ENY4004C/5006C: Entomology 2024

"Know the smaller majority"

Catalog description:
ENY 4004C COS-BIOL4(2,6). General Entomology: PR: "C" (2.0) or better in both BSC 2010C and BSC 2011C, or C.I.Biology of insects: identification, taxonomy, physiology, behavior, & ecology. M&S fee $15.00
ENY 5006C: Morphology, physiology, ontogeny, behavior, ecology and population biology of insects. Credits: COS-BIOL 4(2,6) PR: Admission to M.S. in Biology, Ph.D. in Conservation or Integrative Biology Fee: $40

Class Meeting Time: Monday and Wednesday **10:00am – 10:50am**, BIO 0105.
Lab Meeting Time: Monday and Wednesday **11:00am – 2:20pm**, BIO 0105.

Instructor:
Dr. Barbara Sharanowski, Biology 441
Email: barb.sharanowski@ucf.edu **(see email policies below)**
Office Hours: Open office time: Tuesdays 3:00-4:00 pm. Please let me know if you want to attend office hours. I'm available immediately after class in most cases, but Mondays are hectic. Scheduled appointments are highly recommended. Virtual meetings are also possible.

Graduate Teaching Assistant:
Rachel Behm, Biology 442; Email: rachel.behm@ucf.edu;
Office Hours: By appointment.
Rachel is a Ph.D. candidate, studying the evolutionary impacts of endogenous viruses on wasp genomes (Ichneumonidae). She is an experienced GTA and is devoted to student learning in entomology.

Undergraduate Teaching Assistant:
Katie Johnsen, Biology 442; Email: Katherine.Johnsen@ucf.edu
Katie is a B.Sc candidate, with a passion for entomology and biology in general. She has solid lab experience and taxonomic experience, as well as being an undergraduate teaching assistant.

Scope: Insects affect human lives in significant ways every day, from pollinating our crops to transmitting deadly diseases. This course provides an excellent background in general entomology, including the classification, anatomy, physiology, behavior, ecology, and evolution of insects. There is a large focus on how insects impact human life and ecological interactions between insects and other organisms across diverse ecosystems. The lab focuses on identifying common families of insects across all orders as well as developing skills in insect collecting, preservation, curation, and imaging. This course is useful for anyone considering a career in entomology, museum-based careers, and for any student interested in taxonomy, biodiversity, systematics, evolution, insect morphology, and applied aspects of insect identification. Entomological skills can be applied to careers in agriculture, forestry, horticulture, urban pest management, conservation, ecological assessment & monitoring, veterinary and human medicine.

Course Philosophy
Students' Learning Responsibilities
Students are expected to practice personal and academic integrity and to take responsibility for one's own personal and academic commitments. Within the context of this class, **regular attendance is critical to facilitate effective learning**. Participation in class is expected and heavily encouraged. Students should respect others and contribute to cooperative learning by promoting a respectful atmosphere and striving to learn from differences in people, ideas, and opinions. Students are expected to be prepared for class and submit assignments

on time. Students are highly encouraged to ask for help under any circumstances, but particularly if having difficulty with material or learning.

Instructor's Notes:
The instructor **reserves the right to make changes** to the syllabus and the management of the class at any time during the semester. These changes will be announced in lecture. If the student is in disagreement with anything contained within the syllabus (e.g. course material, structure, grading policy, etc), it is recommended that the student withdraw from the course prior to the university posted deadline. **The instructor also reserves the right to adjust grades up or down upon a request for a re-assessment by the student.**

Student Learning Outcomes: After completion of the course, students should be able to:
(*Cognitive*)

- Differentiate an insect from other life forms and know the basic anatomy of an insect.
- Understand the classification of insects, importance of taxonomy to other disciplines, and appreciate the vast diversity of insect life and form and function
- Recognize insect morphological characteristics, including external and internal anatomy
- Describe basic insect physiology, including growth and development of different types of insects
- Recognize, evaluate, and articulate the advantages and disadvantages of different management strategies in pest control of insects.

