

Course Information

Course Number: ENTO 423 (Lecture) / ENTO 427 (Laboratory)
Course Title: Medical Entomology
Section: In-person
Time: Lecture: Monday and Wednesday 3:00-3:50 PM
Laboratory (4 Sections): 500-(M 4:00 PM-5:50 PM); 501-(T 3:55 PM-5:45 PM);
502-(W 4:00 PM-5:50 PM); 503-(R 8:30 AM-10:20 AM)
Location: Lecture: HPCT 101/Canvas/Zoom
Laboratory: HPCT 108
Credit Hours: 2 (ENTO 423)/ 1 (ENTO 427)

Instructor Details

Instructor: Gabriel Hamer, Ph.D.
Office: HEEP 515
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Office Hours: By appointment (Zoom or in person)

Teaching Assistant: Yu-Hsiu (Hugh) Lin
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Teaching Assistant: James Riggs
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Technical Laboratory Coordinator: Tammy Bouldin
Office: HPCT 305
E-mail: tammy.bouldin@ag.tamu.edu
Office Hours: By appointment

Email policy

Please allow up to 48 hours to reply to any emails sent to the instructor or teaching assistants in this course before sending a follow up email.

Course Description

Biology, disease relationships, and control of insects and other arthropods parasitic on or in humans; aspect of the fields of clinical and preventative medicine.

Course Prerequisites

BIOL 111; ENTO 427 or concurrent enrollment; Junior or Senior classification or permission of instructor.

Course Learning Outcomes

- Categorize medically important arthropods;
- Distinguish how biological and physiological adaptations facilitate the relationship of vectors and particular pathogens;
- Establish the diseases that are caused by specific disease agents and the vectors that transmit them;
- Develop educational outreach material to prevent and eradicate a vector-borne disease from a specific geographical area.

Textbook and/or Resource Materials

Recommended textbook (Optional): Medical and Veterinary Entomology 3rd Edition, 2019, Gary R. Mullen and Lance A. Durden. Free through: <https://sciencedirect-com.srv-proxy2.library.tamu.edu/book/9780128140437/medical-and-veterinary-entomology>

Lab Course Packet (Required)- Available at MSC Bookstore.

Resource Materials will be provided via Canvas

Handouts: lecture slides will be made available (in pdf) prior to lecture on Canvas for download or viewing during lecture.

Supplemental Material: Any additional readings will be made available on Canvas.

Grading Policy ENTO 423

- *Grading Scale as follows (Percentages):*
 - A = 89.5-100
 - B = 79.5-89.4
 - C = 69.5-79.4
 - D = 59.5-69.4
 - F ≤ 59.4
- **Lecture Exams:** 4 lecture exams given throughout the semester- see lecture schedule (25 points each). Exams will not be cumulative and will cover only material covered since the prior exam. The exam will be given in person only during the scheduled lecture period. Exams will include a combination of multiple choice, true or false, matching, and short answer.
If you are absent and have a university-excused absence, a make-up exam will be scheduled for a later date. See excused absence policy ([Student Rule 7](#)). If you are registered with Disability Resources to receive accommodations during exams, please email instructor.
- **Canvas Quizzes:** Quizzes will be given throughout the semester on Canvas covering lecture material and readings (20 points)

- **Vector Management Project:** You will develop an educational campaign in response to a specific arthropod-borne disease outbreak. You will be assigned groups and given details about a disease, vector, and location to develop your project. You will present details about an emerging public health problem and develop a poster to present to the class at the end of the semester. You will be given details about the vector management project on Canvas. (25 points)
- **Class Participation:** Participation in class discussions, Canvas discussion boards (10 points).
- Grades will be based on percentages of total points accumulated throughout the semester.
Lecture Exam 1: 25 points
Lecture Exam 2: 25 points
Lecture Exam 3: 25 points
Lecture Exam 4: 25 points
Canvas Quizzes (5 points each): 20 points
Vector Management Project: 25 points
Class Participation: 10 points
Total Points: 155 points

Grading Policy Changes – Faculty must provide grading policies to students by the first class period. As such, faculty cannot change the course grading policy after the second class session. (See Student Rule 10.)

