SPIDER BIOLOGY

Course Number: ENY3830/ZOO4926
Credit Hours: 2
Fall 2022

Class meeting time: Mon and Wed, 12:50-1:40

Class location: We will meet in **room 3118 Steinmetz Hall**. Please also note that we will occasionally have field trips where we will meet just outside of Steinmetz Hall at the Natural Area Teaching Lab (NATL) covered pavilion (see tentative schedule below). If you are not familiar with NATL, follow this link to locate the covered pavilion where we will meet on these field trips days (https://natl.ifas.ufl.edu/).

COURSE DESCRIPTION: Course provides an introduction to the biology of spiders and their relatives, with an emphasis on their ecology, behavior, and evolution. Students will learn to identify the members of approximately 20 common spider families as well as several common Florida species.

PREREQUISITE: Students must have at least sophomore standing (or instructor permission) to take this course.

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

TEACHING ASSISTANT
Madison Heisey: mheisey@ufl.edu

OFFICE HOURS: I have set aside time to meet with students on Mondays and Wednesdays immediately after our class meeting (MW 140-230pm). If you would like to meet during this time, simply stay after class and we can chat in the classroom or in my office. If this time does not work for you, just send me an email and we can schedule an individual meeting at another time.

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

INSTRUCTIONAL METHODS: This course will meet in person two times per week (M W 12:50-140pm). Attendance is very important. While we will provide lectures notes and/or recordings for students who are unable to attend (see below), students will be most successful if they attend class meetings, take notes, participate in class discussion, and ask questions. Additional course material (readings, discussions, quizzes, and exams) will be available through Canvas, separated into weekly modules. Your grade in this class will be calculated from the following: 2 written exams, 4 quizzes, 5 graded Canvas discussions, and written paper that details your observations of a captive spider. See below for the specific point breakdown.

HOW TO SUCCEED IN THIS COURSE: Students who attend class, actively engage in discussion, ask questions, and **take notes** during lectures are likely to do best in this course. That said, I know that things come up and students will occasionally need to miss class. For example, if you are feeling ill, please DO NOT come to class. If you need to miss class, please get in touch with a classmate (or Madison) to get any relevant notes. There will be regular Canvas discussions that will be related to the material covered in the lectures.

A NOTE ABOUT PRIVACY AND ZOOM MEETINGS: Please note that, in general, class lectures will not be recorded, so attendance is critical. On some rare occasions (such as guest lectures from people who are unable to travel to Gainesville), our class sessions may be audio visually recorded for students in the class to refer back to and for enrolled students who are unable to attend live. Students who participate by Zoom with their camera engaged or use 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 of yourself. 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. For students who choose not to use a profile image of themselves, I would encourage you to update your profile with an avatar image (or your favorite spider image) so that we can recognize you in class.

REQUIRED TEXT: There will be no required textbook for this course. You will be provided with information and handouts in lectures. Additional materials will be 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 and cheap field guide that's great to have on hand whenever you are out in the field)
- *Optional:* Platnick N. 2020. **Spiders of the World: A Natural History**. Princeton University Press. (Newly published book with great information on spider families worldwide)
- *Optional:* Edwards GB & Marshall S. 2002. **Florida's Fabulous Spiders**. World Pubns. (Great guide to Florida spiders, including many of our common Gainesville species)
- *Optional:* Howard T. 2021. **Science Comics: Spiders: Worldwide Webs.** First Second. (Yes, this is a comic book about spiders and it is educational and amazing.)
- *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. (Beautifully illustrated guide to common spiders)
- *Optional:* Ubick D, Paquin P, Cushing P, & Roth V (eds). 2017. **Spiders of North America: an identification manual**, 2nd ed. American Arachbological Society. (An excellent guide for advanced students who want to key out spiders to the genus level).