(*Behavioral*)

- Collect insects for study using a range of aquatic, aerial and terrestrial field collecting techniques
- Identify all orders and common families of insects
- Preserve specimens for museum study and appreciate the importance of museums for teaching, research, and outreach
- Research a topic of interest and be able to communicate scientific knowledge in a meaningful way to a broad audience

(*Affective*)

- Understand the value and importance of insects and understand the ecological roles insects have in different ecosystems
- Appreciate the global impact of insects on human existence with respect to disease transmission and agricultural production

Classroom Conduct: By enrolling at UCF, all students have agreed to abide by the Golden Rule. Please become familiar with this document at**: http://www.goldenrule.sdes.ucf.edu/.** Please also use common courtesy in class by arriving and departing on time, refraining from sleeping/ talking during class, and **turning off** cell phones, music devices, etc. Students are responsible for all announcements made or assignments given during class. Students who fail to abide by the above may be asked to leave the class.

Academic Integrity:
Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty. Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room, including cell phones or computational devices. Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or assignments is also subject to serious academic penalty. Plagiarism involves an attempt to pass off the work and ideas of others as one's own and is considered cheating. **Citing all sources for ideas, images, or otherwise is essential**. Students must cite the source of images used in their presentations, but are encouraged to take their own photographs. **Students should acquaint themselves with the University's policy on plagiarism, cheating, exam impersonation, and duplicate submission (see http://www.goldenrule.sdes.ucf.edu/.)**. Electronic detection tools may be used to screen assignments in cases of suspected plagiarism.

Diversity, Equity, and Inclusion:
The University of Central Florida considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. **UCF expects every member of the university community to contribute to an inclusive and respectful culture** for all in its classrooms, work environments, and at campus events. Dimensions of diversity can include sex, race, age, national origin, ethnicity, gender identity and expression, intellectual and physical ability, sexual orientation, income, faith and non-faith perspectives, socio-economic class, political ideology, education, primary language, family status, military experience, cognitive style, and communication style. The individual intersection of these experiences and characteristics must be valued in our community.

Title IX prohibits sex discrimination, including sexual misconduct, sexual violence, sexual harassment, and retaliation. If you or someone you know has been harassed or assaulted, you can find resources available to support the victim, including confidential resources and information concerning reporting options at www.shield.ucf.edu and http://cares.sdes.ucf.edu/ If there are aspects of the design, instruction, and/or experiences within this course that result in barriers to your success or accurate assessment of your achievement, please notify the instructor as soon as possible and/or contact Student Accessibility Services.

Student Accessibility Statement:
The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester to discuss needed accommodations. **Students who need accommodations must be registered with Student Accessibility Services**, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

Inquiries to the Instructor:
Students are encouraged to discuss issues pertaining to assignments with the instructor well in advance of deadlines. Students should expect **a minimum of 2 business days** to receive a response. Students are encouraged to drop by the instructor's office for assistance (Room BIO 441), particularly during office hours and scheduled appointments are highly recommended.

Instructional Methods:
This course combines traditional lecture and interactive laboratories to achieve course and learning objectives. Traditional lectures are intended to introduce the major morphological features for different insect lineages and to explain the current understanding of insect evolution in a phylogenetic framework. During lab sessions students will sort, curate and identify their own collected material as well as insects provided by the instructor. Field days are scheduled but may be cancelled or delayed due to weather. Students should come prepared to hike for field days with proper shoes, a hat, sunscreen, long pants to prevent scrapes, water and snacks for sustenance, and insect repellant if needed. Items can be stored in the lab when we head into the field.

Late Assignments:
Late assignments will be deducted 10% of the final grade for that assignment for every 24-hour period it is late. Assignments must be submitted at class time on the date and time due. Late is considered past the set time noted in the due date. Thus, if an assignment is due at 8:30am and is handed in at 1pm on the same day, it is still considered 1 day late. Late assignments should be emailed to the instructor if you cannot submit through Webcourses.

Missed Assignments:
To pass the course, all items for which a mark is allocated must be completed and submitted, unless there are extenuating and documented circumstances. **You need to pass the lab portion of the class to pass the course.**

Where assignments are missed and excused through written notification such as a doctor's certification of illness, evidence of death in the family, or other circumstances beyond the control of the student, the student may be given the following options:

1) Complete the assignment and receive the late assignment penalty as described above,
2) Establish a new due date with the instructor and complete the assignment without penalty when handed in by the new due date, or
3) The final class exam can be increased by the amount that would have been allocated to the missed assignment.
Option three is only available under extreme circumstances.

Missed Exams:
See above, however all students must write the class final exam to pass the course. If the final exam has been missed for a **valid, documented reason** such as illness, COVID-19, or death in the family, another exam date will be set at the discretion of the instructor.

