Syllabus BIOL 3336 – ECOLOGY **Fall 2025**

Professor:

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Comments about emails. Emails sent during normal business hours (e.g., 9am to 5pm) can expect a reply that day. Emails sent outside of those times (evenings, weekends or holidays) will receive an answer by the next business day. If you have an emergency, send the email so that I have record of it and I will respond when I can. Pay attention to all announcements in class on on Canvas (or email).

Office Hours: MWF 1:00-2:30 pm or by appointment.

Course Meeting Time: MWF 11:15-12:10 pm, Cowan Fine Arts 1009

Course Description: Study of the interrelationships of organisms with other organisms and their environment. Co-requisite: BIOL 3137. Prerequisites: BIOL 1306/1106, BIOL 1307/1107.

Course Objectives/Student Learning Outcomes

1. Develop the ability to evaluate scientific inquiry on issues in the field of Ecology.
2. Learn the various mechanisms that organisms use in interacting with both the physical and natural world.
3. Understand how the physical world determines the distribution and abundance of organisms
4. Understand the types and outcomes of ecological interactions.
5. Understand the structure and function of different types of ecosystems.
6. Understand how to interpret scientific data presented in figures and tables.

Required Texts:

1. Bowman, William D. and Sally D. Hacker et al. *Ecology*, 6th editions, Sinauer.

2. Diamond, Jared. 1997. *Guns, Germs and Steel: The Fates of Human Societies*. W.W. Norton & Company

Please note that the order of some chapters in earlier editions (*e.g.,* interspecific interactions (Chapters 12-15 in 3rd edition) do not correspond exactly with the order in later editions. The content is the same in the various editions, however. **Please emphasize the chapter titles, not the numbers** when/if you have questions about the topics as numbers have changed from one edition to the next. I think about topics rather than how they are organized in the book (and so should you).

Evaluation:

1. 4 Lecture exams (100 points each, 400 points total)
    a. Optional Final exam (100 points, will replace lowest exam grade)
2. Attendance (100 points)
3. 1 Quiz on *Guns, Germs and Steel*. (50 points)
4. 1 Online Syllabus Quiz (10 points)

Total Points possible: 560 points

Final grades in the course will be determined by a standard grading system
90 – 100% = A 80 – 89% = B 70 – 79% = C 60 – 69% = D < 59% = F

Rounding: Grades will be rounded to the nearest whole number. Therefore, a 79.1 would be rounded down to a 79 (a 'C') and a 79.6 would be rounded up to an 80 (a 'B') and so on. This also means that grades in the middle of a bin, e.g., a 77 or an 87 will not be rounded to an 80 or 90, respectively.

1. **Exams.** Each student will have an entire class period take the exam. See policy on missed exams and assignments below. Although exams will stress the material preceding each exam, all exams should be considered comprehensive (as is all biology). Exams will cover the materials presented in lectures and assigned readings. Exams may contain a mix of multiple choice, definitions and essay/short answer questions. If you arrive late to class and everyone has completed the quiz or exam, you will not get a makeup quiz or exam. If you arrive late and someone has taken the quiz (or exam) and left the room, you will not take a quiz or exam. Arrive to class on time. **Realize that questions of written exams are not 'open ended questions' or opinion-based. The questions I ask you will have definite, correct answers and will not involve your opinions unless I explicitly ask you for your opinions.** Also realize that if you write a very long answer but do not answer the question and/or provide factually incorrect statements, you may earn 0 points for that question. While you may earn partial credit, depending on the completeness of your answers, do not expect to receive points for effort. If you do not answer the question, you will receive zero points. Students must answer the questions clearly using complete sentences, not bullets or phrases. This is not meant to torture students, but the ability to communicate effectively and remember content across courses are very important skills. Thus the clarity of written answer will be a factor in grading.

2. **Attendance.** Attendance is mandatory and will be taken in class. If you sign in for a friend (or friends), all of you will be counted as absent. Also, if you sign in and then leave before class is dismissed, you will be counted as absent.

