

INSECT BIOLOGY
BIOL 4331, 5331 Fall 2022
 T Thu 9:30-10:50, BEB 215
 Dr. Jon Seal
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OFFICE HOURS: BEP 264. TTh 12:30-2pm pm or by appointment; you may try also to find me before or after lecture or lab on Tuesday afternoon.

Week of	Topic	Reading
Unit I: Organismal Biology of Insects		
August 26	Introduction (what is an insect?)	Chap. 1
Sept 2	External Anatomy	
Sept 9	Internal Anatomy and Function	Chap. 2
Sept 16	Sensory Systems	Chap. 3
Sept 23	Reproduction and Development	Chap. 4
Sept 30	Exam 1, Literature Assignment #1 Due	TBA
Unit II: Life history and evolution of Insects		
Sept 30/Oct 7	Life Histories	Chap. 5-6
Oct 14	Overview, Insect Evolution, Systematics	Chap. 7-8
Oct 21	More evolution	
Oct 28	Insect Societies	Chapter 12
Oct 28	Exam II, Literature Assignment #2 Due	TBA
Nov 4	Last day to withdraw (with W grade)	
Unit III: Ecology of Insects, Applied Entomology		
Nov 4-15	Insect Ecology (plant-insect-fungal interactions, interactions with abiotic world, predation, parasitism, and so on)	Chap 9-11, 13-14,
Nov 18	Biomedical and Conservation Entomology	15-17
Nov 21	Graduate Student Lectures (2)	
Nov 25 – 29	Thanksgiving, University Closed (no classes)	
Dec 2	Graduate Student Lectures (3)	
Dec. 2	Exam III, Literature Assignment 3 Due	

FINAL EXAM: TBD

Please Note: the schedule described above is tentative.

COURSE DESCRIPTION: The objectives of this course are to enable students to learn about all aspects of insect biology (organismal biology, evolution and ecology).

TEXTBOOK: Gullan and Cranston, *The Insects: An Outline of Entomology*, Wiley-Blackwell , Fifth edition, 2014. Additional readings on topics not covered in the textbook will be posted on Canvas.

EVALUATION: Grades will be assigned based on the performance on three exams and three literature assignments. The exams will occur during regularly scheduled class time. The final exam will be optional and replace the lowest regular 100 point exam (the final exam will also be worth 100 points). The final exam will take place during the scheduled final exam period at the end of the semester. The final exam will be comprehensive and cumulative. The literature assignment will focus on an assigned reading from the primary literature. The assignments will involve questions about the reading. Students will have at least one week to complete the assignments. Due dates are on the syllabus. You must complete the assignments by the date stated however. The completed literature assignments will be uploaded on Canvas by the deadline announced in class. Assignments not uploaded by the deadline will result in 0 points. Emailed assignments are not accepted. Plan ahead. **Do not wait until 5 minutes before the deadline to submit your assignments.** Additional details will be announced in class.

Graduate students only: Graduate students will be required to 1) give a lecture on an entomological topic given toward the end of the semester and 2) write a term paper on an entomological topic. Graduate students may give a lecture and write the term paper on the same topic (I would advise students to do this). This will be a lecture and, like any other lecture in this course, this lecture will provide testable material to the graduate and undergraduate students in the class. The topic should be a general, textbook topic. Examples could include insect plant interactions, insect fungal interactions, insect-wood interactions, insect vectored human diseases, etc. A grading rubric will be provided to help students write up a lecture. The topic of the lecture must be arranged with and approved by the instructor. The lecture will be worth 100 points. Graduate students should also expect to have more comprehensive exams where they may have to answer more questions and provide more information than undergraduates.

GRADING: All students: Each of the three exams will be worth 100 points each. The three literature assignments will be worth collectively 100 points (the first and second assignments will be worth 33 points and the third assignment will be with 34 points). The (optional) final exam will also be worth 100 points and will replace one of the regular 100 point exams. **Graduate students:** the lecture and essay will be worth 100 points each.

Thus, the grade breakdown will look like this:

	Undergraduate students	Graduate Students
Exams (3 exams, 100 points each)	300	300
Literature Assignments	100	100
Lecture`		100
Term paper		100
Total	400	600

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

To calculate a final grade, divide your total points by the maximum possible number of points. For example, the threshold for an undergraduate to receive an A would be 360 points (90% of 400) whereas graduate students would need 540 (90% of 600).