Grading Policy ENTO 427

- *Grading Scale as follows (Percentages):*
 - A = 89.5-100
 - B = 79.5-89.4
 - C = 69.5-79.4
 - D = 59.5-69.4
 - F ≤ 59.4
 - **Lab Exams:** 3 lab practical exams given throughout the semester- see laboratory schedule (20 points each). Exams will be non-cumulative and can cover different arthropod orders and anatomical features covered up to the time of the exam. The exam will consist of different stations with a specific arthropod or organ displayed. Each student will rotate throughout the stations and will have 3 minutes to identify the specimen at the station. The lab course packet and printed lab lectures will be allowed for use during the lab practical exams.
If you are absent and have a university-excused absence, a make-up exam will be scheduled for a later date. See excused absence policy ([Student Rule 7](#)). If you are registered with Disability Resources to receive accommodations during exams, please email instructor.
 - **Lab Quizzes:** 8 Quizzes will be given throughout the semester in which students will have to identify specimens or respond to specific questions related to the arthropod group that they are working on or a technique that they are using (5 points each).
 - **Lab Participation:** Participation in class discussions, in class demonstrations, group projects (8 points).
 - Grades will be based on percentages of total points accumulated throughout the semester.
Lab Exam 1: 20 points
Lab Exam 2: 20 points
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Lab Exam 3: 20 points
 Lab Quizzes (2 points each): 16 points
 Class Participation: 8 points
Total Points: 84 points

Grading Policy Changes – Faculty must provide grading policies to students by the first class period. As such, faculty cannot change the course grading policy after the second class session. (See Student Rule 10.)

Late Work Policy

- Late work will be accepted for written assignments and Canvas quizzes but with a penalty of 10% reduction per day (24 hours) after the deadline. Oral presentations cannot be made up, however if the absence is excused, the final grade will be calculated excluding the presentation portion.

Work submitted by a student as makeup work for an excused absence is not considered late work and is exempted from the late work policy ([Student Rule 7](#)).

Lecture Schedule

<u>Week</u>	<u>Day</u>	<u>Topic</u>	<u>Textbook Chapter</u>	<u>Assessment</u>
Week 1	Aug 19	Syllabus Review, Course Introduction		
	Aug 21	Direct Effects of Arthropods	Chapter 1	
Week 2	Aug 26	Parasitic Arthropod Morphology and Biology	Chapter 2	
	Aug 28	Disease Epidemiology-Part 1	Chapter 4	
Week 3	Sept 2	Holiday- No Class		
	Sept 4	Disease Epidemiology-Part 2		Quiz 1
Week 4	Sept 9	Vector-Host Interactions		
	Sept 11	Lecture Exam 1		Lecture Exam 1
Week 5	Sept 16	Arthropod Toxins and Venom	Chapter 3	
	Sept 18	Tick Taxonomy	Chapter 27	
Week 6	Sept 23	Tick Biology		
	Sept 25	Tick-borne Diseases		Quiz 2
Week 7	Sept 30	Tick-borne Diseases		
	Oct 2	Mites and Mite-borne Diseases	Chapter 26	
Week 8	Oct 7	Fall Break – No Class		
	Oct 9	Lecture Exam 2		Lecture Exam 2
Week 9	Oct 14	Mosquito Taxonomy	Chapter 15	
	Oct 16	Mosquito Biology		
Week 10	Oct 21	Mosquito-borne Diseases		Quiz 3
	Oct 23	Mosquito-borne Diseases		
Week 11	Oct 28	Other Flies and Diseases	Chapters 12, 14	
	Oct 30	Lecture Exam 3		Lecture Exam 3
	Nov 4	Myiasis	Chapter 5, Chapter 19	

