



INSECTS AND WILDLIFE



ENY 4210 (UNDERGRADUATE LEVEL)

ENY 5212 (GRADUATE LEVEL)

SEMESTER: Fall, 3 CREDIT HOURS

ONLINE ONLY

INSTRUCTOR:

Dr. Estelle Martin

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OFFICE HOURS:

- Every Thursday from 4:30PM to 6:30PM:
- <https://ufl.zoom.us/j/92504781772?pwd=NXpzb0htOXJMcXZ3SnY1TVBHTnFwUT09>
- In addition, students are encourage to contact Alec Tasi at atasi@ufl.edu or me at estellemartin@ufl.edu to arrange a time to meet with subject line: **FALL 2020 - ENY4210 or ENY 5212 meeting request**. All meetings will occur via Zoom. Please allow for a 48h response time.

COURSE WEBSITE: <https://ufl.instructure.com/courses/396353>

COURSE DESCRIPTION: Insects and other arthropods and their relationships with wild vertebrate animals.

PREREQUISITE KNOWLEDGE AND SKILLS: As a prerequisite, you must have completed ENY3005L or BSC2005L (or higher).

PURPOSE OF COURSE: This course has several purposes: (1) to introduce students who are mostly interested in vertebrate animals (wildlife) to the importance of smaller, often overlooked, but ecologically important invertebrates, mostly insects; (2) to introduce students to vertebrate animals that interact with arthropods (mostly insects); (3) to learn how insects

are managed, and how vertebrate animals can be positively or negatively affected by the various practices.

COURSE GOALS AND/OR OBJECTIVES: By the end of this course, students will develop an understanding of the ecological relationships of arthropods and pesticides with natural resources, particularly the roles of arthropods as food, nuisance pests, vectors of animal disease, and in natural resource and wildlife conservation. Students will be able to identify the groups of insects (and other arthropods) that are most important as food, nuisance pests, and vectors of animal disease. They will learn methods of arthropod diet assessment and know how different methodologies affect the outcomes of research. They will learn how arthropod populations can be manipulated to favor wildlife, and will create a wildlife management plan that applies the principals and practices provided in the course.

INSTRUCTIONAL METHODS: The class will be conducted entirely online uses Canvas. You are responsible for the course content in Canvas as well as assigned textbook readings. You should view the lectures and read the text in the order shown in the class outline. You should also view the video clips, which serve to illustrate the items discussed.

COURSE TECHNOLOGY: You will need internet access to the UF Canvas eLearning site to see the course contents and complete assessments.

LEARNING OBJECTIVES:

By the end of the course, students will be able to:

1. Compare the major insect orders
2. Discuss insects external and internal structure
3. Summarize the nutritional value of insect
4. Identify insect orders that are important to wildlife diet
5. Analyze the different impact insects have on animal and environmental health
6. Compare and contrast the different type of disease transmission
7. Discuss strategies for pest control, animal disease control and wildlife management
8. Judge and critique scientific literature related to insects and wildlife interaction
9. Create presentations on insect-vectorred diseases that are involved in the regulation of animal populations
10. Employ databases to find relevant journal articles related to insects and wildlife

LECTURE OUTLINE:

Module	Course topic	Assessment	Due dates
0 (Aug 31-Sept 6)	Course introduction	Syllabus quiz (14 pt) Discussion board (30 pts) Assess your knowledge quiz (14 pts)	Sept 4

1 (Aug 31-Sept 6)	Insects and their relatives	Quiz 1 (30 pts) Discussion board 1(30 pts) Assignment 1* (20 pts)	Sept 7
2 (Sept 6-Sept 13)	Insect structure and function	Quiz 2 (30 pts) Discussion board 2(30 pts) No assignment	Sept 14
3 (Sept 14-Sept 20)	Food resources for wildlife	Quiz 3 (10 pts) Discussion board 3 (30 pts) No assignment	Sept 21
4 (Sept 21-Sept 27)	Wildlife diets	Quiz 4 (30 pts) Discussion board 4 (30 pts) Assignment 2* due next week	Sept 28 except for assignment 2 due Oct 5
5 (Sept 28-Oct 4)	Insects important as food for wildlife	Quiz 5 (30 pts) Discussion board 5 (30 pts) Assignment 2* due (50) Insect Identification Quiz (30 pts)	Oct 5
6 (Oct 5-Oct 11)	Insects and ecosystems	Quiz 6 (10 pts) Discussion board 6 (30 pts) Group Quiz (3 pts)	Oct 12
7 (Oct 12-Oct 18)	Transmission of disease agents to wildlife by arthropods	Quiz 7 (10 pts) Discussion board 7 (30 pts) Mid-course assessment (5 pts Extra Credit) No assignment	Oct 19
8 (Oct 19-Oct 25)	Infectious disease agents transmitted to wildlife by arthropods	Quiz 8 (10 pts) Discussion board 8 (30 pts) Assignment 3* (26 pts)	Oct 26
9 (Oct 26-Nov 1)	Parasitic disease agents transmitted to wildlife by arthropods	Quiz 9 (20 pts) Discussion board 9 (30 pts) Assignment 4* (25 pts)	Nov 2
10 (Nov 2-Nov 8)	Arthropods as parasites of wildlife	Quiz 10 (30 pts) Discussion board 10 (30 pts) Assignment 5* (25 pts)	Nov 9
11 (Nov 9-Nov 15)	Pesticides and their effects on wildlife	Quiz 11 (30 pts) Discussion board 11 (30 pts) Assignment 6* (25pts)	Nov 16
12 (Nov 16-Nov 22)	Alternatives to insecticides	Quiz 12 (10 pts) Discussion board 12 (30 pts) No assignment	Nov 23
13 (Nov 23-Nov 29)	Insect-wildlife relationships	Quiz 13 (10 pts) Discussion board 13 (30 pts) Assignment 7* (25 pts)	Nov 30

		End-of course evaluation (5 pts Extra Credit)	
14 (Nov 30-Dec 6)	Insect and wildlife conservation	Quiz 14 (10 pts) Discussion board 14 (30 pts) No assignment Assess your knowledge quiz (14 points)	Dec 7

*assignment for Undergraduate and Graduate student is different

COURSE FORMAT AND REQUIREMENTS:

This course is offered as pre-recorded lectures delivered by the eLearning course management system Canvas. Slides are available as PDF as well as transcripts should you care to print them.