Grades will be rounded to the nearest whole number, e.g., an 89.1 is a B (rounded to an 89) whereas an 89.7 would be rounded up to a 90.

In grading, I strive for fairness and consistency. If you feel like a grading error was made on an exam, you may submit a typed appeal within a week (7 days) of when the exam was returned to you. Your written appeal should be based on course materials and should stress the scientific validity of your original response.

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. Since this is an upper level course and students should have a grasp of basic biology, genetics and ecology, most of the exams will have a short answer format and contain some longer essay type questions. You must answer the questions clearly using complete sentences. This is not meant to torture you, but the ability to communicate effectively and remember content across courses are very important skills. Thus the clarity of your written answer will be a factor in grading.

Attendance: Attendance is required. Lectures will not be online. If you miss class, you can find out what was covered from another student. Please be advised that this is an upper level biology course. Not all of the material will be covered in the textbook and I may not cover all material that is in the textbook. Hence, it is in your best interest to attend class every day.

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. I also suggest printing out illustrations for future lectures to facilitate note-taking. Lectures will be supplemented by frequent videos shown during class. These will provide new information or reaffirm the information presented in lecture. **Both lectures and supplements represent testable material. Videos are not just busy work.**

PRE_REQUISITES: General Biology (BIOL 1306, 1307), Genetics (BIOL 3332), Ecology (BIOL 3336) and Cell Biology (BIOL 3334)

EXAMS: It is your responsibility to arrive at the exam on time. All exams will be held in our regular classroom. Students who arrive late will not be given additional time, and anyone arriving after other students have finished and left will not be permitted to take the exam.

Failing to take a scheduled examination will result in a score of 0 unless replaced by a make-up exam in a timely fashion. 'Make-up' examinations are given only in cases where there is a documented excuse beyond your reasonable control:

- Illness – you must have a physician note indicating that you were not in a physical condition to take the exam at the scheduled time. A note from a family member is insufficient.
- Death or grave illness in your immediate family.
- Significant scheduling conflicts (e.g., med-school interviews, or other university sponsored events). You must notify the instructor at least 2 weeks in advance of this absence.

The nature of the make-up exam will be decided by the instructor and may consist of a written and/or oral examination.

Realize that essay questions 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 lose points. Do not expect to receive points for effort. Contradictory information in an answer will also result in a loss of 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 lectures are very important skills.

All exams or assignments completed on Canvas will be checked for plagiarism within the class and with a database of assignments and other sources from around the world. Do not cheat or plagiarize. **If you cheat or plagiarize, you will at a minimum receive a 0 on that assignment and be reported to the university authorities.** Realize that any issue with academic misconduct can severely impact, if not inhibit, your chances of obtaining a career associated with public trust (police officer, lawyer, doctor, dentist, nurse, etc.). Don’t cheat or plagiarize. Just don’t do it. Don’t be tempted to look up/copying and pasting sources while taking an exam. Just don’t. For definition and explanation of cheating or plagiarism see section on “**Student Standards of Academic Conduct**” toward the end of this document.

Recording of Class Sessions

Class sessions may be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

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.

Student Resources:

Resources to assist you in the course

- [UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)

- [UT Tyler Supplemental Instruction](#)
- [Upswing \(24/7 online tutoring\) - covers nearly all undergraduate course areas](#)
- [Robert Muntz Library](#) and [Library Liaison](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)
- Digital Support Toolkit (for supported courses only. Students are automatically enrolled in the toolkit for supported courses)
- LIB 422 -- Computer Lab where students can take a proctored exam
- [The Career Success Center](#)
- [UT Tyler Testing Center](#)
- [Office of Research & Scholarship Design and Data Analysis Lab](#)

Resources available to UT Tyler Students

- [UT Tyler Counseling Center](#) (available to all students)
- [MySSP App](#) (24/7 access to Student Support Program counseling through phone or chat and online wellness resources available in a variety of languages)
- [Student Assistance and Advocacy Center](#)
- [Military and Veterans Success Center](#) (supports for our military-affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Student Business Services](#) (pay or set up payment plans, etc.)
- [UT Tyler Registrar's Office](#)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

University Policies and Information

Withdrawing from Class

Students may [withdraw](#) (drop) from this course using the [Withdrawal Portal](#). Withdrawing (dropping) this course can impact your Financial Aid, Scholarships, Veteran Benefits, Exemptions, Waivers, International Student Status, housing, and degree progress. Please speak with your instructors, consider your options, speak with your advisor, and visit the One-Stop Service Center (STE 230) or email enroll@uttyler.edu to get a complete review of your student account and the possible impacts to withdrawing. We want you to make an informed decision.

