

SPIDER BIOLOGY

Course Number: ENY 4905, ZOO 4926

Credit Hours: 2

Fall 2019

Class location: 1027 Steinmetz Hall

Class meeting times: Mon and Wed 12:50-1:40 (period 6)



COURSE DESCRIPTION: Course provides an introduction to the biology of spiders and their relatives, with an emphasis on their ecology, behavior, and evolution. While identification is not the focus of the course, students will learn to recognize the members of approximately 20 common spider families as well as several common Florida species.

INSTRUCTOR: Dr. Lisa Taylor
2211 Steinmetz Hall (office)
Entomology and Nematology Department
Lisa.taylor@ufl.edu
Office phone: 352-273-3937

OFFICE HOURS: Mondays 2-3pm or by appointment (email to schedule a time).

COURSE WEBSITE: This course uses the Canvas course management system on E-Learning. Students should follow the provided URL and log on with their GatorLink ID and password: <http://lss.at.ufl.edu>

REQUIRED TEXT: There will be no required textbook for this course. You will be provided with information in lecture as well as handouts and will be occasionally assigned additional material to read (posted in Canvas). Even though a textbook is not required, I highly recommend the following books, which provide excellent guidance on spider identification, as well as biology and natural history.

- *Recommended:* Levi, H. & Levi, L. **A Guide to Spiders and Their Kin**. St Martins Press. (This is a tiny field guide that's great to have on hand whenever you are out in the field)
- *Optional:* Edwards, GB and Marshall, S. 2002. **Florida's Fabulous Spiders**. World Pubns. (Great guide to Florida spiders, including many of our common Gainesville species)
- *Optional:* Foelix, R. 2011. **Biology of Spiders**. 3rd Edition. Oxford Press. (Great overall textbook on spider biology)
- *Optional:* Bradley, RA & Buchanan, S. 2012. **Common Spiders of North America**. U. California Press (An excellent guide for advanced students who want to key out spiders to the genus level).

PREREQUISITE KNOWLEDGE AND SKILLS: Students must have completed ENY1001, ENY2040, ENY3005, BSC2005, BSC2010, or obtained permission from the instructor.

COURSE LEARNING OBJECTIVES: By the end of this course, students will be able to:

1. Identify, describe the biology of, and understand the evolutionary relationships between members of the 12 largest arachnid orders

2. Identify and describe the biology of members of the 20 most common spider families, and understand their evolutionary relationships
3. Identify (to species level) and describe the biology of approximately 25 of the most common local species and be able to find them in the field
4. Give examples (across a range of spider taxa) of how spiders sense their environment, find mates and reproduce, find and hunt their prey, protect themselves from predators, interact in social groups, and learn about their environment
5. Describe the role of spiders in both natural and agricultural ecosystems
6. Understand how to keep spiders in captivity, make careful behavioral observations of their behavior, and develop hypotheses for the function of the behaviors observed
7. Understand the medical relevance of spider bites and which species cause harm to humans (and which do not)
8. Be familiar with current and ongoing research in the field of spider biology and understand the methods that scientists use to study spiders
9. Be aware of common spider myths and misconceptions and understand how to accurately assess these claims

INSTRUCTIONAL METHODS: This course will meet for lecture two times per week (MW 12:50-140pm).

Attendance at class meetings is critical. While I will post lecture PowerPoints after each lecture, they will not have a lot of text on them, so you need to be in class to take your own notes. Additional course material (assignments, readings, etc.) will be available through Canvas, separated into weekly modules. Your grade in this class will be calculated from the following: two written exams, 4 quizzes, 6 graded Canvas discussions, a written paper on a spider that you keep in captivity during the course of the semester, as well as attendance and participation. See below for the specific point breakdown.

COURSE COMMUNICATIONS: If you have questions either before or during the course, feel free to speak with me after class, email me directly at any time, send me a message via Canvas, or visit me during my office hours.

TENTATIVE COURSE SCHEDULE (FALL 2019):

Class	Date	Topic
1	21 Aug W	Introduction
2	26 Aug M	Overview of spider & arachnid diversity
3	28 Aug W	Evolution of arachnids, how to care for your spider (for spider behavior project)
-	2 Sept M	No class (holiday)
4	4 Sept W	Evolution, diversity, and identification of spider families (part 1), Canvas discussion 1 due
5	9 Sept M	Evolution, diversity, and identification of spider families (part 2)
6	11 Sept W	Field trip #1 during class – meet at Natural Area (NATL)
7	16 Sept M	Spider mating 1, spider ID quiz #1

