

**Biology 3601/5607:S01/V01 – General Entomology – Summer II 2025**  
**Lecture M-F 9:00-10:15 Lab 10:30-1:15 WSB 109**  
**Syllabus**

**Instructor:** Dr. Chris M. Ritzi

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Office hours: Most afternoons or by appt.

**Class Website:** <http://sulross.blackboard.com> & <http://faculty.sulross.edu/critzi/>

**Text:** Triplehorn, C.A. and N.F. Johnson. 2005. Borror and Delong's Introduction to the Study of Insects. 7<sup>th</sup> edition. Other books of possible interest include Bland's How to Know the Insects, Castner's Photographic Atlas to Entomology and Guide to Insect Identification, as well as a handy field guide (Kaufman, Peterson, Audubon, etc.)

**Course Description:** This course will focus on classification, identification, ecology, evolution, physiology, conservation, and the economic importance of insects.

**Student Learning Outcomes**

The graduating biology student graduating with a BS in Biology should be able to:

- 1) The student will be able to demonstrate an understanding of basic biological concepts, including but not limited to evolution via natural selection, cell theory, and the role and function of DNA.
- 2) The student will be able to demonstrate utilization of various field techniques toward addressing scientific questions in the specific discipline. These field techniques can include, but are not limited to, plant collection and processing, various animal collection techniques, ecological surveying and sampling, and biodiversity indexing.
- 3) The student will be able to use biological instrumentation to solve biological problems using standard observational strategies.
- 4) The student will develop writing skills by summarizing and critiquing recent relevant biological literature.

The biology student graduating with an MS in Biology should be able to:

- 1) Understanding and implementation of scientific methodology.
- 2) Utilization of field techniques toward addressing scientific questions.
- 3) Be able to utilize statistics toward the analysis of data within the discipline.
- 4) Be able to effectively disseminate scientific findings using both written and oral communication.

**Marketable Skills:**

1. Students will be able to organize, analyze, and interpret data.
2. Students will be proficient at using presentation software.
3. Students will acquire experience in managing time and meeting deadlines.
4. Students will gain the ability to speak effectively and write concisely about scientific topics.
5. Students will acquire experience and guidance in the development of professional email correspondence.

**Course Objectives:** Over the course of this class, I hope the following objectives will be met:

1. To instill a sense of awe and excitement about insects and other arthropods.
2. To train the student in the skills required by a professional research entomologist, who develops and transmits new knowledge.
3. To familiarize the student with the student with the scientific method, and approaches used in the development of theory in entomology.
4. To improve the student's skills in quantitative biology.
5. To train the student in the identification of insects, to at least the family level.

**Course Structure:** In order to accomplish the above objectives, the following activities will be integrated by the student into an understanding of the science of entomology:

1. Lectures will cover the basic biology of insects and key topics of current concern and study.
2. Laboratories will provide practical experience with insect form and function, identification, and ecology.
3. A required insect collection will aid the student in learning about habitats in which insects live, their lifestyles, and other aspects of their lives.
4. Several field trips will be offered over the course of the term. These are intended to provide field experience as a group, and introduce students to a variety of means of insect collecting.
5. Tests and examines will enable students to gauge progress in learning the material.
6. Reading the textbook should be considered required for preparation for the class. The recommended book provides a very interesting coverage of insect life and taxonomy, and it is highly suggested that students consult the book often when identifying insects. The reading and studying of this material is to be self-paced, and students are individually responsible for the content covered in this course.
7. Students must appreciate that this is a lecture and laboratory course. Learning is the responsibility of the student, while the instructor aids by presenting information for the student to assimilate.

**Grading:** Your grade will be assigned based on the percentage of points you get out of a total possible 600 points. (100pt exams (2), 50pt Lab notebook, 50pt preview collection, 25pt lab quizzes (4), 200pts from insect collection).

**Tests:** There will be a total of 2 exams, each worth 100 points. Quizzes will be given throughout the semester to assess material between exams. If you miss an exam or quiz and have a legitimate excuse, contact me within 24 hours of the test and we will arrange a make-up test. If you do not contact me within 24 hours, you will receive a zero on that exam.

**Collection:** The collection will consist of at least **100 separate families** in at least **20 orders**. Only 10% of the collection may include other arthropod specimens (i.e. spiders, scorpions, centipedes, solfugids, etc.). Each specimen must be correctly prepared, labeled, and in good condition. More information about collections will be presented later.

**Note** – Collections are very time consuming and tend to be the biggest stumbling block for completing the course. To avoid a lot of stress trying to find enough different types of insects, it is imperative to start collecting NOW.

**Preview Collection:** To make sure you are off to a good start, a subset of your collection will be **due on Jul 16**. This preview of **at least 15 specimens** will be graded on correct pinning, pointing, spreading, labeling and preservation techniques. Identifications are not required (but will be considered if provided). Species should consist of 5 pointed, 5 pinned, 2 spread winged, and 3 alcohol specimens.

**Attendance:** Students missing 20% of lectures (5 lectures) shall be dropped from the class per the SRSU catalog. Any student dropped for excessive absences will receive an F for the course grade. Please notify your instructor BEFORE missing class for authorized activities, death in the family, or illness. Excused exams or quizzes may be made up on the day of the final exam.