UT Tyler faculty and staff are here for you and often can provide additional support options or assistance. Make sure to carefully [read the implications for withdrawing from a course and the instructions](#) on using the [Withdrawal portal](#).

Texas law prohibits students from dropping more than six courses during their entire undergraduate career*. The six courses dropped include those from other 2-year or 4-year Texas public colleges and universities. Consider the impact withdrawing from this class has on your academic progress and other areas, such as financial implications. We encourage you to consult your advisor(s) and Enrollment Services for additional guidance. CAUTION #1: Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). CAUTION #2: All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms. CAUTION #3: All UT Tyler Athletes must check with the Athletic Academic Coordinator before withdrawing from a course. CAUTION #4: All veterans or military-affiliated students should consult with the [Military and Veterans Success Center](#).

* Students who began college for the first time before 2007 are exempt from this law.

Artificial Intelligence Statement

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. Refer to the About This Course section of the UT Tyler Syllabus Module for specific information on appropriate use of AI in your course(s).

Final Exam Policy

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the Dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members must maintain student final examination papers for a minimum of three months following the examination date.

Incomplete Grade Policy

If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for

the course. The "I" may be assigned in place of a grade only when all of the following conditions are met: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all coursework or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor, and (c) the student presents these reasons before the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to meet all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has yet to be assigned within one year, then the Incomplete will be changed to an F, or NC. If the course was initially taken under the CR/NC grading basis, this may adversely affect the student's academic standing.

Grade Appeal Policy

Disputes regarding grades must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. A grade appeal should be used when the student thinks the final course grade awarded does not reflect the grades earned on assessments or follow the grading scale as documented in the syllabus. The student should provide the rationale for the grade appeal and attach supporting document about the grades earned. The form should be sent via email to the faculty member who assigned the grade. The faculty member reviews the rationale and supporting documentation and completes the instruction section of the form. The instructor should return the form to the student, even if a grade change is made at this level. If the student is not satisfied with the decision, the student may appeal in writing to the Chairperson of the department from which the grade was issued. In situations where there is an allegation of capricious grading, discrimination, or unlawful actions, appeals may go beyond the Chairperson to the Dean or the Dean's designee of the college from which the grade was issued, with that decision being final. The Grade Appeal form is found in the [Registrar's Form Library](#).

NOTE: The Grade Appeal Form is different from the Application for Appeal form submitted to the Student Appeals Committee, which does not rule on grade disputes as described in this policy.

Disability/Accessibility Services

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email saroffice@uttyler.edu, or call 903.566.7079."

Military Affiliated Students

UT Tyler honors the service and sacrifices of our military-affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you.

The [Military and Veterans Success Center \(MVSC\)](#) has campus resources for military-affiliated students. The MVSC can be reached at MVSC@uttyler.edu or via phone at 903.565.5972.

Students on an F-1 Visa

To remain in compliance with Federal Regulations requirements you must do the following:

- Traditional face-to-face classes: Attend classes on the regular meeting days/times.
- Hybrid Classes: Attend all face-to-face classes convened by the instructor according to the schedule set for your specific course.
- Online course: Only one online course can count toward your full-time enrollment. Students are expected to be fully engaged and meet all requirements for the online course.

Academic Honesty and Academic Misconduct

The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

FERPA

UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course instructor will follow all requirements to protect your confidential information.

Absence for Official University Events or Activities

This course follows the practices related to [Excused Absences for University Events or Activities](#) as noted in the Catalog.

Absence for Religious Holidays

This course follows the practices related to [Excused Absences for Religious Holy Days as noted in the Catalog](#).

Absence for Pregnant Students

This course follows the requirements of Texas Laws SB 412, SB 459, SB 597/HB 1361 to meet the needs of pregnant and parenting students. Part of the supports afforded pregnant students includes excused absences. Faculty who are informed by a student of needing this support should make a referral to the Parenting Student Liaison. NOTE: Students must work with the Parenting Student Liaison in order to receive these supports. Students should reach out to the Parenting Student Liaison at parents@uttyler.edu and also complete the [Pregnant and Parenting Self-Reporting Form](#).

Campus Carry

We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.