

ECOLOGY AND EVOLUTION, BioS 230

Fall 2012 — Tuesday and Thursday, 9:30–10:45, LCE 101

Instructors

Dr. Roberta Mason-Gamer, robie@uic.edu, 1008 SEL, 996-4537, Office Hours Tu/Th 11:00–12:00
Dr. Emily Minor, emminor@uic.edu, 3346 SES, 355-0823, Office hours Tu 11:00–12:00, W 9:00–10:00
Ms. Mira Markova, dmarko5@uic.edu, 1016 SES, Office hours W 10:00–12:00, Th 11:00–12:00

We are happy to answer questions and discuss the material with you, so stop by during office hours. If our office hours don't match your schedule, please contact us to make an appointment.

Course Objectives

To develop an understanding of concepts and models of ecology (population growth, species interactions, community ecology, and energy and nutrient flow in ecosystems) and evolution (genetic basis of evolutionary change through adaptation, natural selection, and other mechanisms).

Texts

Evolutionary Analysis, 4th Edition (2007). Scott Freeman and Jon C. Herron. Companion Website:
http://wps.prenhall.com/esm_freeman_evolution_4

Elements of Ecology, 8th Edition (2012). Robert L. Smith and Thomas M. Smith. Companion website:
www.ecologyplace.com - follow the log-in instructions in your book

You may purchase the previous edition of either textbook, but you are responsible for the assigned reading material as it is presented in the current edition. Chapter and page numbers in earlier editions will not correspond to those used in the syllabus, lectures, or lecture summaries, so you will probably need occasional access to a current edition. We do not recommend using editions earlier than the one immediately previous to the current edition.

Exams

Three non-comprehensive in-class exams (100 points each) will include multiple-choice and short-answer questions. The final exam (150 points) will include only multiple-choice questions. The final will combine a non-comprehensive portion (100 points) covering the last lectures of the semester, and a comprehensive portion (50 points) covering the rest of the semester. Exams will include material from assigned textbook readings, lecture presentations, and any supplementary material specifically indicated by the instructor.

Exam 1, September 20, 100 points, lectures 1–7

Exam 2, October 16, 100 points, lectures 8–13

Exam 3, November 13, 100 points, lectures 14–20

Final Exam, December 12, 150 points total: 100 points, lectures 21–26 + 50 points, lectures 1–20

You might have other exams scheduled for the same days. **We cannot offer multiple exam dates to accommodate exams in other courses.** You must plan ahead, and take the BioS 230 exams on their scheduled days. Makeup exams will only be given in case of a conflict with an official UIC function (inform the instructors ahead of time), or a documented medical incident. The final exam will be given during UIC's designated final examinations week. Please account for this in your post-semester plans; no one will be allowed to take the exam prior to finals week. We will follow UIC's policy for students with more than two final exams scheduled for the same day:

http://www.uic.edu/depts/oar/current_students/calendars/final_exam_schedule.html#scheduling

Homework

Four homework exercises, worth 25 points each, will be posted on Blackboard and announced in class. You will have 5–7 days to complete each assignment. They will be due **at the beginning of class** on their due date. Two points will be deducted per day for late assignments. Late homework will not be accepted after the answers are posted on Blackboard.

iClickers

The iClickers will be used for answering questions during lectures. Eight of the in-class questions, distributed throughout the semester, will be counted for a single extra-credit point each. The dates of the extra-credit questions will not be announced ahead of time, but they will be announced in class at the time they are presented. No makeups will be given for iClicker points.

Supplementary Materials

Blackboard. For the first half of the class (Evolution), lecture summaries will be posted before each class; you should print these and bring them to class with you. Other supplementary materials will be announced and explained as they are posted.

FaceBook. A BioS230 FaceBook page will include links to photos, articles, videos, etc., that are related to class topics; students are encouraged to post relevant links. The page will also allow students to interact with each other; e.g., set up study groups, talk about lecture topics, etc. *You are not required to read the page, or participate in any way; no vital course-related information will be posted only on FaceBook.*

Academic Integrity

Academic dishonesty includes, but is not limited to, cheating, fabrication, facilitation of cheating, bribes, examination by proxy, grade tampering, and non-original works. For definitions of academic dishonesty, reporting procedures, and disciplinary policy, see UIC's student conduct page (<http://www.uic.edu/depts/dos/studentconduct.html>).

