

ENY-5223C, Biology and Identification of Urban Pests, 3 credits

Syllabus, Fall 2023

Instructor: Dr. Michael E. Scharf
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Phone: 352-273-3953
Office: Steinmetz Hall rm. 3101
Office Hours: By appointment, but I am very flexible and can meet by zoom with an appointment
Canvas Website: <https://elearning.ufl.edu/> (login with UF Gatorlink username and password)

Teaching Assistant: Gretchen Thomas (thomasg@ufl.edu), MS graduate student
Duties: Assignments, iNaturalist, lab questions.

Email: Each student must have an active email account. The University of Florida requires that you obtain a student ID# and a Gatorlink email account as part of your registration process. The instructor may post class notices to your Gatorlink email account. While many of you already have independent email accounts, you must also obtain a University of Florida Gatorlink email account for use as a registered student.

Course Description and Learning Objectives:

This is an *asynchronous online** course that covers the biology, life cycles, and ways of identifying the major urban pest groups, including wood destroying insects and their damage, cockroaches, blood-sucking insects, pest ant species, flies, stinging insects, and stored food pests. Preferred foods and sources of infestation for each pest group will be discussed. The main urban pest species and their effect on human health and well-being will be covered. Through completing the course students will be expected to:

1. Know the major groups of urban pests and their phylogenetic relationships to each another.
2. Know the key identifying features for major groups of urban pests.
3. Know the life cycles and feeding habits of major important pests.
4. Know the factors that can make urban arthropods and insects become elevated to pest status.

* "Asynchronous online" means the course will consist of online lectures, labs and learning materials only, to be completed by students independently on their own schedule. However, exams and assignments will be done according to a set schedule. A course schedule is available on the Canvas eLearning site. Students are expected to regularly consult this schedule and be aware of upcoming deadlines.

Special Research Topic (due Nov 17): Special Research Topic Report (due Nov 17): This assignment is in relation to the paper "A global horizon scan for urban evolutionary ecology" by Verrelli et al. (2022, Trends in Ecology & Evolution 37(11):106) which is provided through the

link below and available through UF libraries. Your assignment is to **(1) read and in your own words summarize key concepts of the paper, and (2) pick one of the questions and major themes identified in the paper and write a short literature review around that theme as relates to any contemporary urban entomology pest or ecology issue.** Picking themes that are parallel to your own research or career interests is completely appropriate and highly encouraged! **HINT:** Databases that may be helpful for searching the insect literature include Google Scholar and PubMed. Google searches may also be helpful to locate researchers or literature, but your report citations can only be refereed scientific literature (Wikipedia doesn't count!). Your report should be 1500-2000 words in length and carefully written using proper spelling, sentence structure, grammar, etc., along with a literature cited section that is not included in the word count. Lastly, do not use Chat GPT or any other AI software to write your report –it is easy to spot AI generated text and this will result in failure of the assignment.

Critical Thinking and Evidence Collection (due Nov 27): Urban pests are found in many situations and can be difficult to recognize. Students will be expected to locate and identify at least **25** insect pests and record their findings on iNaturalist. The iNaturalist site can be located through the “Assignments” tab in Canvas, as well as instructions for how to create an account and upload photos, etc. Pictures or other evidence can be uploaded to the class iNaturalist site as well. Observations about the pests should be recorded, such as: recognizing the damage they cause, how to prevent infestations based on the pest’s biology. Students will be required to observe the reports of other students and provide additional guidance to them.

Laboratories: Assignments are multiple choice laboratory activities located at the Canvas website. Students can do the on-line laboratory activities as often as necessary until the due date and will get credit for the best grade obtained for each assessment.

Text: Mallis, Arnold. *Handbook of Pest Control*. 10th Edition. 2011 Mallis Handbook Co., Cleveland, OH. ISBN: 978-1-890561-02-4. Library of Congress Catalogue Card No.: 2010928977. Course readings from this book will be provided so purchasing this book is required, but it is an excellent resource for this course and for pest management professionals. (Available at PCT Store for \$79 [<https://store.pctonline.com/en/mallis-handbook>]).