8	18 Sept W	Spider mating 2
9	23 Sept M	Campus spider walk – common Gainesville spiders, spider ID quiz #2
10	25 Sept W	Diversity and ID of common Florida spiders (part 1), Canvas discussion 2 due
11	30 Sept M	Diversity and ID of common Florida spiders (part 2)
12	2 Oct W	Field trip #2 during class – on campus, location TBA
13	7 Oct M	Spider ID quiz #3 and review for Exam 1
14	9 Oct W	Exam 1 (midterm)
15	14 Oct M	Mimicry in spiders, Canvas discussion 3 due
16	16 Oct W	Spider sensory ecology 1
17	21 Oct M	Spider sensory ecology 2
18	23 Oct W	Venom, Canvas discussion 4 due
19	28 Oct M	Webs and silk
20	30 Oct W	<i>Arachnophobia</i> (movie and critique)
21	4 Nov M	Social Spiders
22	6 Nov W	Predators of spiders, Canvas discussion 5 due
-	11 Nov M	No class (holiday)
23	13 Nov W	Anti-predator defenses, spider ID quiz #4
24	18 Nov M	Spiders as predators, using spiders for biocontrol
25	20 Nov W	Spider sensory ecology (part 2), Canvas discussion 6 due
26	25 Nov M	Non-spider arachnid diversity (part 1)
-	27 Nov W	No class – Thanksgiving break
27	2 Dec M	Non-spider arachnid diversity (part 2), spider behavioral papers due
28	4 Dec M	Course wrap-up and review for final exam*

***FINAL EXAM DATE AND LOCATION: TBA**

Note that this course outline is a tentative schedule; it is subject to change

COURSE POLICIES:

ASSESSMENTS AND GRADES: All assignments will be returned within one week, meaning that at any point in the semester, you should be able to calculate your current grade for the course. To be fair to all students, I follow the rules and point system laid out in this syllabus very closely. If you ever have a question about a score you earn, I would be happy to discuss it. I do ask that you address all questions about grading of particular assignments within two weeks of receiving a grade on that assignment.

Your final grade for this course will be based on the following assessments and will be calculated from the percentage of points that you earn out of a possible total of 390 points. The assessments with specific point values are as follows.

Assessment	Details	Total points	% of grade
Spider ID quizzes	4 quizzes at 15 points each (require correct identification of spiders to the family level from photos)	60	15.4%

	and/or live specimens)		
Exams	2 exams (midterm and final) at 100 points each (consist of a combination of multiple choice and short answer questions)	200	51.3%
Spider behavioral project	A written paper describing your behavioral observations of a live spider during the course of the semester. A rubric will be provided with the assignment	75	19.2%
Canvas discussions	A total of 6 discussions at 5 points each (related to topics that we cover in class)	30	7.7%
Class participation	Based on attendance and participation in class discussions and activities	25	6.4%
GRAND TOTAL		390	100%

Grades will be calculated as follows*:

A	93-100
A-	90-92.9
B+	88-89.9
B	83-87.9
B-	80-82.9
C+	78-79.9
C	73-77.9
C-	70-72.9
D	60-69.9
E	59% and below

***Final percentages are rounded to the nearest whole number to determine your final grade.** This means that at any point in the semester, you can simply calculate the percentage of points that you have earned at that stage to estimate your current grade.

For information on current UF policies for assigning grade points, see: <http://www.isis.ufl.edu/minusgrades.html>

ATTENDANCE AND MAKE-UP POLICY: Attendance in this course is crucial for success; you must be present to take notes on the material presented, to take quizzes and exams, and to participate in class activities and discussions.

Requirements for make-up assignments and other work are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

UF policy states that “in general, acceptable reasons for absence from or failure to participate in class include illness, serious family emergencies, special curricular requirements (e.g., judging trips, field trips, professional conferences), military obligation, severe weather conditions, religious holidays and participation in official university activities such as music performances, athletic competition or debate. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused.”

If your absence falls into one of the categories above (*and can be documented*), you can make special arrangements with the instructor to make up missed work. Where possible, contact the instructor at least one week BEFORE the due date (e.g., in the case of religious holidays, etc.). In cases of unforeseen emergencies

(e.g., medical emergency documented with a doctor's note), contact the instructor as soon as possible following the emergency. Such situations will be handled on a case-by-case basis.

POLICY ON LATE ASSIGNMENTS: Late assignments will be accepted, but will be deducted 20% per day late. This means that assignments that are 5 (or more) days late will earn no credit. Assignments turned in via Canvas must be submitted by 11:59pm on the day they are due.

COURSE TECHNOLOGY: This course will use Canvas (<http://lss.at.ufl.edu>) for posting course materials and discussions, and submitting assignments. All students must have access to a computer with a reliable Internet connection (a high speed connection is recommended). Please be sure to have a backup option in case your computer or Internet connection fails. See the 'Getting Help' section below for technical assistance with Canvas.

UF POLICIES:

UNIVERSITY POLICY ON ACCOMMODATING 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.

Disability Resource Center

0001 Reid Hall, 352-392-8565,

www.dso.ufl.edu/drc

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/honorcodes/honorcode.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. Take a moment to read this netiquette guide for online courses: <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

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. These evaluations are conducted online at: <https://evaluations.ufl.edu>.

Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at: <https://evaluations.ufl.edu/results>.

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.

GETTING HELP:

For issues with technical difficulties for E-learning in Canvas, 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.

Other resources are available at <http://www.distance.ufl.edu/getting-help>.

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
- Wellness Coaching

Career Resource Center

First Floor JWRU, 392-1601, www.crc.ufl.edu/