



BSC/AG 416 Wildlife Population Biology

I. General Information

Course syllabus: Spring 2024

Credits: 3 sch

Instructor of record: Johanna Delgado Acevedo, Ph.D.

Office: Science Building (STC) 262

Office hours: TR 1-2:30; by appointment

Phone: 903.468.3333

Email: johanna.delgado-acevedo@tamuc.edu

II. Course Description

This course outlines processes governing the abundance and distribution of animals and plants, and the consequences for natural resource management. Practical applications lie in wildlife management, sustainable harvesting of resources, pest control and conservation of endangered species. Topics will include mathematical models of population growth, population viability analysis, and metapopulations, dispersal, population harvesting, predation, population cycles, and competition.

III. Student Learning Objectives

To understand population demography concepts.

To understand and apply basic concepts from Population Biology.

To collaborate and work on teams.

To develop a reading tradition.

To develop communication skills and clarity to present ideas and explain them in public.

IV. Tentative schedule

i. Density independent growth
week 1 (Jan 10-13)

ii. Density dependent growth and intraspecific competition
week 2 (Jan 15-19)
week 3 (Jan 22-26)

iii. Population regulation
week 4 (Jan 29-Feb 2)

iv. Population with age structure
week 5 (Feb 5-10)

v. Metapopulation ecology
week 6 (Feb 12-17)

vi. Life history strategies
week 7 (Feb 19-24)



College of Science and Engineering

- vii. Interspecific competition
week 8 (Feb 26-Mar 2)
- viii. Mutualism
week 9 (Mar 4-9) Spring break (Mar 11-16)
- ix. Host-parasite interactions
week 10 (Mar 18-23)
- x. Predator/prey interactions
week 11 (Mar 25-30)
- xi. Plant-herbivore interactions
week 12 (Apr 1-6)
- xii. Multi-trophic interactions
week 13 (Apr 8-13)
- xiii. Summary
week 14-15 (Apr 16-29)

V. Evaluation

Assignments, quizzes, and research paper are required. I encourage student contribution to the overall progress of the group. I encourage interactive participation even though is an online class. It is necessary that students have a professional and ethical behavior through the entire course.

Homework, quizzes, exams, concept implementation project and term paper are required.

It is necessary that students have a professional and ethical behavior through the entire course.

Exams

Midterm 100 pts.

Final 100 pts.

Classroom exercises 100 pts.

Assignments

Journal 1 10 pts.

Journal 2 10 pts.

Journal 3 10 pts.

Journal 4 10 pts.

Journal 5 10 pts.

Research project and final presentations 100 pts.

Total 450 pts

Assignments



Journal articles

Reading and assimilating information is a critical part of your current and continuing education. For each assign date, a journal is named in the right column of the table, choose and read a paper from that journal that you find interesting or relevant. These journals are available in our library (online resources). On that date, provide me a citation and a short description of the paper (10 sentences). Each summary will follow the format of Ecology.

Due date	Journal
January 20	Ecology
February 20	Population Ecology
March 20	Ecosphere
April 5	The Journal of Wildlife Management
April 3-	Ecology and Evolution

Research project and presentation:

You will develop a research project (literature review) on a specific topic of Population Biology. You should include an introduction, methodologies used to study your topic, results, and discussion. The research project will have at least 2,500 words including references. The project will be due the last day of class. You will present your research project in a 12-minutes presentation and submit it in the assigned dropbox along with the written part.

VI. Course and University and Policies

Responsible Use of Technology — It is expected that all students will only use cellphones, PDAs, laptop computers, MP3 players and other technology outside of class time or when appropriate in class. Answering a cell phone, texting, listening to music or using a laptop computer for matters unrelated to the course may be grounds for dismissal from class and/or other penalties. Students are not allowed to use image, video, nor audio recording devices of any kind during class time without prior consent of the instructor.

University Specific Procedures:

ADA Statement-Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an



TEXAS A&M UNIVERSITY

COMMERCE

College of Science and Engineering

accommodation, please contact:

Office of Student Disability Resources and Services Texas A&M-Commerce

Gee Library

Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamuc.edu

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.

Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.