

BIO 3500: ECOLOGY AND THE ENVIRONMENT
FALL SEMESTER, 2017
SYLLABUS

Instructor: Dr. Chris Steiner
Biological Sciences Building, Office #3121
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LECTURE LOCATION/TIME

150 General Lectures
Tuesday and Thursday 11:30 am – 12:45 pm

HONORS SECTION LOCATION/TIME

Tuesday 9:30am - 10:30am. The start time, meeting place and frequency of meetings may change and will be announced on Blackboard and by email to participants.

OFFICE HOURS

Tuesday 2:00-3:00 pm, Thursday 10:00 am - 11:00 am.

COURSE DESCRIPTION

Ecology is an integrative scientific discipline that examines how organisms interact with each other and with their environment. This course will introduce you to the fundamental ecological processes that control the abundance, distribution, and diversity of organisms. It will illustrate these concepts using contemporary environmental issues, emphasizing the human dimension of ecology.

COURSE LEARNING OBJECTIVES:

Students will

- gain working knowledge of the scientific method and be able to use hypothetico-deductive reasoning to formulate predictions and tests of those predictions
- develop an understanding of the influence/impact humans have on natural ecological processes.
- exercise critical thinking and interpret data from graphs and models.
- develop an understanding of contemporary environmental issues and be able to critically evaluate the scientific basis of societal and political ecological/environmental issues.
- be able to evaluate legitimate scientific data.
- be able to apply knowledge; i.e., using both basic models and fundamental ecological principles apply them to novel situations and formulate predictions regarding ecological patterns and dynamics.
- develop an understanding of basic ecological concepts including:
 - how morphological and physiological traits of organisms influence their fitness, abundance and distributions in different environments
 - how species' traits influence their interactions with their environments and other organisms

- how environmental factors and species interactions influence species' abundances and distributions in space and time
- how energy and matter are stored, transformed and transferred among biotic and abiotic components of ecosystems
- how biodiversity and external environmental factors influence the functioning and stability of ecosystems
- how human activities alter natural populations, biodiversity, and the functioning of ecosystems

COURSE PREREQUISITES

BIO 2200 and BIO 2600 with grades of C-minus or above.

REQUIRED COURSE MATERIALS

1. Environmental Science: Foundations and Applications, First Edition (2012), by Andrew Friedland, Rick Relyea, and David Courard-Hauri.

The book is on reserve at the Undergraduate Library (UGL). Additional supplemental readings may be assigned for certain lectures and will be made available on Blackboard. The degree to which lectures use materials directly from the textbook will vary greatly, with some lectures drawing more heavily from outside sources (such as news articles, books and primary literature). Thus, it is vital that you attend lectures and take notes in order to do well in this class.

2. iClicker remote or iClicker Reef

This course will make use of iClicker technology for in-class question/answer exercises and extra credit quizzes. You may use either iClicker remote keypads (e.g., iClicker 2 available at the University bookstore) or the iClicker Reef system which can be accessed through a mobile device or laptop (via wireless). The iClicker Reef app is available for IOS or Android phones while the online portal can be accessed at <https://app.reef-education.com/#/login>. Access is free for 14 days after which a subscription must be purchased. Students using the iClicker remote keypad must register their remote online at <https://app.reef-education.com/#/login>. All students must register online and add this course to their online portfolio by **Thursday, September 7**.

I try to have question/answer exercises during most lectures (though we may skip a lecture from time to time); you will earn participation points for taking part in the question/answer exercises which will count towards 5% of your grade (see Grading below). In addition to question/answer sessions, iClickers will also be used to take short extra credit quizzes which will be periodically administered during lecture periods throughout the semester. You can earn up to 50 points total towards your grade from the extra credit quizzes. Quizzes will be announced ahead of time in preceding lectures and on Blackboard. There are no make-up opportunities for missed iClicker/REEF questions or extra credit quizzes. Students arriving late or who are absent from class will not be able to answer missed questions.

EXAM FORMAT AND DATES

You must bring your student ID (Onecard) to all exams. All exams are multiple choice (forms will be provided). Three midterm examinations (scheduled for **September 28, October 19, and November 9**) will be given during the lecture period. A two-hour final will be given during the scheduled final exam period (**Tuesday, December 19, 10:15 am – 12:15 pm**). The final exam will be cumulative, but

the majority of questions will be drawn from lectures 18-25. All students are expected to take the exams at these times. Reasonable exceptions will be granted in cases of illness, which will require notification prior to the exam (via email) and must be followed up with an original signed note from a physician on official stationary. Exams will be closed book and held in class. No electronic devices of any kind (including watches) will be allowed and cell phones must be turned off. Anyone who leaves the exam room will not be allowed back in. Late-arriving students should know that admittance into the exam room will not be allowed after the first student has left the room.