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*

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

1. Identify and compare the morphology and biology of members of the 12 largest arachnid orders and sketch their evolutionary relationships

2. Identify and compare the biology of members of the 20 most common spider families, sketch their evolutionary relationships, and be able to find them in their natural habitat in the field

3. Identify (to species level), describe, and compare the morphology and biology of approximately 25 of the most common local Gainesville species and be able to find them in their natural habitat in the field

4. Compare different groups of spiders in terms of how they 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 and compare the roles of different groups of spiders in both natural and agricultural ecosystems

6. Keep a spider in captivity, make careful behavioral observations of their behavior, and develop hypotheses for the function of the behaviors observed

7. Describe the medical relevance of spider bites and distinguish between those that cause harm to humans (and those that do not)

8. Examine current and ongoing research in the field of spider biology and critique the methods that scientists use to study spiders

9. Critically evaluate common spider myths and misconceptions

TENTATIVE COURSE SCHEDULE (FALL 2022):

Week	Date	Topic	Assignments and exams
1	24 Aug W	Introduction to course, iNaturalist, live arachnids	
2	29 Aug M	Spider myths, overview of spider & arachnid diversity	
-	31 Aug W	Evolution of arachnids, basic anatomy, and spider ID	Canvas discussion 1 due
3	5 Sept M	**No class meeting** (Labor Day holiday)	
-	7 Sept W	Tarantula biology (and raising tarantulas)	
4	12 Sept M	Evolution, diversity, and ID of spider families (part 1)	Canvas discussion 2 due
-	14 Sept W	Evolution, diversity, and ID of spider families (part 2)	Spider ID quiz #1
5	19 Sept M	Evolution, diversity, and ID of spider families (part 3)	
-	21 Sept W	**NATL field trip**: how to find and collect spiders	First iNat observation due
6	26 Sept M	Webs	Canvas discussion 3 due
-	28 Sept W	Diversity and ID of FL spiders, spider ID practice (part 1)	Spider ID quiz #2
7	3 Oct M	Diversity and ID of FL spiders, spider ID practice (part 2)	
-	5 Oct W	Spider mating	Spider ID quiz #3
8	10 Oct M	Exam review, practice questions	
-	12 Oct W	**Exam 1 (in class or in Canvas)**	Exam 1
9	17 Oct M	Sensory ecology 1	
-	19 Oct W	Sensory ecology 2	
10	24 Oct M	**NATL field trip:** practice spider ID in the field	Canvas discussion 4 due
-	26 Oct W	*Arachnophobia* movie screening	Spider ID quiz #4

11	31 Oct M	*Arachnophobia* follow-up discussion	
-	2 Nov W	Spider enemies (part 1)	iNat observations #2-4 due
12	7 Nov M	Spider enemies (part 2)	
-	9 Nov W	Guest lecture: Laurel Lietzenmayer (topic: spider egg predators)	
13	14 Nov M	Spider defenses and mimicry	Canvas discussion 5 due
-	16 Nov W	Venom and medically relevant spiders	
14	21 Nov M	Social spiders (**online lecture/activity – no in-person class meeting today**)	
-	23 Nov W	**No class meeting (Thanksgiving holiday)**	
15	28 Nov M	Guest lecture: Dr. Erin Powell (topic: harvestmen)	
-	30 Nov W	Non-spider arachnid diversity	Spider behavior papers due
16	5 Dec M	Course wrap-up, discussion, and review for Exam 2	
-	7 Dec W	**Exam 2 (in class or in Canvas),** last day of class	Exam 2

Note that this course outline is a tentative schedule; it is subject to change. Announcements and updates will be posted regularly in Canvas. Please adjust your Canvas settings so that you will be notified of announcements.

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 400 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 and/or written descriptions), quizzes are 'closed-book' and will be available both through Honorlock and in the classroom	60	15%
Exams	2 exams at 100 points each (consist of a combination of multiple choice and short answer questions), exams are 'closed-book' and will be available both through Honorlock and in the classroom	200	50%
Spider behavior 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	18.8%
Canvas discussions	A total of 5 Canvas discussions at 5 points each	25	6.3%

	(extending discussions that we begin in class), discussions are 'open-book' (notes and any additional resources are allowed).		
iNaturalist participation	A total of at least 4 spider observations contributed to our class project page on iNaturalist	20	5%
Class participation	Based on attendance and participation in class discussions and activities	20	5%
GRAND TOTAL		400	100%

Grades will be calculated as follows*:
A   93-100%
A-   90-92%
B+   87-89%
B   83-86%
B-   80-82%
C+   77-79%
C   73-76%
C-   70-72%
D   60-69%
E   less than 60%

*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
https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/.