Grading

Exam 1	100 points	<u>Grades will be determined as follows:</u> A = 492–550 points = 89.5%–100% B = 437–491 points = 79.5%–89.4% C = 382–436 points = 69.5%–79.4% D = 302–381 points = 55%–69.4% F = < 302 points < 55%
Exam 2	100 points	
Exam 3	100 points	
Homework	100 points (4 x 25 points each)	
Final Exam	150 points	
Total	550 points	

Points from extra credit questions (eight maximum) will be added to the total from the exams and homework. Grades will be posted on Blackboard. The time it takes to grade an exam or assignment is variable, but we attempt to get your grades to you as quickly as possible. If you find a grading error in a homework assignment or exam, **you must notify your teaching assistant within one week** after the grade is posted. We will not “curve” any individual exam scores.

Disabilities

The University of Illinois at Chicago is committed to maintaining a barrier-free environment so that individuals with disabilities can fully access programs, courses, services, and activities at UIC. Students with disabilities who require accommodations for full access and participation in UIC Programs must be registered with the Disability Resource Center (DRC). Please contact DRC at (312) 413-2183 (voice) or (312) 413- 0123 (TDD). For more information about the DRC, visit their web page (http://www.uic.edu/depts/oa/disability_resources/index.html).

Schedule

Lecture	Date	Lecture Topic	Reading: Book, Chapter*
1	Tu 8/28	HIV and the Study of Evolution Other Evolving Pathogens	Freeman 1 Freeman 14
2	Th 8/30	Darwinian Natural Selection	Freeman 3
3	Tu 9/4	Origin of Genetic Variation – Mutation Genetics in Populations 1. Hardy-Weinberg Principle	Freeman 5 Freeman 6
4	Th 9/6	Genetics in Populations 2. Selection, Mutation, Migration	Freeman 6, 7
5	Tu 9/11	Genetics in populations 3. Genetic Drift, Non-Random Mating	Freeman 7
6	Th 9/13	Adaptation	Freeman 10
7	Tu 9/18	Sexual Selection	Freeman 11
--	Th 9/20	EXAM 1	--
8	Tu 9/25	Kin Selection	Freeman 12
9	Th 9/27	Species Concepts	Freeman 16
10	Tu 10/2	Speciation	Freeman 16
11	Th 10/4	Phylogenetics I	Freeman 4
12	Tu 10/9	Phylogenetics II, Human Evolution I	Freeman 4, 20
13	Th 10/11	Human Evolution II	Freeman 20
--	Tu 10/16	EXAM 2	--
14	Th 10/18	Introduction to Ecology; Biomes & Climate	Smith 1, 2, 24
15	Tu 10/23	Adaptations to the Environment	Smith 4, 6, 7
16	Th 10/25	Life History Patterns	Smith 10
17	Tu 10/30	Population Structure & Growth	Smith 8, 9
18	Th 11/1	Population Regulation & Metapopulations	Smith 11,12
19	Tu 11/6	Species Interactions	Smith 13,14,15.16
20	Th 11/8	Species Interactions (continued)	Smith 13,14,15.16
--	Tu 11/13	EXAM 3	--
21	Th 11/15	Community Structure & Dynamics	Smith 17,18,19
22	Tu 11/20	Landscape Ecology	Smith 20
--	Th 11/22	<i>Thanksgiving - no classes</i>	--
23	Tu 11/27	Biodiversity & Conservation	Smith 27,29
24	Th 11/29	Urban Ecology	TBA
25	Tu 12/4	Ecosystem Ecology	Smith 21.22
26	Th 12/6	Human Impact & Climate Change	Smith 28,30
--	W 12/12	FINAL EXAM 10:30–12:30	--

*Some chapters include material that will not be covered in class. Sometimes you will be asked to read some of this on your own, and that material will be included on the exams. You will not be responsible for topics in the textbook that are neither covered in class nor assigned as independent reading.