



BIOL 3500 – Ecology

Course Syllabus – Fall 2015

Individuals with disabilities who need to request accommodations should contact the Disability Services Coordinator, Student Center 255, (678) 466-5445, disabilityservices@mail.clayton.edu.

Course Description:

Number and Title:

BIOL 3500 (CRN 80672)
Ecology

Credit Hours:

3.0 semester credit hours

Catalog Description:

The environment is made of both living and non-living components. This course examines the relationships between these various components in the biosphere. Students will learn how complex natural cycles and chains can be perturbed by small disturbances, and conversely, how life adapts to these changes.

Course Prerequisites and Co-requisites:

- Prerequisites:
 - MATH 1231, with a minimum grade of C
 - BIOL 1107, with a minimum grade of C, and BIOL 1107L, with a minimum grade of C, and BIOL 1108, with a minimum grade of C, and BIOL 1108L, with a minimum grade of C; or BIOL 1112, with a minimum grade of C.

Computer Requirement:

Each CSU student is required to have ready access throughout the semester to a notebook computer that meets faculty-approved

hardware and software requirements for the student's academic program. Students will sign a statement attesting to such access. For further information on CSU's Official Notebook Computer Policy, please go to

<http://www.clayton.edu/hub/itpchoice/notebookcomputerpolicy>.

Software Requirement:

To properly access the course content you will need to download the following free software:

- Adobe Reader (needed to access files in PDF format):
<http://get.adobe.com/reader/>
- Adobe Flash (needed to access video content):
<http://get.adobe.com/flashplayer/>

Computer Skill Prerequisites:

- Able to use the Windows™ operating system
- Able to use Microsoft Word™ word processing
- Able to send and receive e-mail using Outlook™ or Outlook Express™
- Able to attach and retrieve attached files via email
- Able to use a Web browser.

In-class Use of Student Notebook Computers:

Student notebook computers may be used in the classroom, provided their use is not distracting for other students. Computers will be required to access course materials and to communicate with your instructor.

GeorgiaVIEW Desire2Learn (Online Classroom):

On-line activity will take place in Desire2Learn, the virtual classroom for the course.

You can gain access to Desire2Learn, by signing on to the SWAN portal and selecting: "D2L" on the top right side. If you experience any difficulties in Desire2Learn, please email or call The HUB at TheHub@mail.clayton.edu or (678) 466-HELP. You will need to provide the date and time of the problem, your SWAN username, the name of the course that you are attempting to access, and your instructor's name.

Biology Learning Outcomes:

BIOL 3500 is a required course in the B.S. degree program in Biology. BIOL 3500 supports all seven outcomes of the biology major:

- Effectively demonstrate knowledge of the basic principles of major fields of biology.
 - Demonstrate a mastery of a broad range of basic lab and technology skills applicable to biology.
 - Apply knowledge of physical science, mathematics, and statistics to biological concepts.
 - Communicate scientific information in a clear, concise manner both orally and in writing.
 - Demonstrate the ability to collect, evaluate and interpret scientific data, and employ critical thinking to solve problems in biological science and supporting fields
 - Collaborate effectively on team-oriented projects.
 - Demonstrate the ability to identify and describe the impact of biological science on the environment and society.
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Course Learning Outcomes:

After this course, I want you to be able to:

- Understand the core concepts of ecology, and apply those concepts to novel systems.
 - Develop conceptual models to explain the complexity in ecological systems.
 - Appreciate the value of ecology for all organisms and at all scales of biology.
 - Gain proficiency at reading and understanding scientific literature.
 - Design studies that appropriately investigate scientific questions.
 - Manipulate and graph data using Microsoft Excel.
 - Perform and interpret statistical analyses of data.
 - Critically evaluate the experimental design and statistical analyses of other researchers.
 - Clearly communicate the details of scientific studies through writing.
 - Confidently articulate your ideas in group discussions.
 - Improve your study skills, including the habit of reflection.
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Instructor Information:

Ann Showalter, PhD

Email: AnnShowalter@clayton.edu

Phone: (678) 466-4771

Website: www.annshowalter.com

Office: NBS 161

Office hours: Mon & Wed 2:15-5pm, Tues 1-1:45pm

The best way to contact me is via email. If you do not get a response within one business day, assume I did not get your email. I do not always check email on weekends. Do not contact

me through the message service on Desire2Learn – I do not check this regularly.

Class Meetings:

Classroom: Laboratory Annex Building, Room 107

Class times: Monday and Wednesday, 12:45pm – 2:00pm

Textbook Information:

Cain, Bowman, and Hacker, Ecology, 3rd edition, Sinaur, 2014.