GRADING

Your grade will be based on points earned from the exams and in-class participation (based on in-class iClicker exercises):

Midterm Exam 1	200
Midterm Exam 2	200
Midterm Exam 3	200
Final exam	350
<u>Participation (iClicker questions)</u>	<u>50</u>
<i>Total points possible:</i>	<i>1000</i>

Extra credit iClicker quizzes are worth up to a total of 50 points towards your grade.

You will be graded based on the following scale.

A	93.5 – 100%	C	72.5 – 75.4%
A-	89.5 – 93.4%	C-	69.5 – 72.4%
B+	85.5 – 89.4%	D+	65.5 – 69.4%
B	82.5 – 85.4%	D	62.5 – 65.4%
B-	79.5 – 82.4%	D-	59.5 – 62.4%
C+	75.5 – 79.4%	F	≤ 59.4%

MAKE-UP EXAM POLICY

If the student's absence from an exam is a legitimate documented emergency, then the student's score on the cumulative portion of the Final Exam may (at the discretion of the instructor) be pro-rated to cover the missed exam.

EXAM GRADE DISPUTES / CHALLENGE OPTION

Students will have one (1) week after the return of an exam to challenge a grade for any question. Failure to challenge the grade within this period indicates a willingness to accept the grade as is. The challenge should consist of a written description of why the answer is correct based on other published material that you cite.

CHEATING

Cheating is covered in detail in the Wayne State University Code of Conduct, found at <https://doso.wayne.edu/conduct>

Students found to be cheating during an exam (using a "cheat sheet" in physical or electronic form, looking at another's paper, or allowing another to look at yours), will receive a zero for that test with no

opportunity to drop or replace that score. A second episode of cheating will result in a grade of F for the course and may also result in initiation of university disciplinary action.

No electronic devices (cell phones, tablets, computers, smart watches, cameras, calculators, etc.) are to be present at an exam. Those present will be confiscated until the exam is completed, and students using such devices to cheat on an exam will receive a zero on the exam.

POSTING OF EXAM GRADES

Exam grades will be posted on Blackboard by Student ID Number as soon as possible after the exam has been administered.

HONOR STUDENT REQUIREMENTS

Honors students will work in groups to develop lab exercises that may be used in future laboratory sections of BIO 4130 (Ecology). Individuals must develop a written lab handout due Thursday, December 7, before the end of class. Successful completion of the honors section is dependent on attendance of scheduled meetings (10 points) and the written assignment (100 points). Students who receive <70 points on the written assignment will receive an incomplete (I) grade for the course until the written assignment is revised to an adequate level (incompletes automatically revert to a “F” after 12 months).

SPECIAL CONSIDERATIONS FOR INDIVIDUALS WITH DISABILITIES

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TTD only). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours or at another agreed upon time to discuss your needs. The mission of Student Disability Services' is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University. Please be aware that a delay in getting SDS accommodation letters for the current semester may hinder the availability or facilitation of those accommodations in a timely manner. Therefore, it is in your best interest to get your accommodation letters as early in the semester as possible.

RELIGIOUS HOLIDAY CONFLICTS

If you have a conflict with any of the scheduled class or exam times due to religious reasons, you must notify Dr. Steiner via email at least two weeks in advance of the date of conflict.

ADD/DROP POLICY

September 13, 2017 is the last day you can drop classes and get your tuition refunded. The last day you can drop this course and have no record on your transcript is September 27, 2017. From September 28, 2017 until the last withdraw date (November 12, 2017), if you withdraw from the course you will receive a WN on your transcript if you never completed any exams; a WP if you have greater than 60% of the points possible at the time of your request on exams; or a WF if you have less than 60% of the points possible at the time of your request. No exams are dropped or replaced in this calculation. You can initiate a withdrawal request in Academica, and the system will contact me. I will respond within

five business days. Failure to withdraw before the deadline will result in the student receiving the grade earned in the course. See <http://reg.wayne.edu/students/calendar17-18.php> for more important dates.

UNEXPECTED UNIVERSITY CLOSURES

If the University is officially closed on an exam day, the exam will be held on the next regularly scheduled class day. Closure of the University is announced by the following mechanisms:

1. the University Newsline (313) 577-5345 *
2. WSU Homepage (www.wayne.edu) *
3. WSU Academica portal (academica.aws.wayne.edu) *
4. WDET-FM (Public Radio 101.9)
5. by other local radio and television stations

* Note: The information on closures and class cancellations is likely to be found at these locations before it is broadcast by local radio and television stations

Any specific issue not covered by this syllabus will be resolved using University policies. Disputes that cannot be resolved following the guidelines present in this syllabus will be resolved by following the guidelines of the University "Student Due Process".