<i>Week 12</i>	Nov 6	Fleas and Flea-borne Diseases	Chapter 10	
<i>Week 13</i>	Nov 11	Lice and Louse-borne Diseases	Chapter 7	
	Nov 13	Kissing Bugs and Chagas	Chapter 8	
<i>Week 14</i>	Nov 18	Vector Monitoring and Integrated Pest Management		Quiz 4
	Nov 20	Lecture Exam 4		Lecture Exam 4
<i>Week 15</i>	Nov 25	Group project – No Class		
	Nov 27	Holiday- No Class		
<i>Week 16</i>	Dec 2	Poster Presentations		
	Dec 4	Reading Day- No Class		

Laboratory Schedule

<u>Week</u>	<u>Week of</u>	<u>Topic</u>	<u>Assignment</u>
<i>Week 1</i>	Aug 19	No Lab	
<i>Week 2</i>	Aug 26	Syllabus Review, Lab Introduction	Dichotomous Key Group Assignment
<i>Week 3</i>	Sept 2	No Lab	
<i>Week 4</i>	Sept 9	Arthropod Internal and External Anatomy	Lab Quiz 1
<i>Week 5</i>	Sept 16	Mite Identification	Lab Quiz 2
<i>Week 6</i>	Sept 23	Lab Exam 1	Lab Exam 1
<i>Week 7</i>	Sept 30	Tick Identification	Lab Quiz 3
<i>Week 8</i>	Oct 7	Mosquito Larvae Identification	Lab Quiz 4
<i>Week 9</i>	Oct 14		
<i>Week 10</i>	Oct 21	Adult Mosquito Identification	Lab Quiz 5
<i>Week 11</i>	Oct 28	Lab Exam 2	Lab Exam 2
<i>Week 12</i>	Nov 4	Other Adult Fly Identification	Lab Quiz 6
<i>Week 13</i>	Nov 11	Fly Maggot Identification	Lab Quiz 7
<i>Week 14</i>	Nov 18	Identification of Hemiptera, Lice, Fleas	Lab Quiz 8
<i>Week 15</i>	Nov 25	No Lab	No Lab
<i>Week 16</i>	Dec 4	Lab Exam 3	Lab Exam 3

University Policies

Attendance Policy

The university views class attendance and participation as an individual student responsibility. Students are expected to attend class and to complete all assignments.

Please refer to [Student Rule 7](#) in its entirety for information about excused absences, including definitions, and related documentation and timelines.

Makeup Work Policy

Students will be excused from attending class on the day of a graded activity or when attendance contributes to a student's grade, for the reasons stated in Student Rule 7, or other reason deemed appropriate by the instructor.

Please refer to [Student Rule 7](#) in its entirety for information about makeup work, including definitions, and related documentation and timelines.

Absences related to Title IX of the Education Amendments of 1972 may necessitate a period of more than 30 days for make-up work, and the timeframe for make-up work should be agreed upon by the student and instructor" ([Student Rule 7, Section 7.4.1](#)).

"The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence" ([Student Rule 7, Section 7.4.2](#)).

Students who request an excused absence are expected to uphold the Aggie Honor Code and Student Conduct Code. (See [Student Rule 24](#).)

Academic Integrity Statement and Policy

"An Aggie does not lie, cheat or steal, or tolerate those who do."

"Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work, should the instructor request it, may be sufficient grounds to initiate an academic misconduct case" ([Section 20.1.2.3, Student Rule 20](#)).

Texas A&M at College Station

You can learn more about the Aggie Honor System Office Rules and Procedures, academic integrity, and your rights and responsibilities at aggiehonor.tamu.edu.

Americans with Disabilities Act (ADA) Policy

Texas A&M University is committed to providing equitable access to learning opportunities for all students. If you experience barriers to your education due to a disability or think you may have a disability, please contact the Disability Resources office on your campus (resources listed below). Disabilities may include, but are not limited to attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their disability related needs with Disability Resources and their instructors as soon as possible.

