

BIOL 3375 – Applied Entomology Syllabus

Spring 2026 – Texas A&M University–San Antonio

Instructor Information

Dr. Megan Wise de Valdez, STEM 311G Work phone: 784-2218

e-mail: megan.wisedevaldez@tamus.edu

Office hours: coming soon TBD

Class Meeting Times and Location

Tuesdays 5:30-8:15pm

SciTech Room 166

Textbook

The Insects – An outline of entomology

4th or 5th Edition

Gullan and Cranston

Wiley-Blackwell publishers

Note that this book is no longer in production and be purchase online as a Kindle book for as low as \$2.99

Other required Materials

- Blackboard – this is where you will go for lectures, grades, and weekly announcements
- DIY Insect collection supplies – TBD

Course Description and Prerequisites

The characteristics, life history, and identification of insects important to man, with particular reference to agriculture and disease vectors. Stress will be on control measures for harmful species.

Prerequisites: BIOL 1307 or BIOL 1309

Learning Objectives

Be able to identify most insects to order

Understand basic insect physiology

Understand the evolutionary life history as it pertains to the study of insects.

Understand the importance of insects to global society and health

Introduction to medical and agricultural entomology

Understand the concepts of insect control

Explore insect behavior as it pertains to evolutionary history

Learn basic insect collection and preservation techniques

Topics Covered (in approximate order)

- Topic 1 - The importance, diversity, and conservation of insects – includes naming and classification of insects
- Topic 2 - External Anatomy
- Topic 3 - Methods in Entomology: Preservation, Curation and Identification
- Topic 4 - Insect Classification to Order
- Topic 5 - Insect development
- Topic 6 - Ground-dwelling Insects
- Topic 7 - Aquatic Insects
- Topic 8 - Internal Anatomy
- Topic 9 - Reproduction
- Topic 10 - Sensory systems & Behavior
- Topic 11 - Social Insect
- Topic 12 - Insect predation & parasitism
- Topic 13 - Insect Defense
- Topic 14 - Medical and Veterinary Entomology
- Topic 15 - Insects & plants
- Topic 16 - Pest Management

Course Assessment

- 8 Quizzes – (15 points each) – total = 105 pts because I drop your lowest or you can miss one w/o penalty
- 4 Regular Exams – (100 points each) = 400 pts

In class Presentations – 50+ points

Insect Collection – 100 points