3. ***Guns, Germs and Steel* Quiz**. You are required to read this book. My recommendation would be to read this book early in the semester, take notes and think about it as we

explore other topics throughout the semester. This book should help you think about how climate and the environment impacted human society and will continue to impact. There will be an in-class, open-note quiz about this book toward the end of the semester. You will need to have read this book to perform well on the quiz. Do not rely on a AI summary or anything other than the original text.

4. **Syllabus Quiz**. There will be a short, online quiz in the first 1-2 weeks on course policy.

More on grading. In the event you wish to dispute an exam question, an essay outlining your argument must be submitted within one week of the exam being handed back to you. Your request must be justified with content from the lecture, textbook or other scientific peer-reviewed source, i.e., not random websites Calculation mistakes must also be made in writing. No make-up exams will be given, unless arranged ahead of time with a valid excuse (e.g., athletic tournament, hospitalization, etc.).

No Grade Grubbing (please!). Grade grubbing is asking for points you did not earn. It's unethical to ask and would be unethical for me to award points. Also, within the category of grade grubbing is asking for exams or quizzes to be regraded outside the window where you are allowed to do so. Grade grubbing is **not** asking about your grades or trying to understand where you went wrong.

Academic Misconduct: Submitting plagiarized work to meet academic requirements including the representation of another's work or ideas as one's own; the unacknowledged word for word use of another person's ideas; and/or the falsification, fabrication, or dishonesty in reporting research results shall be grounds for charges of academic misconduct. **Any cheating or other type of academic misconduct will be reported to university administration and at minimum will result in automatic failure of the course.** Cell phone use during exams or quizzes is strictly forbidden.

Supplements: Illustrations, announcements and PowerPoint presentations will be available on Canvas. These materials are strictly for your own use, and are not to be disseminated to anyone else, under any circumstances. Lectures may be supplemented by films shown during class. Films and videos are not 'busy-work' and will contain testable information and will provide new information or reaffirm the information presented in lecture. **Lectures and supplements represent testable material.** The textbook also has an excellent website with quizzes and other study aids. https://learninglink.oup.com/access/bowman6e. While the online supplements will not directly count toward your grade, students who avail themselves of this feature often learn more and have higher grades.

Study Help. I will distribute study guides that contain a list of concepts or pose questions that should help you master the topics in this course. These lists are not exhaustive but should point you toward the correct direction.

Artificial Intelligence Statement

For this course, **AI is not permitted in this course at all**. I expect all work students submit for this course to be their own. I have carefully designed all assignments and class activities to support your learning. Doing your own work, without human or artificial intelligence assistance, is best for your efforts in mastering course learning objectives. For this course, I expressly forbid using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming. Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic honesty values.

TENTATIVE CLASS SCHEDULE

(Changes or other deviations will be announced in class)

Unit 1: The physical environment and the biosphere

Introduction (Chapter 1)
Physical Environment (2)
The Biosphere (3)
Coping with Environmental Variation (Temperature and Water) (4)

Sept 15 – Exam 1

Unit 2: Evolutionary Ecology, the interrelationships between ecology and evolution.

Evolution (6)
Life History (7)
Behavioral Ecology (8)
Population Dynamics (9-11, partial)

October 6 – Exam 2

Unit 3: Ecological Interactions.

Ecological Interactions:
- Competition (14)
- Parasitism (13)
- Predation (12)
- Mutualism/Commensalism (15)

Community Ecology (16-17,19, partial)

November 3 - Exam 3

Unit 4: Community and Conservation Ecology. How ecological communities work and how we can protect them.

Ecosystems and Energy Flow (21-22)
Conservation Biology (23)
Global Ecology (25)

Guns, Germs and Steel quiz

December 5 - Exam 4

Optional Cumulative Final Exam: Monday December 8, 10:15-12:15

Important Dates:

September 1: Labor Day (No Class)
September 8: Census Date
October 20: Mid-term grades due
November 3: Withdrawal Date
November 24-28: Thanksgiving Week (No Class)
December 5, last day of lecture