Students are encouraged to use PriceLoch.com to comparison shop for textbooks.

Evaluation:

Grade item	Points	%
Weekly online quizzes: 14 quizzes @ 10pts	140	23%
Scientific articles: 3 articles @ 15pts	45	7.5%
Assignments/homework	100	17%
Exams*: 4 exams @ 75pts	300	50%
Exam reflections: 3 reflections @ 5pts	15	2.5%
TOTAL	600	100%

***All exams are comprehensive** and include an in-class portion (50pts each) and a take-home portion (25pts each). In-class exams will be a mix of multiple-choice and short-answer questions, while take-home exams will be essay questions.

Grading:

Grade	Percentage
A	89.5 - 100%
B	79.5 – 89.4%
C	69.5 – 79.4%
D	59.5 – 69.4%
F	below 59.4%

Mid-term Progress Report:

The mid-term grade in this course, which will be issued on October 1, reflects approximately 30% of the entire course grade. Based on this grade, students may choose to withdraw from the course and receive a grade of "W." Students pursuing this option must fill out an official withdrawal form, available in the Office of the Registrar, or withdraw on-line using the Swan by mid-term, which occurs on October 9. [Instructions for withdrawing are provided at this link.](#)

The last day to withdraw without academic accountability is Friday, October 9, 2015

Course Schedule:

The following schedule is tentative and may be subject to change. However, exam dates are fixed.

Date	Topic	Text Chapter/Pages
Aug 17	Introduction to ecology	Chapter 1
Aug 19	The physical environment	p. 23-26, 28-34, 38-39, 44-46
Aug 24	Evolution in ecology	p. 137-140, 144-148, 154-156
Aug 26	Coping with variation in temperature	p. 85-98
Aug 31	Coping with variation in energy	Chapter 5
Sept 2	Niche – case study	

Sept 7	No class – Labor Day	
Sept 9	Exam 1	
Sept 14	Population distribution and abundance	p. 205-213, 216-217
Sept 16	Article discussion	
Sept 21	Population growth, regulation, and dynamics	p. 230-231, 236-244, 250-257
Sept 23	Population growth, regulation, and dynamics	p. 230-231, 236-244, 250-257
Sept 28	Case study or article discussion	
Sept 30	Competition	Chapter 12
Oct 5	Exam 2	
Oct 7	Competition	Chapter 12
Oct 9	Last day to withdraw without academic accountability	
Oct 12	No class – Fall Break	
Oct 14	Predation	Chapter 13
Oct 19	Predation	Chapter 13
Oct 21	Article discussion	
Oct 26	Mutualism and commensalism	Chapter 15
Oct 28	Food webs and species networks	p. 359-362, 367-374, Chapter 21
Nov 2	Food webs and species networks	p. 359-362, 367-374, Chapter 21
Nov 4	Lyme disease – case study or discussion	
Nov 9	Exam 3	
Nov 11	Species richness and diversity	p. 362-366, 431-434, 442-444
Nov 16	Succession	p. 380-393
Nov 18	Human microbiome – case study	
Nov 23	The nitrogen cycle	p. 500-501, 503-504, 575-577
Nov 25	No class – Thanksgiving Holiday	

Nov 30	Nitrogen in aquatic ecosystems	p. 511-514, 587-589
Dec 2	Nitrogen – case study	
Dec 7	Nitrogen – case study	
Dec 14	Comprehensive Final Exam @ 10:15am	

Course Policies:

- 1. Attendance is expected.** Students are responsible for obtaining any missed information from other students or D2L. This includes information concerning quiz dates, exam dates, due dates, etc.

While I track attendance, it is not an explicit part of your grade, and I do not require documentation for missed classes, unless you need to be excused from late penalties on assignments that were due in your absence. In these instances, please contact me as soon as possible to discuss your situation, and written documentation from an authority (doctor, judge, etc.) will be required for any waivers of the late penalty.
- 2. Late policy on assignments.** Unless otherwise indicated, all assignments are due at the start of class. Late assignments are subject to a penalty of 10% of the points for each day (i.e., 24 hour period) that the assignment is late.
- 3. Many assignments will be submitted on Dropbox in D2L.** It is your responsibility to ensure that the appropriate documents have been submitted by the deadline. Submit documents as Word (.doc or .docx) or Excel (.xls, .xlsx, or .csv) files only – I will not accept Pages (sorry Mac users!), PDFs, or Google docs for any assignments. If you submit inappropriate documents (e.g., wrong file format or wrong assignment altogether), you will be subject to late penalties until you post the appropriate file to Dropbox.
- 4. Help! D2L is not working and something is due today!** If you have problems with uploading a document to D2L, email your assignment to me instead. I may still ask you to upload your assignment when the D2L problems have been resolved, but I will not take late penalties. If you experience problems with the online quizzes, email me as soon as possible so I am aware of your situation, and we will work out how to fairly resolve the situation.
- 5. Respectful behavior is expected.** This means active listening when I am talking or when another student is talking during class discussions. Inappropriate side-conversations and the inappropriate use of laptops/cell phones is distracting to other students and disrespectful to everyone. Students repeatedly violating this policy will be asked to leave the classroom for being disruptive.

