



BIOL 3317-002 Ecology

Biology Program, Department of Natural Sciences

Instructor information

Instructor: J. Rodolfo Valdez Barillas (Call me Dr. Valdez)

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Office hours: TR 11:00-1 pm and 3:30-4:30 pm. E-mail me if you need to meet outside these times

Class meeting format: F2F TR 2:00 to 3:15 am at Sci Tech 173

Course Description

This course provides the foundations of the scientific study of organisms and their environment. Basic components involved in the function and evolution of ecosystems, different ecological models, and the mechanisms that drive ecosystem changes through time will be addressed. Students will learn to approach the study of ecology from the organismal to global scale. The course will incorporate the classic concepts of ecology and introduce students to current theoretical and applied fields of ecology.

Course Objectives

1. Develop an appreciation of the past and modern scope of scientific inquiry in Ecology through lectures and assignments.
2. Recognize the mechanisms behind the interaction between organisms (from bacteria to plants and animals) and their environment.
3. Understand how scientists conduct studies in ecology, including techniques, methods, and equipment used to address different ecological questions.
4. Investigate the many theoretical and applied aspects of ecology globally, and in Southern Texas, particularly Bexar County.
5. Apply the importance of ecology as a tool to study current environmental issues.
6. Assess the effects of ecological processes on our lives and all living systems.

Recommended resources

Ecology 6th Edition by Bowman & Hacker ISBN: 9780197614044

E-book ISBN: 9780197614082 (Reflowable Layout)

Ecology 5th Edition by Bowman & Hacker ISBN: 9781605359212

eText ISBN: 9781605359236, 1605359238

Ecology Research Guide: [Welcome - Ecology Research Guide - A&M-SA Research Guides at Texas A&M University-San Antonio University Library](#)

Textbook companion website (4th edition): <http://ecology4e.sinauer.com>

The idea behind this website is to provide the student with resources for reviewing, learning key terms, working with data from actual experiments, and using simulations to explore model systems. It also allows students to assess their knowledge by providing practice quizzes, flashcards, and recommended readings for each book chapter.

Course Policies

Attendance: You are required to attend **every class**.

Participation: I expect that you will review the course material for the week and review material from previous lectures, so you come to class ready with questions.

Communication: All communication and inquiries to the instructor should be via e-mail: jvaldezb@tamusa.edu. This e-mail is for communication only. I will not accept assignments via e-mail unless I have granted accommodation. Please **submit all assignments through Blackboard or in class as required by the instructor**.

Course Changes: This course syllabus and lecture schedule are subject to change at any time; however, I will notify any changes through announcements in Blackboard or during lectures.

Makeup Exams: Makeup Exams are granted at the instructor's discretion. Make-up exams require you to communicate your absence in written form, or no later than 24 hours after your absence. I prefer an acceptable doctor's note or excuse.

Late assignment submission: I will deduct 10% of the assignment's possible points for each day after the due date.

Course Evaluation

Exams: The Exam format will include multiple-choice, true/false questions, and short answer/essay questions.

- Exams are closed book, and most questions will come from or be like quiz questions.
- The Exam may include figures, tables, diagrams, or articles that will be provided on the day of the Exam.
- Each exam will include the material covered during the lecture before the day of the Exam.
- Once you start, you have 1 hour and 15 minutes to complete your Exam.

iClickers: This may be provided by the instructor during class and used to record attendance, allow the students to participate in polls during lectures, and take in-class quizzes. These activities may be included as in-class assignments.

Quizzes: Quizzes will be available weekly, except on Exam week.

- Regular quizzes will be available via Blackboard and completed outside of lecture time. You will be given 5 days to complete the quiz and submit it. I will post quizzes on Thursday at 11:59 pm, and the Due date will be the following Tuesday at 11:59 pm.

- You can take your quiz three times, and the highest quiz score will go in your grade book.
- You will answer one question at a time, and no backtracking will be possible. The number of questions may range from 5-10.
- The length of the quiz may range from five to 10 minutes.