Grading: The exams will be timed exams taken on Canvas. The final exam will be comprehensive of all lectures. The course is based on a total of **1700** points:

Course item	Points	Dates
Exam 1	200 points	Sep 20-22
Laboratory Exam 1	75 points	Sep 20-22
Exam 2	200 points	Oct 23-25
Laboratory Exam 2	75 points	Oct 23-25
Special Research Topic Report	200 points	Nov 17
Critical Thinking & Evidence Collection	200 points	Nov 27
Final exam	400 points	Dec 11-13
Laboratory Final Exam (cumulative)	150 points	Dec 11-13
Laboratory Assignments	200 points	Multiple due dates (see schedule)

Grading scale (%):

94-100 A
90-<94 A-
87-<90 B+
83-<87 B
80-<83 B-
77-<80 C+
74-<77 C
70-<74 C-
67-<70 D+
64-<67 D
60-<64 D-
<60 E

Specific Evaluations: Your grade in the course will be based on the points you earn and determined by the percentage breakdown of points earned. The percentage is then applied to the grading scale. Lecture exams 1, 2, and final exam will be timed exams. Final exams (lecture and laboratory) will be comprehensive. The “critical thinking & communication” document will be graded by evaluating the critique of the 5 sections of the downloaded research paper + connecting the paper with concepts in the course, on a scale of 40 points per section.

Class files: Lectures, reading assignments, class notes, class schedule, and syllabus. The files are available on the Canvas eLearning course site.

Grades and Grade Points

For information on current UF policies for assigning grade points, see <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/> .

Absences and Make-Up Work

Since this is an asynchronous online course there are no attendance requirements; however, requirements for make-up exams, assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/> .

Online Course Evaluation Process

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at:

<https://gatorevals.ua.ufl.edu/students/> . Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/> . Summaries of course evaluation results are available to students at: <https://gatorevals.ua.ufl.edu/public-results/> .

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation
0001 Reid Hall, 352-392-8565, <https://disability.ufl.edu/>

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*

Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library

Training Programs
Community Provider Database

- U Matter We Care, www.umatter.ufl.edu/
- Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/
- Student Success Initiative, <http://studentsuccess.ufl.edu>.
- Student Complaints:
 - Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-studentconduct-code/>.
 - • Online Course: <http://www.distance.ufl.edu/student-complaint-process>

Plagiarism.

Plagiarism is a serious violation of the [Student Honor Code](#). The Honor Code prohibits and defines plagiarism as follows:

Plagiarism. A student shall not represent as the student's own work all or any portion of the work of another. Plagiarism includes (but is not limited to):

- a. Quoting oral or written materials, whether published or unpublished, without proper attribution.
- b. Submitting a document or assignment which in whole or in part is identical or substantially identical to a document or assignment not authored by the student.

(University of Florida, Student Honor Code, 15 Aug. 2007

<http://www.dso.ufl.edu/judicial/honorcode.php>)

University of Florida students are responsible for reading, understanding, and abiding by the entire [Student Honor Code](#).

Important Tips: You should never copy and paste something from the Internet without providing the exact location from which it came. The course instructor also is trained in the use of plagiarism detection tools and software.

UF Policy on E-mail:

“Official University business email will be communicated to students using the University GatorLink email account. That is, official email will be sent exclusively to GatorLinkUserName@ufl.edu. The preferred email address recorded for all students will be the GatorLink address. This is the email address displayed in the online phonebook. Students may continue to use the forwarding mechanism to deliver their email to other mail services, if they wish. However, it is the student's responsibility to insure that the forwarding address is current so that they receive official communications from the University”.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking

the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

****NETIQUETTE: COMMUNICATION COURTESY:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.
<http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>

GETTING HELP:

For issues with technical difficulties for E-learning, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

** Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Lecture Subjects

1. Overview of Urban Entomology
2. Orders of Arthropods that are Urban Pests
3. Cockroaches
4. Cockroaches (Problems)
5. Cockroaches (Blattellidae)
6. Cockroaches (Blattidae)
7. Composition and Structure of Wood
8. Termites
9. Subterranean termites
10. Non-Subterranean termites
11. Wood-boring Beetles
12. Wood Decay & Other WDOs
13. Pests in Damp Locations
14. Delusory Parasitosis
15. Biting flies & Mosquitoes
16. Lice & bugs
17. Bedbugs
18. Fleas
19. Ticks and Mites
20. Pests of Fabric

21. Pests of Paper
22. Ants
23. Pest Ants
24. Wasps
25. Bees
26. Spiders and Scorpions
27. Envenomization
28. Stored Food Pests
29. Filth Flies & Small Flies (Gnats)