

BIOL 4680 – Ecology

Fall 2015

Instructor: Dr. Laurissa Hamilton

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Office and hours: N261, Monday & Wednesday: 9:15am – 10:45am & by appt.

Course Code, Time, and Location: 40177, MWF 11:00 - 11:50 am, N322

Textbook: Ecology: Concepts and Applications, 6th edition, by M. Molles (ISBN 9780073383224)

iClickers are required for this course

Course Description and Objectives:

Ecology is the study of the relationships of organisms and their physical environments. It encompasses the study of individuals, populations of individuals, entire species and their interactions, community structures and relationships, ecosystem level functioning, and large-scale interactions. Ecological studies may be empirical, seeking out factual information on how organisms relate to their living on nonliving world; or, ecological studies may focus on applied topics, seeking guidelines for mitigation of human impacts and conservation of natural resources.

Ecology is a senior level course. It is a 4-unit lecture and laboratory course. It covers the basic interrelationships of plants and animals within their physical environments. General Ecology satisfies the ecology requirement for the major. The lab course (BIOL 4682) is corequisite. Prerequisites are BOTY 1050, ZOOL 1050, OR BIOL 1150 and statistics or calculus.

There may be required outdoor work over the course of the semester, during class times. You must dress appropriately for outdoor work (jeans, sneakers, and rain gear if stormy) on these days. I will let you know the dates in advance.

The objectives for this course are that all participants gain a working knowledge of 1) the major aspects that contribute to describing an organism's ecology, 2) the multi-level structure of ecological concepts, and 3) the theories that guide modern ecology research.

Knowledge of ecological concepts is important to the study of any living thing, and it is critical that we apply this knowledge if we are to support the persistence of the species and landscapes present on our planet today.

Grading:

Lab and lecture points are combined for a single grade in the course. I do not use a curve and no grades will be changed once they have been submitted to the registrar. Grades will be assigned on a percentage of the possible points earned, thus

Grade Calculations Grades are based on the percentage of points earned.

A 93-100%	A- 90-93%	B+ 87-90%	B 83-87%	B- 80-83%	C+ 77-80%
C 73-77%	C- 70-73%	D+ 67-70%	D 63-67%	D- 60-63%	F 0-60%

NOTE: that Credit/No Credit is not an option for this course.

Points will be earned as follows:

6 midterm quizzes (lowest dropped), 50 pts. each	250 pts.
iClicker	~40 - 80
1 presentation	50 pts.
1 final exam, 100 pts.	100 pts.
Lab assignments	~350 pts.
Total	~800 pts.

Quizzes: Quizzes will be on material presented in lectures, student presentations, and readings from the textbook. Exam format may include essay questions, definitions, short answers, fill in the blanks, and multiple-choice. Always bring scantron 882-ES. The final exam will be comprehensive. Note that your highest five quiz grades will be used in the calculation of your final grade. Quizzes will only be given as scheduled. There will be no makeup quizzes. A quiz missed for any reason will automatically be the lowest and thus dropped grade.

Tentative Quiz / Final Exam Schedule

Quiz	Date
1	Sept. 11
2	Sept. 30
3	Oct. 16
4	Nov. 2
5	Nov. 20
6	Dec. 9
Final Exam	Dec 14 (11:15am – 1:15pm)

Final Exam: This will be comprehensive. Much of the exam is likely to come from the quizzes.

NOTE: If your overall class average of all six quizzes plus the presentation (without extra credit) is in the A range (i.e., over 90 %), you will not be required to take the final exam.

Participation:

Participation includes attendance and being actively engaged in the class. This definitely includes attending other students' presentations.

iClicker:

The iClicker is required for this course. Using clickers in class helps to make lecture more interactive. It keeps you awake, allows you to earn participation points, and it helps me to gauge how well the class understands my presentation.

- Register your iClicker at www.iclicker.com right away! Be sure to use your CSU Stanislaus username! (e.g. lhamilton) as your ID.
- ***Beginning on Monday (9/28) you will not be eligible for potential points via the iclicker system if you have not registered your iclicker. Points will begin accruing toward your grade on beginning on Monday, August 31st.***

- iClicker grading: 1 pt. for participating in the entire day's session, 1 pt. for the correct answer, ¼ pt for incorrect answer.
- You can purchase a used iClicker and re-register it under your own name.