There are 14 quizzes, 14 discussions and 7 assignments for this course.

Quizzes are multiple choice tests and must be taken via Canvas unless other arrangements are made in advance

Also, there are 14 “practice quizzes”. These are not graded and it is for your use only as a study aid. If you can answer these questions successfully you are acquiring adequate knowledge about the relationship of insects and their relatives that will allow you to be successful for each of the 14 “end of the module quizzes”

In addition, there is an ‘insect identification quiz’ which will assess your ability for identification of insect orders and insect relatives that are of particular importance to wildlife. This quiz can be taken up to 3 times and the best score will be kept. At the end of each attempt the explanations as to how identification of the images is determined.

In addition, there also is one “syllabus quiz”, two “course assessment quizzes” (midway and end of course) as well as 2 “assess your knowledge quizzes” (beginning and end of the course). For these, full grade will be given just for complete the quiz.

Among the 7 assignments, some are design as presentation of journal articles (1-2 page summary that may be accompanied by the production of a short video). The list of the journal articles is listed below:

- Chapter - Journal article
- 6 - Insect herbivory and nutrients
- 6 - Salmon flies and nutrients
- 6 - Termites and elephants
- 6 - Ticks and global warming
- 8 - Plague and mountain plover

- 8 - Plague and prairie dogs
- 8 - Scavenging and plague
- 8 - Trout disease and stoneflies
- 9 - Chagas disease in Brazil
- 10 - Fire ants and wildlife
- 11 - Pesticides and intoxication
- 13 - Bats limit arthropods
- 13 - Bats limit insects
- 13 - Beehive-elephants
- 14 - Plague and vector control
- 14 - Tick control

COURSE COMMUNICATIONS: Please post course related question on the discussion board and send private question related to the course or grades to Estellemartin@ufl.edu

NETIQUETTE: COMMUNICATION COURTESY: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

REQUIRED TEXT: Capinera, J.L. 2010. Insects and Wildlife. Arthropods and their Relationships with Wild Vertebrate Animals. Wiley-Blackwell, Oxford, UK.

ADDITIONAL RESOURCES: All other materials are provided via the eLearning site.

HOW THIS COURSE RELATES TO THE STUDENT LEARNING OUTCOMES:

Biology students – will develop competence in the basic terminology, concepts, methodologies and theories used within the biological sciences; and will develop ability to analyze biological information and develop reasoned solutions to problems.

Wildlife biology students – will develop knowledge of scientific, social and ethical arenas of wildlife ecology and conservation; skills for critical reasoning in conservation management; knowledge of Florida wildlife species and their biology, ecology, natural history and behavior; principles and applications of wildlife management practices, population dynamics and habitat management; and application of biological principles to solve problems in wildlife conservation and preserve biological diversity.

Entomology students - will allow students to demonstrate knowledge of insects, other arthropods and/or nematodes, including their relationship with the environment and humans

COURSE POLICIES:

ATTENDANCE POLICY: There is no attendance policy, but it will be difficult to pass the course unless you read the book carefully, and listen to the lectures. Students are encouraged to work

on this class weekly since **All writing assignments are due by the date posted and must be submitted using Canvas.**

QUIZ/EXAM POLICY: You have only one chance to take each test, so prepare in advance. Please take tests using a reliable computer and connections. All assignments are due on the Monday of the following week and the whole content of the course will be available to student as they start the course. To earn points, quizzes, discussion posts and assignments, must be completed and submitted before the Monday of the following course week. All late submissions will be docked 10% on the individual component grade for each 24 hrs after each deadline. Contact me in advance (minimum of two weeks) if there will be a problem with the dates of the scheduled tests. The insect identification quiz you will be allowed three attempts and the highest score will be recorded.

COURSE GRADING: Students are responsible for the content of the lectures and textbook. The quizzes, discussion board and assignments are weighted equally and the points assigned for each evaluation is listed in the “assessment” column of the lecture outline table Page 3-4 of this syllabus. The final grade, based on accumulation of points, will be assigned as:

A=>90 (891-990 points)
B=80-89 (792- 890 points)
C=70-79 (693 -791points)
D=60-69 (594-692 points)
E=<60 (0- 593 points)

Grade point equivalencies for grades are found at: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

UF POLICIES:

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/>.

Attendance and Make-Up Work

Requirements for class attendance and 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/>.

COVID Response Statements

For face to face courses a statement informing students of COVID related practices such as: We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class. • Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (Click here for guidance from the CDC on symptoms of coronavirus), please use the UF Health screening system and follow the instructions on whether you are able to attend class. Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms.
- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. Find more information in the university attendance policies.

For online course with recorded materials a statement informing students of privacy related issues such as: Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

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.aa.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.aa.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*
Counseling Services Groups and Workshops Outreach and Consultation Self-Help Library
Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/

- *Career Connections Center*, First Floor JWRU, 392-1601, <https://career.ufl.edu/>. Student Complaints:
 - Residential Course: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>.
 - Online Course: <http://www.distance.ufl.edu/student-complaint-process>