

Eastern Kentucky University
Department of Biological Sciences
BIO 112 Ecology and Evolution, CRN XXXXX
4 Credit Hours
Fall XXXX

Professor's Name

Professor's Office #

Professor's Contact Information

Catalog Course Description:

An introduction to the fundamental principles of ecology and evolution: interactions among plants, animals, microbes, and their environment, and the diversification of life through evolutionary processes. Designed for biology majors. 3 Lec/2 Lab. Gen. Ed. E-4 [NS]. Prerequisite: Completions of all developmental requirements.

Text:

Required Textbook

Brooker RJ, EP Widmaier, LE Graham, and PD Stiling. 2014. *Biology: Biology 112 Special Edition for Eastern Kentucky University*, 3rd ed. McGraw Hill Education. ISBN: 978-1-259-12639-0.

Required Lab Manual

The lab manual will be handed to students during lab and posted under Course Documents in BlackBoard. Students are highly encouraged to purchase (at least) a 1½ -inch, 3-Ring Binder to organize and store the lab manual, SimUText workbooks, notes, and data.

Required SimBio/SimUText Access

Students must purchase the lab course pack from SimBio before the second lab meeting. This pack can be purchased directly from the SimBio website (<https://simutext.com/student/pages/Welcome.jsp>) using a credit or debit card. Students will be given the access key code during lab. The SimBio pack includes five lab activities that will be completed through their SimUText software. SimUText can be installed onto students' personal computers or on a university laboratory computer.

Student Learning Outcomes:

Upon the successful completion of this course, students will be able to:

1. Demonstrate an understanding of the scientific methods used to answer biological questions.
2. Use observational and experimental data to make reasonable and valid conclusions.
3. Recognize evolutionary processes and how they are a common thread throughout biology.
4. Demonstrate an understanding of how genetic mechanisms contribute to evolution.
5. Identify how evolutionary processes produce patterns of diversity.
6. Recognize the variation of species interactions and how they influence the functioning of ecological communities.
7. Trace the flow of energy and cycling of materials within ecosystems.
8. Analyze the effects of human activities on biodiversity in natural systems.

Evaluation Methods:

Requirement	% of Grade	Points	Total Points
Lecture	69		680
<i>In-class Activities</i>	15	5-30/Activity	150
<i>5 Blackboard Quizzes</i>	5	10/Quiz	50
<i>Biomes Newsletter</i>	3	30	30
<i>3 Lecture Exams</i>	31	100/Exam	300
<i>1 Comprehensive Final Exam</i>	15	150	150
Lab	31		300
Total	100		980

In-class Activities: In-class activities are designed to gauge student learning and progress using course materials. These assignments will range from student discussions to short writing assignments. Points available for these activities will vary depending on rigor, length, and time available to complete the activity. Thus, materials covered in the assignments but not in lecture may also be included on exams. Each in-class activity will be due by the end of class.

Blackboard Quizzes: The Blackboard quizzes are designed to help students review the course material, recharge student memories, and most importantly prepare students for this course's exam style. Thus, the quizzes are formatted in a similar style to the lecture exam questions, including multiple choice and multiple answer type questions. These quizzes are designed to gauge students' knowledge, understanding, and application of the course material. All quizzes will be administered through Blackboard.

Biomes Newsletter: The objective of the Biomes Newsletter is to spark the creative mind in students and to research the characteristics of a selected biome, including climate, weather patterns, flora, fauna, and unusual endangered organisms. This newsletter must be complete in a group of. This newsletter must be complete in a group of 2 or 3 students and will be submitted through SafeAssign in Blackboard.

Lecture/Final Exams: The objective of the in-class exams is to evaluate students' understanding of the topics through the application of course materials (e.g., textbook, in-class activities, Blackboard quizzes, and lecture notes) to given scenarios. The exam format will be a combination of multiple choices, listing in order, fill-in-the blank, matching, short answer, and essays. Students will use ScanTron answer sheets for part of the exam; therefore, students must bring a #2 pencil. Students can only attend exams in their own section, as other lecture sections may be on a difference schedule.

Grades and Grading Scale

Students can monitor their progress in the course through Blackboard. Blackboard will display both the total number of points and the percentage earned in the class.