**Lecture courtesy:** The general rules of classroom etiquette are below.

- 1) Please do not talk to others in class while the instructor is lecturing. If you have a question, ASK THE INSTRUCTOR! That's what I'm here for.
- 2) No eating, chewing, dipping, etc.
- 3) If you are going to attend class, please do so. Leaving and returning to class repeatedly is disruptive, as well as showing up after half the period is over.
- 4) Please turn cell phones and pagers to silent while in class. They are disruptive to the entire class, and distract others as well.

#### **Tentative Lecture Outline**

<b><u>Date</u></b>	<b><u>Lecture topic</u></b>	<b><u>Chapter</u></b>
Jul 7	Introduction, Arthropod characteristics, and nomenclature	
Jul 8	Collecting, preserving, and mounting insects - Collect on Campus	
Jul 9	Insect Orders and video about invading the land	

Jul 10	Insect Physiology and Trip to the Mare Pasture and Quiz 1
Jul 11	Collecting trip to Kokernot Park/ in town
Jul 14	Insect Movement and Fight and Keying exercise
Jul 15	Reproduction and Development Lecture and video on flight
Jul 16	Pinning and IDing and Quiz 2 - Preview Collection due
Jul 17	Collection trip to the Post
Jul 18	Pinning and IDing
Jul 21	Insect Color Lecture (Blacklight collection trip to the Post at night)
Jul 22	Midterm Exam
Jul 23	Simple Insects + Quiz 3 on Keying
Jul 24	Trip to vineyard/ranch
Jul 25	Hemiptera Lecture (Blacklight collecting trip to the ranch)
Jul 28	Collection Trip to Balmorhea Lake
Jul 29	Coleoptera Lecture and Quiz 4
Jul 30	Neuroptera/Lepidoptera Lecture
Jul 31	Diptera Lecture and Quiz 5
Aug 1	Trip to Terlingua Ranch and the Rio Grande (overnight)
Aug 4	Hymenoptera Lecture
Aug 5	Identifications and Quiz 6
Aug 6	Pinning and IDing
Aug 7	Pinning and IDing
Aug 8	Pinning and IDing
Aug 11	Work on Collections, Collections Due by 5pm
Aug 12	Create an Arthropod Activity and Exam Review
Aug 13	9:00am Final Lecture Exam

Note – This outline is subject to change for reasons of course interest, time constraint, or instructor whim. The exams will be administered on the dates given, unless material relevant for a given exam has not been covered. Under such cases, an exam may be moved a class period or two to aid in the clarity and understanding of the material.

**Graduate/Honors Course Credit Requirement:** As with all modified undergraduate for graduate course credit classes, this course has extra requirements above and beyond those for the undergraduates. The extra length in which must be taken will include a small scale research project and write-up to be included with your insect collection. The research project must be approved by your instructor prior to beginning, and should work to understand a particular ecological or geographical aspect of entomology. Examples of potential projects (yet not limited to these) include the pollinators of a specific plant species or community, the pests of a specific plant or community, a survey of particular ecological habitat (sand dunes, wetland, or other unique vegetative area), a survey of a particular niche (nocturnal insects, fossorial arthropods, aquatic insects), or a intensive survey of a group not emphasized in this course (scorpions, solfugids, whip-scorpions, pseudoscorpions, spiders, ticks, etc.). Please keep this separate project independent of your primary course collection, although you may use spacer tags in your main collection to refer to your special project collection for grading and fulfilling your collection requirements.

The write-up for this project should be stylized as a note or short manuscript following the instructions to authors for the journal, *Southwestern Naturalist*. You must include relevant citations, and document why you choose this particular study, the methods and materials you employed to conduct your study, what you found/collected, and what you think it means or tells us about the question you asked.

For grading purposes, this special collection and write-up will be worth a combined 200 points (100 points for collection and 100 points for the final paper). These are due at the start of the final exam on Friday Aug 13<sup>th</sup>. If you complete your collection and paper earlier than this, early submissions are encouraged.

**SRSU Disability Services:** Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Mrs. Mary Schwartz Grisham, LPC, SRSU's Accessibility Services Director at 432-837-8203 or email [counseling@sulross.edu](mailto:counseling@sulross.edu). Our office is located on the first floor of Ferguson Hall, room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine. Texas, 79832.

**SRSU Distance Education Statement:** Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the

course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.

**Libraries:** The Bryan Wildenthal Memorial Library in Alpine offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, [library.sulross.edu](http://library.sulross.edu). Off-campus access requires logging in with your LobolD and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email ([srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu)), or phone (432-837-8123).

**Academic Integrity:** Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. Students should submit work that is their own and avoid the temptation to engage in behaviors that violate academic integrity, such as turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden. Students should also avoid using open AI sources unless permission is expressly given for an assignment or course. Violations of academic integrity can result in failing assignments, failing a class, and/or more serious university consequences. These behaviors also erode the value of college degrees and higher education overall.

**Classroom Climate of Respect:** Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

**Supportive Statement:** I aim to create a learning environment for my students that supports various perspectives and experiences. I understand that the recent pandemic, economic disparity, and health concerns, or even unexpected life events may impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create a supportive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.