Presentation (journal article):

The purpose of this presentation is to increase familiarity with scientific literature and to practice communications skills. This presentation will be on published refereed scientific paper in ecology. Each presentation has three parts: an oral presentation, a written outline, and a written abstract.

Each oral presentation will be 7-9 minutes duration using Powerpoint. It should include a short introduction to the study, a thorough explanation of the methods, clear results, and a short conclusion of the major findings.

Each typed outline will be a brief outline of the informational points in the oral presentation. The outline must conclude with 2 major "points to remember" from the paper. Note: these cannot be "random" points, but must be the major conclusions of the research in the paper. Enough photocopies of the outline must be ready and given to everyone in the class prior to the oral presentation. This should be 1-2 pages in length, no more, no less.

Each typed abstract is, of course, on the paper being presented. An abstract consists of 1-2 sentences of introduction, 1-2 sentences on methods, and several sentences on major findings. This is generally written as one or two paragraphs. The lower and upper page limits for this are ¾ to 1 ½ pages, double-spaced. Only one copy needs to be turned in directly to your teacher. This is also due on presentation day. Note that you cannot turn in the abstract which was published with your paper!

No quotes will be allowed in any part of the presentation or associated written tasks! No plagiarism allowed!

Grading will be on preparedness and knowledge of the paper's contents and following the presentation instructions (another handout). Level of nervousness will not be graded. However, you are expected to present in as professional a manner as possible.

Papers for the presentation must come from refereed scientific journals. Only papers published in 2014 or 2015 will be approved. Many journals have papers related to ecology. The most obvious ones that I recommend are Ecology or Ecology and Evolution. These are completely available to you online via our library (i.e. www.csustan.edu → library → electronic journals). Articles from other journals will also be considered.

→ When you think you have a paper that you want to present, bring a pdf copy of the first title page.

Note: all presentation articles must be pre-approved by your instructor by November 2. (Sooner is better and I will give priority of paper choice and scheduling to those who bring their requests first.) Presentations will be scheduled in labs during the weeks of Nov. 30 and Dec. 7.

Extra Credit:

A maximum of 10 Formal Extra Credit Points may be attempted during the semester. These points are added to your point total for the course. Additional, less formal extra credit opportunities *may* arise during the semester.

Ecology Related Work

You may earn 10 extra credit points for doing outside ecology-related work. You must obtain prior approval for the work from your instructor and sign a liability waiver. Examples of work that are likely to be approved include: helping with a ecology-related project at a park or refuge, helping with ecology-related research, or writing a 2-page abstract on a preapproved 2014 or later journal article. Note that any extra credit work is not a requirement for this course and that you must personally accept liability for your participation in any extra credit work. Also note, that any extra credit work must be approved by Nov. 16 and will be due by Nov. 30 at the beginning of class time. No extra credit work will be approved after that time and final grades will be final.

Ecology in the News

Over the course of the semester, find and share with the class one ecologically-related news story. The story should have something to do with ecology as the primary focus of the story. The news story must be fresh (same week (seven days) for a daily news source, same month for a monthly news source such as a magazine).

Type a 1-3 paragraph summary of the story. Include a full reference citation of your source in your write-up. This should include: author, date, title of the article, and name of the source (like the name of the newspaper, magazine, web news source including page title and URL, or radio show).

While your story is still fresh, share it with the rest of the class. Just let me know at the beginning of the class that you have a news story for us. Multiple students may present stories on the same day, even if they are the same exact story; however, once a story has been presented, it cannot be presented again on a subsequent day. So, when you find an interesting news story, get your summary ready for presenting right away!

5 points per news item, up to 10 points total. You may only present one article on any particular day.

Other:

1) Cheating and other forms of academic dishonesty (ex. plagiarism) will result in an automatic grade of F in the course. Note that plagiarism is using another's words without acknowledging the source. It includes minor tweaking of sentences and near quotes. Thus, when you do your presentation and associated outline and abstract, be sure that you use your own wording. Some

special phrasings must stay the same to retain meaning, but “lifting” of entire sentences or using entire paragraphs with just some minor rewording are both considered plagiarism!

2) Let me know if there is some reason why you need your cell phone on during class. Otherwise, cell phones should be **OFF** during class. This includes texting which is both rude and disruptive to your concentration and mine. Research has shown that “multitaskers” have decreased comprehension and accomplishment than “single taskers.” When you are in class, be totally in class.

3) Audio and video recording of this class are not allowed. Let me know if you have some reason why you think you should have an exception to this.