Course materials:
Recommended if you like reference texts, but not mandatory or essential

Textbook – The Insects: An Outline of Entomology. P.J. Gullan and P.S. Cranston. 2014. 5th Edition, ISBN 978-1-118-84615-5.

Assessment and Grades:

Assignment	Percent of Grade	Due Date	Format
Class Assignments (35%+20%Final=55%)			
• Pretest	0%	Jan 8	Online/Webcourses
• Syllabus Exam	1.5%	Jan 10	Online/Webcourses
• Hybrid AI Insect	3.5%	Jan 29	Online/Webcourses
• Class Midterm 1	10.0%	Feb 19	In class
• Class Midterm 2	10.0%	March 27	In class
• Class Presentations	10.0%	April 8-10 (assigned)	In class
Lab Assignments (35% +10% Final=45%)			
• Lab Quiz 1	2.5%	Jan 22	In class
• Lab Quiz 2	5.0%	Feb 7	In class
• Lab Quiz 3	5.0%	Feb 26	In class
• Lab Quiz 4	5.0%	March 11	In class
• Lab Quiz 5	5.0%	Apr 1	In class
• Insect Collection	12.5%	Apr 17 (11am)	Hand-in to TA
• Lab Final	10.0%	Apr 22	In class
Class Final	**20.0%**	**TBA**	**In class**

Grading Scheme: A = 100-90; B = 89-80; C=79-70; D=69-60; E/F (fail) < 60
Rounding: I will round up ONLY if you fall within 0.5 of the next letter grade. Thus, 89.6 will become an A grade. 89.4 will not, and will be a B grade. I will accept no attempts at grade persuasion.

Description of Examinations/Assignments & Progress checks:

Pretest

A Pretest will be given out on the first day to test student's knowledge and background information upon entering the class. There are no grades associated with this test, it is purely to assist the instructor.

Syllabus Exam

This short exam tests your knowledge of the information obtained in this syllabus, rules mentioned in class, as well as descriptions of assignments handed out in class. Basic class rules and assignments are the focus. Note: My pet peeves are: misuse of the word "like" and "literally," the sound of crinkly chip bags and screeching chairs and parrots, and asking questions that are on the syllabus. **Also all unnecessary emails**. My favorite things: students who regularly attend class, students who get actively involved in their learning, students who bring their best to class, students who come see me when they are not achieving their desired grades.

Class Midterms and Final

The midterms and final exam will consist of multiple-choice, short-answer and essay questions about specific topics covered in lectures and class discussions. I provide example questions and the format stays the same for all exams based on class material. Questions will assess student's mastery of the content and ability to communicate and defend viewpoints on specific issues related to insects and their impact on the environment and human life. Some content is taught in both lecture and lab and will require students to integrate the knowledge learned in both sections.

Lab Quizzes

The lab quizzes will assess student's ability to identify insects by knowing key morphological characteristics that define orders and common families of insects learned within the laboratory. Students will be expected to know specific identifying characteristics of organisms to allow them to identify multiple families of insects across all orders.

Description of Assignments

***Oral Presentation (10% of final grade)*:**

The purpose of this assignment is to ensure students can research an entomological topic of interest and communicate about entomological science to a broad audience. Students will be choose a topic to research but should obtain approval of the instructor. Students will present their topic to the class (5 minute oral presentation, followed by two minutes of questions), utilizing images obtained from researched sources. For graduate students, presentations will be 10 minutes long with 2 minutes for questions. Power point is strongly recommended as a delivery format. See assignment handout and grading rubric for more details.

Insect Collection (12.5% of final grade)

This will teach students how to collect, sort, and identify insects, focusing on adult insects. Students will also learn to properly curate and preserve insect specimens, including proper mounting, labeling, and storage. Students must hand in 25 curated and identified specimens. See assignment handout and rubric for more details. Some students have ethical issues with killing insects for curation. There is an alternative assignment choice in extreme circumstances (see below).

Specimen Check (Mandatory)

- Students must have 5 insects properly curated by March 4th
- Students should have 15 minimum curated by April 3rd.

Students having not completed these checks must speak with the professor about progress.

Alternative Assignment Option for the Insect Collection: An alternate is only allowed in special circumstances. Please discuss with Dr. Sharanowski if you have concerns about creating an insect collection.

Course Schedule: See Handout