ATTENDANCE AND MAKE-UP POLICY: Attendance in class is important for success; if you cannot attend, please make arrangements to get notes from a classmate or the TA/instructor and follow up with any questions you have.

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/.

POLICY ON LATE ASSIGNMENTS AND MISSED QUIZZES AND EXAMS:

Late assignments (including late participation in graded Canvas discussions and the spider behavioral project paper) 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.

Quizzes and exams must be taken during class time in the classroom or on Canvas using Honorlock on the dates that they are scheduled (students may choose whether to take them in person in the classroom or using Honorlock). In case of personal emergency on quiz/exam day that results in a missed quiz/exam, students must submit documentation to the Dean of Students office (dsocares@dso.ufl.edu,

https://care.dso.ufl.edu/instructor-notifications/) and request that an instructor notification to be sent. This must be done within five business days after the scheduled time of the quiz/exam. In addition to contacting the Dean of Students office, please also send me an email to let me know that you plan to request a make-up quiz/exam (and also to let me know that all is okay, as I worry when students miss these important dates!)

COURSE TECHNOLOGY: This course will use Canvas (*http://lss.at.ufl.edu)* for posting course materials and discussions. Quizzes and exams will be available both in the classroom and through Canvas using the Honorlock proctoring service*.* 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.

iNaturalist. We will use the online *iNaturalist* platform throughout the semester and students will be required to sign up for a free account and contribute at least 4 observations to our project page over the course the semester (see list of assessments and grades above). If students don't have access to a basic camera (such as a smartphone camera, or any other type of basic digital camera), they should contact the instructors about options for borrowing one from our course supplies. *iNaturalist* can be accessed for free using either a web browser (iNaturalist.org) or using the free smartphone app. At the start of the semester, students will be given guidelines that describe best practices for using this platform and for contributing to the *iNaturalist* community.

STANDARD UF POLICIES:

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/

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.

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. 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/.

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.

RECORDING OF LECTURES. Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil

cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

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.

Canvas technology requirements. Computers, Internet, and Web browsers: Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser. It is recommended to use a computer less than five years old with at least 1GB of RAM. It is recommended to have a minimum Internet speed of 512kbps. It is strongly recommended to not use a wireless connection, phone, tablet, or notepad for critical course tasks such as exams and discussions.

Canvas currently supports the following browsers: Chrome, Safari, Firefox, Edge. Canvas supports the last two versions of most browsers. It is highly recommend updating to the newest version of whatever browser you are using. Note that your computer's operating system may affect browser function. Failure to use one of these browsers will cause problems.

For more information on approved computers and browsers please visit: https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66 On this web page there is an area titled "Is My Browser up to Date?" Use it to check each computer and browser you may use in this course. There is another important area on "Browser Privacy Settings." Read the section(s) for any browser intended for use. For example, Note that: In browsers such as Safari, insecure content will never be displayed in the browser. Return to the page to check for updates on technology issues in Canvas.

If you encounter technical difficulties in this course, contact the UF Computing Help Desk right away to troubleshoot. https://helpdesk.ufl.edu/ or (352) 392-HELP. If the problem cannot be fixed immediately, notify your instructor, and provide them with the Help Desk ticket number.

CAMPUS HELPING RESOURCES: Students experiencing crises or personal problems that interfere with their general wellbeing 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-studentconduct-code/
- Online Course: http://www.distance.ufl.edu/student-complaint-process

UF Student Success: FOR IMPROVING STUDY SKILLS AND CONNECTING WITH A PEER TUTOR, PEER MENTOR, SUCCESS COACH, ACADEMIC ADVISOR, AND WELLNESS RESOURCES, GO TO *http://studentsuccess.ufl.edu*

COVID-19 SAFETY: As we continue to navigate the COVID-19 pandemic, please continue to be respectful and do what you can to keep yourselves and your classmates safe. The university recommends – but does not require – people to wear masks on campus and encourages everyone to get vaccinated and stay current with boosters to minimize COVID-related risks. For additional detail, including up-to-date changes to campus policies relating to COVID, please visit: https://coronavirus.ufl.edu/. Please also visit coronavirus.ufhealth.org or the Centers for Disease Control and Prevention website for additional information.