Assignments: This may include a scientific article summary and critiques, **or** in-class activities

- Please read the instructions provided when writing the article summary and critique.
- Depending on the assignment, the submission may be during or after the lecture.
- I may provide an assignment that will be submitted on the same day. I may provide group or individual assignments.
- You cannot make up for in-class assignments if you miss class.

Ecology Book Club: Students will create groups of 5. Each group will choose an e-book from the [Ecology Research Guide titles](#). You will be expected to meet outside of class, preferably in the library, to engage in a group discussion following the guidelines provided in Blackboard.

Extra credit: To earn Extra credit, you may search for and submit a news article or participate in an activity related to Ecology outside of lecture time.

- **Ecology News articles (5 pts):** I will provide instructions for you to submit a news article in a folder titled Ecology News. You need to briefly describe why you chose the article and what the article is about, as well as a web link or PDF file. The article you select should be on a topic in Ecology covered during the weeks before the due date. You only need to post once to earn 1 point. Five Ecology News folders will become available during a specific period. Once the period ends, you may not submit to that folder.
- **Ecology activities (5-10pts):** You may earn extra credit for every hour you participate in the activities listed below. To earn the credit, you will post a one-page summary of the activity in the folder titled Ecology activities:
 - Attending volunteering and community service events related to ecology
 - Conducting undergraduate research or helping undergraduate researchers
 - Attending a Biology Seminar or Guest Speaker presentation
 - Visiting a Park or Natural Area

GRADING (Number of quizzes and assignments may be adjusted based on student course load)

Instruction	Assessment	Cumulative pts
Lecture	Exams (3+final) 100pts/each	400
	Quizzes (11) 10pts/each	110
	In-Class Assignments (6) 5pts each	30
	Ecology Book Club	10
	Total Points	550

A = 90 – 100 points

B = 80 – 89.9 points

C = 70 – 79.9 points

D = 60 – 69.9 points

F = <59.9 points

Calculation of Final Grades: The extra credit earned is added to the 550 points when calculating your final grade over 100. **Final Grade (% 100)**

BIOL 3407 Ecology Lecture Fall 2026 Schedule

Wk.	Date	Topic	Quizzes/ Assignments
01	08/25/2026	Syllabus, Introduction to Ecology	
	08/27/2026	Introduction to Ecology	Quiz 1
02	09/01/2026	Physical environment 1	
	09/03/2026	Physical environment 2	Quiz 2
03	09/08/2026	Physical environment 2	
	09/10/2026	Energy Flow and Heterotrophs	Quiz 3
04	09/15/2026	Exam 1	
	09/17/2026	Energy Flow and Autotrophs	
05	09/22/2026	Energy Flow and Autotrophs	
	09/24/2026	Production and Decomposition	Quiz 4
06	09/29/2026	Biogeochemistry & Nutrient Cycling 1	
	10/01/2026	Biogeochemistry & Nutrient Cycling 2	Quiz 5
07	10/06/2026	Evolution	
	10/08/2026	Life History	Quiz 6
08	10/13/2026	Population Distribution	
	10/15/2026	Population growth and dynamics	Quiz 7
09	10/20/2026	Exam 2	
	10/22/2026	Competition	
10	10/27/2026	Predator-prey and herbivore-plant adaptations	
	10/29/2026	Symbiotic interactions	Quiz 8
11	11/03/2026	Symbiotic interactions	
	11/05/2026	Nature of Communities	Quiz 9
12	11/10/2026	Change in communities	
	11/12/2026	Community diversity & Biogeography	Quiz 10
13	11/17/2026	Exam 3	
	11/19/2026	Conservation Biology	
14	Thanksgiving week		
15	12/01/2026	Landscape Ecology	
	12/03/2026	Ecosystem Management	Quiz 11
16		Final Cumulative Exam (Same room)	

This schedule is subject to change. Any changes will be addressed in class and via Blackboard by Dr. Valdez