Texas A&M at College Station

Disability Resources is located in the Student Services Building or at (979) 845-1637 or visit disability.tamu.edu.

Title IX and Statement on Limits to Confidentiality

Texas A&M University is committed to fostering a learning environment that is safe and productive for all. University policies and federal and state laws prohibit gender-based discrimination and sexual harassment, including sexual assault, sexual exploitation, domestic violence, dating violence, and stalking.

With the exception of some medical and mental health providers, all university employees (including full and part-time faculty, staff, paid graduate assistants, student workers, etc.) are Mandatory Reporters and must report to the Title IX Office if the employee experiences, observes, or becomes aware of an incident that meets the following conditions (see [University Rule 08.01.01.M1](#)):

- The incident is reasonably believed to be discrimination or harassment.
- The incident is alleged to have been committed by or against a person who, at the time of the incident, was (1) a student enrolled at the University or (2) an employee of the University.

Mandatory Reporters must file a report regardless of how the information comes to their attention – including but not limited to face-to-face conversations, a written class assignment or paper, class discussion, email, text, or social media post. Although Mandatory Reporters must file a report, in most instances, a person who is subjected to the alleged conduct will be able to control how the report is handled, including whether or not to pursue a formal investigation. The University's goal is to make sure you are aware of the range of options available to you and to ensure access to the resources you need.

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Students wishing to discuss concerns in a confidential setting are encouraged to make an appointment with [Counseling and Psychological Services \(CAPS\)](#).

Students can learn more about filing a report, accessing supportive resources, and navigating the Title IX investigation and resolution process on the University's [Title IX webpage](#).

Statement on Mental Health and Wellness

Texas A&M University recognizes that mental health and wellness are critical factors that influence a student's academic success and overall wellbeing. Students are encouraged to engage in healthy self-care by utilizing available resources and services on your campus

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Students who need someone to talk to can contact Counseling & Psychological Services (CAPS) or call the TAMU Helpline (979-845-2700) from 4:00 p.m. to 8:00 a.m. weekdays and 24 hours on weekends. 24-hour emergency help is also available through the 988 Suicide & Crisis Lifeline (988) or at [988lifeline.org](https://www.988lifeline.org) [Links to an external site.](#)

Campus-Specific Policies

Texas A&M University is committed to engaged student participation in all of its programs and courses and provides an accessible academic environment for all students. This means that our classrooms, our virtual spaces, our practices and our interactions are as inclusive as possible and we work to provide a welcoming instructional climate and equal learning opportunities for everyone. If you have an instructional need, please notify me as soon as possible.

The Aggie Core values of respect, excellence, leadership, loyalty, integrity and selfless service in addition to civility, and the ability to listen and to observe others are the foundation of a welcoming instructional climate. Active, thoughtful and respectful participation in all aspects of the course supports a more inclusive classroom environment as well as [our mutual](#) responsibilities to the campus community.

Statement on the Family Educational Rights and Privacy Act (FERPA)

FERPA is a federal law designed to protect the privacy of educational records by limiting access to these records, to establish the right of students to inspect and review their educational records and to provide guidelines for the correction of inaccurate and misleading data through informal and formal hearings. Currently enrolled students wishing to withhold any or all directory information items may do so by going to howdy.tamu.edu and clicking on the "Directory Hold Information" link in the Student Records channel on the MyRecord tab. The complete [FERPA Notice to Students](#) and the student records policy is available on the Office of the Registrar webpage.

Items that can never be identified as public information are a student's social security number, citizenship, gender, grades, GPR or class schedule. All efforts will be made in this class to protect your privacy and to ensure confidential treatment of information associated with or generated by your participation in the class.

Directory items include name, UIN, local address, permanent address, email address, local telephone number, permanent telephone number, dates of attendance, program of study (college, major, campus), classification, previous institutions attended, degrees honors and awards received, participation in officially recognized activities and sports, medical residence location and medical residence specialization.