Letter	% Range	Points Needed	Letter	% Range	Points Needed
A	90.0 – 100.0	≥ 882	D	60.0 – 69.9	588-685
B	80.0 – 89.9	784-881	F	< 60.0	≤ 587
C	70.0 – 79.9	686-783			

Attendance Policy:

Missing 20% of the lecture or lab meetings will result in the automatic failure of the course. Twenty percent is equivalent to missing 8 lectures or 3 labs. Thus, attendance to lecture and lab is necessary in order for students to pass the course. Lecture handouts and supplementary materials may be distributed during lecture. The student is responsible for getting these handouts and lecture notes, and absence will not be accepted as an excuse for not having them. If a student misses lecture, then do not contact the instructor to ask, “what did we do today?” or “could you send me your completed lecture PowerPoint slides?” or any variation of these questions. The following are approved excuses for your absence in class: 1) original health care provider’s excuse with swith signature (copies will not be accepted); 2) death in the immediate family (with documentation); participations in a university-approved activity (with documentation). All other excuses will not be accepted.

Lateness Policy

In-class Activities: Students that miss an in-class activity will receive a zero for the activity and will only have an opportunity to make-up the activity IF the student has an approved excuse (see below). The instructor and student will negotiate a due date to give the student plenty of time to complete the activity. Students that attend class to complete the in-class activity and then leave after the activity will also receive a zero for the activity. Further, students that arrive during or after the activity will receive a zero for the activity.

Blackboard Quizzes: Students that miss a Blackboard quiz will receive a zero for the quiz and will NOT have any opportunity to make-up the quiz. Students will have one week to take the quiz, so plan accordingly.

Exams: If for some legitimate reason a student cannot take a lecture exam on the scheduled date (see below for approved excuses), contact the instructor in advance. The instructor and student will negotiate a make-up exam, within one week of the scheduled exam. Otherwise, the student will earn a zero for missing the scheduled exam. Students will have zero opportunity to make-up the lecture final exam. If you arrive late to an exam, you will not be given extra time to finish the exam.

Last Date to Drop the Course: As posted in the Colonel's Compass

Disability Statement:

The University strives to make all learning experiences as accessible as possible. If you are registered with the ECU Center for Student Accessibility (CSA), please obtain your accommodation letters from the CSA, present them to the course instructor, and discuss the accommodations needed. If you believe you need an accommodation and are not registered with the CSA, please contact the office in 361 Whitlock Building by email at disserv@ecu.edu or by telephone at (859) 622-2933. Upon individual request, this syllabus can be made available in an alternative format.

Academic Integrity Statement:

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Students are advised that ECU's Academic Integrity Policy will strictly be enforced in this course. The Academic Integrity policy is available at <http://www.academicintegrity.ecu.edu/>. This statement is applicable to all ECU students in all courses regardless of whether it appears in the class syllabus. Questions regarding the policy may be directed to the Office of Academic Integrity.

Official E-mail:

An official EKU email is established for each registered student, each faculty member, and each staff member. All university communications sent via email will be sent to this EKU email address.

Course Requirements:**Course Outline:**

This schedule is tentative, which means that the instructor has the authority to modify as needed. Instances where the course schedule needs modification include, but are not limited to, time to cover the material, instances out of our control (e.g., weather), or changes in reading materials.

Week	Date	Topic	Chapter/Due Dates
1	8/22-8/26	Syllabus / Introduction to Biology	Chapter 1
2	8/29-9/2	Population Genetics	Chapter 24 Quiz 1 Due (9/4)
3	9/5-9/9	Labor Day – No Class (M 9/5) Origin of Species	Chapter 25
4	9/12-9/16	Macroevolution	Chapter 25 Quiz 2 Due (9/18)
5	9/19-9/23	M 2/15 ***Exam 1*** Evidence for Evolution	Chapter 23
6	9/26-9/30	Evidence for Evolution Assurance of Learning – No Class (F 9/30)	Chapter 26 Quiz 3 Due (10/2)
7	10/3-10/7	Taxonomy and Systematics	Chapter 26
8	10/10-10/14	The Scales of Ecology	Chapter 54 Quiz 4 Due (10/16)
9	10/17-10/21	Fall Break – No Class (M 10/17) The Blank Paper F 10/21 ***Exam 2***	
10	10/24-10/28		
11	10/31-11/4	Population Ecology Teach Me	Chapter 56
12	11/7-11/11	Species Interactions	Chapter 57 Quiz 5 Due (11/13)
13	11/14-11/18	W 11/14 ***Exam 3*** Community Ecology	Chapter 58
14	11/21-11/25	Thanksgiving Break - No Class (M/F 11/23 & 11/25)	
15	11/28-12/2	Ecosystem Ecology Biomes Newsletter Due	Chapter 59
16	12/5-12/9	Biodiversity and Conservation Ecology Being a Model	Chapter 60
17	12/14	FINAL EXAM 8:00 AM – 10:00 AM	Comprehensive