

SPIDER BIOLOGY

Course Number: Special Topics course ENY4905/ZOO4926
Credit Hours: 2
Fall 2020

Class meeting time: Mon and Wed, 12:50-1:40 by Zoom
Class location: see Canvas for Zoom meeting ID and passcode



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.

INSTRUCTOR

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UNDERGRADUATE TEACHING ASSISTANTS

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OFFICE HOURS: I have set aside time to meet with students on Mondays and Wednesdays immediately after our Zoom class meeting. 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), email me directly at any time, or send me a message via Canvas.

INSTRUCTIONAL METHODS: This course will meet for lecture by Zoom two times per week (M W 12:50-140pm) Attendance at Zoom class meetings is very important. While I will post recorded Zoom lectures after our meetings for students who miss them (see below), students will be most successful if they attend the Zoom meetings in real time, 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, and 10 graded Canvas discussions. See below for the specific point breakdown.

One of the most exciting features of this course (pre- COVID 19 pandemic) was the opportunity to raise a baby tarantula (or other captive spider) and write a paper that detailed behavioral observations throughout the semester. Due to current logistical challenges (and the course now being entirely online), this is not a formal assignment this semester. However, we will cover tarantula biology and provide students with the knowledge, opportunity, and community to raise a baby tarantula, if they are interested. This activity is entirely optional and will not affect your grade in the course.

HOW TO SUCCEED IN THIS COURSE: Students who attend the live Zoom meetings, actively engage in discussion, ask questions, and **take notes** during Zoom lectures are likely to do best in this course. That said, I know that things come up and students will occasionally need to miss Zoom meetings. If you do need to miss a Zoom meeting, please watch the recording right away, take notes, and reach out with any questions. There will be regular Canvas discussions that will be related to the material covered in the lectures. Please watch all lectures before participating in the Canvas discussions. Please do not wait until right before the quizzes or exams to watch the recordings.

A NOTE ABOUT PRIVACY AND ZOOM MEETINGS: Our class sessions will 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 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. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited. 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 in Zoom lectures. Handouts and additional readings 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:* Edwards GB & 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. (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>

PREREQUISITE: Students must have at least sophomore standing to take this course.

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 2020):

Week	Date	Topic	Assignments and exams
1	31 Aug M	ZOOM: Introduction to course, live arachnids	Pre-course survey
-	2 Sept W	ZOOM: Spider myths, overview of spider & arachnid diversity	
2	7 Sept M	No Zoom meeting (Labor Day holiday)	
-	9 Sept W	ZOOM: Raising tarantulas, with Spider Bio alumni and tarantulas as guests	Canvas discussion 1 due
3	14 Sept M	ZOOM: Evolution of arachnids, basic anatomy and spider ID	
-	16 Sept W	ZOOM: Evolution, diversity, and ID of spider families (part 1)	Canvas discussion 2 due
4	21 Sept M	ZOOM: Evolution, diversity, and ID of spider families (part 2)	Spider ID quiz #1 (Canvas)
-	23 Sept W	ZOOM: Evolution, diversity, and ID of spider families (part 3)	Canvas discussion 3 due
5	28 Sept M	ZOOM: Virtual spider walk, how to find and collect spiders	
-	30 Sept W	ZOOM: Diversity and ID of FL spiders, spider ID practice (part 1)	Canvas discussion 4 due
6	5 Oct M	No Zoom meeting today (watch recorded lecture on spider research)	Spider ID quiz #2 (Canvas)
-	7 Oct W	ZOOM: Diversity and ID of FL spiders, spider ID practice (part 2)	Canvas discussion 5 due
7	12 Oct M	ZOOM: Spider mating	Spider ID quiz #3 (Canvas)
-	14 Oct W	ZOOM: Exam review, practice questions	
8	19 Oct M	No Zoom meeting today (take Exam 1 in Canvas today)	Exam 1 (Canvas)
-	21 Oct W	ZOOM: Sensory ecology 1	
9	26 Oct M	ZOOM: Sensory ecology 2	Canvas discussion 6 due
-	28 Oct W	ZOOM: <i>Arachnophobia</i> movie screening (with chat discussion)	
10	2 Nov M	ZOOM: <i>Arachnophobia</i> follow-up discussion	Spider ID quiz #4 (Canvas)

-	4 Nov W	ZOOM: Spider enemies (part 1)	Canvas discussion 7 due
11	9 Nov M	ZOOM: Spider enemies (part 2)	
-	11 Nov W	No Zoom meeting (Veteran's Day holiday)	
12	16 Nov M	ZOOM: Spider defenses and mimicry	Canvas discussion 8 due
-	18 Nov W	ZOOM: Social spiders	
13	23 Nov M	ZOOM: Venom and medically-relevant spiders	
-	25 Nov W	No Zoom meeting (Thanksgiving break)	
14	30 Nov M	ZOOM: Non-spider arachnid diversity	Canvas discussion 9 due
-	2 Dec W	ZOOM: Weaponry in harvestmen (guest lecture: Dr. Erin Powell)	
15	7 Dec M	ZOOM: Course wrap-up, discussion, and review for Exam 2	Canvas discussion 10 due
-	9 Dec W	No Zoom meeting today (take Exam 2 in Canvas today), last day of class	Exam 2 (Canvas)

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 360 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 administered through Honorlock	60	16.7%
Exams	2 exams at 100 points each (consist of a combination of multiple choice and short answer questions), exams are 'closed-book' and administered through Honorlock	200	55.6%
Canvas discussions	A total of 10 Canvas discussions at 10 points each (extending discussions that we begin in class), discussions are 'open-book' (notes and any additional resources are allowed)	100	27.8%
GRAND TOTAL		360	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 <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

ATTENDANCE AND MAKE-UP POLICY: Attendance at Zoom meetings is important for success; if you cannot attend a Zoom meeting, you must watch the recorded session, take notes, 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) 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 in Canvas using Honorlock on the dates that they are scheduled. 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 administered 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.

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.bluer.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.

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 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>

A new UF Student Success website recently launched, which serves as a central hub of information for students looking for resources to help them thrive amid COVID-19. The website was developed through the collaboration of a core group of students, staff, faculty and administrators, and was created to help students navigate new and existing services to support their success, highlighted below:

- Success Coaching: Success Coaching will be offered to students to assist in achievement of

academic and career goals by connecting students to university resources, addressing barriers, and developing support networks that create a positive university experience. UF coaches recognize students as the expert in their life, and partner with students to maximize their personal, professional, and academic success.

- Peer Tutoring via Knack: Through a partnership with Knack Technologies, Inc., all UF undergraduate students now have access to free peer tutoring in 38 courses most frequently repeated due to D, E, or W grades. Students with identified financial need are eligible to receive free peer tutoring in any course. Funding for this program was provided by the Provost and will extend from Summer B 2020 through Spring 2021, or until the funds are exhausted.
- **Student Success Survey**: A survey was sent to students to gain a better sense of their needs for support services. Students may provide their contact information in the survey if they wish to receive follow-up assistance with a variety of concerns. The survey will be distributed again in Fall 2020 and Spring 2021 semesters.
- Peer Mentoring: UF will launch a peer mentoring pilot program in the Fall 2020 semester. This initiative will support existing peer mentoring programs while also creating new opportunities for students to serve their peers by helping them navigate college life.