6. Procedures for in-class exams.

- i. Exam dates are fixed and will not change. So mark your calendars. If you cannot take the exam on the date listed in the syllabus, your make-up exam will be harder than the regular exam (to account for the extra study time you got).
- ii. Exams start at the beginning of class. Students who arrive late will not be given extra time on the exam.
- iii. You are allowed one 8.5"x11" cheat-sheet on the in-class exams. You can write whatever you want on this paper, but you must turn in your cheat-sheet with your exam.
- iv. The use of or possession on your person of a cell phone, or any other electronic device, is not permitted during an exam. Anyone caught with a cell phone (in your hands, or lap, or pocket, etc.) will be subject to disciplinary action (see Academic Dishonesty below) and will receive a zero on the exam.

7. **Plagiarism will NOT be tolerated**, and any instances of plagiarism will be subject to disciplinary action (see Academic Dishonesty below). Ignorance is not an excuse. I consider your completion of the plagiarism awareness homework assignment as evidence that you understand the various forms of plagiarism. If you are ever in doubt, please ask me (or the Writers' Studio) for help.

8. **Visitors are not permitted without the instructor's permission.** Children are not allowed in the classroom at any time.

General University Policies & Other Services:

General Policy

Students must abide by policies in the [Clayton State University Student Resource Handbook](#), and the [Basic Undergraduate Student Responsibilities](#).

University Attendance Policy

Students are expected to attend and participate in every class meeting. Instructors establish specific policies relating to absences in their courses and communicate these policies to the students through the course syllabi. Individual instructors, based upon the nature of the course, determine what effect excused and unexcused absences have in determining grades and upon students' ability to remain enrolled in their courses. The university reserves the right to determine that excessive absences, whether justified or not, are sufficient cause for institutional withdrawals or failing grades.

Academic Dishonesty

Any type of activity that is considered dishonest by reasonable standards may constitute academic misconduct. The most common forms of academic misconduct are violating testing procedures, cheating, and plagiarism. All instances of academic dishonesty will result in a grade of zero for the work involved. All instances of academic dishonesty will be reported to the [Office of Community Standards](#). Judicial procedures are described in the [Student Resource Handbook](#) (Procedures for Adjudicating Alleged Academic Conduct Infractions beginning on page 16).

Plagiarism Detection Software

Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. You should submit your papers in such a way that no identifying information about you is included.

Disruption of the Learning Environment

Behavior which disrupts the teaching–learning process during class activities will not be tolerated. While a variety of behaviors can be disruptive in a classroom setting, more serious examples include belligerent, abusive, profane, and/or threatening behavior. A student who fails to respond to reasonable faculty direction regarding classroom behavior and/or behavior while participating in classroom activities may be dismissed from class. A student who is dismissed is entitled to due process and will be afforded such rights as soon as possible following dismissal. If found in violation, a student may be administratively withdrawn and may receive a grade of WF.

A more detailed description of examples of disruptive behavior and appeal procedures is provided at:

<http://www.clayton.edu/Portals/5/DisruptiveClassroomBehavior.pdf>

Writing Assistance

The Writers' Studio 224 is located in the A&S building, room 224. There you can talk with trained writing consultants about your writing projects. They are available to work with you at any stage of your paper, from generating ideas to organizing your paper to understanding how to format it correctly. The service is free; you may drop in and wait for a consultant or sign up for a regular appointment. But remember: you, not your consultant, are ultimately responsible for the quality and content of the papers you submit. Visit our website for more information: <http://clayton.edu/writersstudio>.

Operation Study

At Clayton State University, we expect and support high motivation and academic achievement. Look for Operation Study activities and programs this semester that are designed to enhance your academic success such as study sessions, study breaks, workshops, and opportunities to earn Study Bucks (for use in the University Bookstore) and other items. See the following site for details: <http://www.clayton.edu/operation-study>

Changes or additions to this syllabus, including reading, exam schedule, grading, and course policies can be made at the discretion of the instructor at any time.

Last update: August 13, 2015
