. When exams/homework are handed back in class, you have 24 hours to identify arithmetic errors on our part.
2. If you would like to have an exam or homework question re-graded, you must submit it with a written explanation of your arguments and the entire exam or homework within one week after it was returned in class. We may choose to regrade the entire exam.
3. We will gladly speak with you about the material thereafter but absolutely no grade changes will be made once the one-week period has elapsed.

CLASSROOM ETIQUETTE

- Come to class on time.
- Please DO ask questions!! This keeps the class more interesting and easy to understand.
- Stop talking when the lecture starts, and raise your hand if you'd like to ask a question or contribute an idea.

- Do not read newspapers or text during class.
- Let me know if I'm going to slowly or too quickly. It is hard to hit the right balance in a large class, and if you provide some feedback, I can do a better job.

ACADEMIC INTEGRITY

Cheating is unethical, and damaging to you and to your fellow classmates. While I encourage group work and helping each other on homework assignments, if you work with a friend and do not understand the answer they arrive at, it does you no good to write it down yourself. Work to understand the question or problem, and you may find that you didn't understand their answer because they were wrong! Also, clearly, during exams, it is cheating to look at someone else's exam.

Plagiarism is the unauthorized or unacknowledged use of another person's academic or scholarly work. **WRITE OUT YOUR WORK IN YOUR OWN WORDS.** Plagiarism is a theft of intellectual property and a violation of an ironclad rule demanding "credit be given where credit is due."

If you cheat in this class, you risk both failing the assignment, and failing the course. Cheating could result in expulsion from the university. Each instance of plagiarism, classroom cheating, and other types of academic dishonesty will be addressed according to CSU guidelines. Details can be found on the TILT website (<http://tilt.colostate.edu/integrity/index.cfm>)

LIFE 320 Syllabus, Hufbauer Spring 2013

This schedule is firm, but not set in stone. Please listen and watch for updates.

Lec	Date	Topic	Readings	Homework
January				
1	22	Introduction to ecology and to this course	1-6, 11,14-17	
2	24	Global climate	39-40, 61-73	
3	29	Ecosystems I	TBA	
4	31	Ecosystems II - the carbon cycle	485	
February				
5	5	Climate Change	TBA	
6	7	Life histories	ch7	# 1 due
	12	Exam review		
	14	Exam 1 (lectures 1-6)		
7	19	Sex and evolution	TBA	
8	21	Population structure and growth	109-203, 207	
9	26	Population regulation (intraspecific competition)	(Dispersion)-215, 219, 222-236	
10	28	Population dynamics: temporal and spatial	236-245	
			ch12	
March				
11	5	Herbivory and predation: biology	Ch 14	
12	7	Herbivory and predation: models	Ch 15	#2 due
	12	Exam review		
	14	Exam 2 (lectures 7-12)		
	18-22	Spring break		
13	26	Competition	Ch 16, pg 200	
14	28	Biological invasions (Mike- Ruth out)	TBA	
April				
15	2	Coevolution and mutualisms	Ch 17	
16	4	Biological diversity	Ch 20	
17	9	Landscape ecology	Ch 25	#3 due
	11	Exam review		
	16	Exam 3 (lectures 13-17)		
20	18	Disease Ecology	TBA	
21	23	<i>Mike Miller</i> - Chronic Wasting Disease	TBA	
22	25	Conservation Ecology and Genetics	273-280, Ch 26	
23	30	<i>Chris Funk</i> - Climate change and biodiversity: an issue of scale	TBA	
May				
24	2	<i>Kevin Crooks</i> - Conservation and landscape ecology of large predators	TBA	
25	7	Our ecological footprint and where to go from here	TBA	#4 due
	9	FINAL EXAM (6:20 PM)		