
INVERTEBRATE BIODIVERSITY

ZOO 4205C

SPRING 2025 • THE UNIVERSITY OF FLORIDA

CLASS TIMES

Lecture: Wednesday and Friday 11:45 am – 1:40 pm,
Bartram Hall Room 211

Lab Sections: Carr Hall Room 120

- Section 344A Tuesday 3 pm – 6 pm
- Section 344B Wednesday 1:55 pm – 4:55 pm
- Section 344C Thursday 3 pm – 6 pm
- Section 344D Friday 1:55 pm – 4:55 pm



INSTRUCTOR

Dr. Melissa Meadows

Department of Biology

- Email: melissa.meadows@ufl.edu
- Zoom Office: <https://ufl.zoom.us/j/3066712046>
- In-person Office: Carr 522B
- Student Office Hours: Monday 1 pm – 2 pm, Wednesday 8:30 am – 10:30 am, by appointment
- Reserve your spot: <https://calendar.app.google/1vEwAyh2kmo3nkz3A>

LAB TAs

Tuesdays and Thursday Labs: Abby Uehling, auehling@uf.edu

Wednesday and Friday Labs: Eric Trotman, eric.trotman@ufl.edu

COURSE GOALS

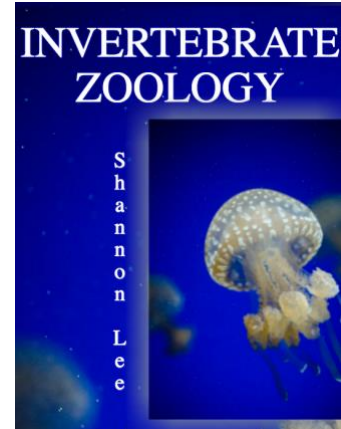
In this course, you'll learn in brilliant detail about our incredible diversity of invertebrate animals. Courses such as this one focus a great deal on anatomy and identification, but you'll also be learning about the evolution of these organisms as well as their ecology. Along the way, you'll develop your skills in scientific illustration (no, you don't have to be an artist!), keeping a lab/field journal, reading primary literature and understanding research lectures, and more.

COURSE REQUIREMENTS

Textbook

Required: Invertebrate Zoology by Dr. Shannon Lee, published in Top Hat and updated by Dr. Melissa Meadows (that's me ☺). See more below.

Recommended excellent text for more information about your favorite topics: Brusca, R. C. et al. 2023. Invertebrates. 4th Edition. Sinauer, Sunderland, MA. You will not need this book fully participate in the course, but it's great to have on hand to learn more if you can get a used or e-book copy. I also have a few personal copies that I'm willing to loan out, so just ask!



A good field guide for use on *optional* marine field trips: [Florida's Living Beaches \(2nd Ed\), Blair and Dawn Witherington, 2017 \(REQUIRED later if you plan to take Marine Ecology, so it's a good idea to get it now.\)](#) (Hint: look for used copies!)

Top Hat

Your required textbook and embedded videos, questions, and discussions will be hosted on Top Hat in an interactive format. Assignments in Top Hat will be due each week and a subscription is required for each student. You'll need to purchase access either through [UF All-Access](#) or directly through Top Hat. You'll enter the course on Top Hat through the individual assignments. Here is a guide to getting started in Top Hat: <https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>, and here are specific instructions for enrolling in the course through Canvas: <https://support.tophat.com/s/article/Student-LTI-Course-Enrollment-Canvas>. IMPORTANT: Especially those who already have Top Hat accounts – please ensure that you have access until the end of this semester, April 23! Top Hat is required, and a lapsing account is not an acceptable excuse for missed homework.

E-learning

Please set your preferences in E-Learning/Canvas so that you receive timely notifications of course announcements and other information. I will be communicating extensively and often with you using Canvas announcements which you can set to come to your email. When in doubt, go to our Canvas page and click "Announcements" for all of the latest information and assignments.

Lab Materials

Lab will be primarily specimen and dissection based with a couple of field trips to find and identify living organisms. All dissection materials will be provided. In addition to practical work learning and dissecting specimens, you will also be keeping a lab/field notebook and drawing specimens; these are essential skills that we will practice in this course. You will need: drawing supplies (I suggest drawing pencils and paper if you can get them or have them, but regular notebook or printer paper and standard writing pencils will do, too), a notebook in which to keep your lab notes and drawings – can be bound or a binder with loose-leaf paper, and ideally a waterproof field notebook. You may also wish to have colored pencils, though adding color to drawings is optional. Alternatively, you might wish to use a tablet to draw digitally – whatever you are comfortable using to make high-quality hand drawings. Do NOT use images from your camera/phone or take images from the internet as this will be considered academic dishonesty.

CONTACTING YOUR INSTRUCTOR

Student Office Hours

I am available for one-on-one help on more detailed questions about course content, grades, etc., or if you just want to pop on to say hi!

- Office hours are [BY APPOINTMENT](#), available Mondays 1 pm – 2 pm and Wednesdays 8:30 am – 10:30 am. Other times are also possible if these times do not fit in your schedule – email if needed.
- Please allow **at least 24 hours in between making your appointment and the appointment time** so that I have time to check notifications and know to be there. If not, I cannot guarantee that I will see your appointment reservation in time.
- Meetings will be at my [Zoom link](#) or in person in Carr 522. I'm also usually available briefly after class.

Course Questions Forum

For questions that may pertain to the entire class (about an assignment, about course policies), please use the Course Questions Forum on Canvas. Also, don't forget to see if your question has already been answered. Please help classmates, too, if you know the answer!

Canvas Inbox/Email

I will respond to questions that are individual in nature (grades, absences, etc.) within 24 hours during the week. After 5 pm on Friday I will not respond until Monday. Be professional in tone and expectations. Please do not expect an immediate response. Please do your best to avoid asking me questions whose answers you can find in the syllabus, announcements, or in the Course Questions Forum.

ASSESSMENTS & GRADING

I will make every effort to have each assignment graded and posted within one week of the due date.

Grade Component	Description	Percentage
Exams	4 non-cumulative exams on topics discussed in lecture and assigned readings. They will be closed-book exams with a variety of question types. Exam dates are included on the schedule. Please check the schedule for exams ahead of time and clear your schedule at those times. Make-ups are not allowed due to work or other personal obligations.	40%
Lab Assignments & Projects	Single or multi-week projects will be assigned that can be completed during the lab period, or occasionally in field environments. Labs are due within one week.	25%
Lab Exams	There will be 2 lab practical exams (see schedule).	20%

Top Hat Homework & Discussion Participation	Each week's Top Hat Homework assignments are due at 11:59 PM the Sunday after the chapter is discussed in lecture (see schedule). However, it will NOT be possible to finish all assignments at the last minute. I suggest you read each chapter and complete the embedded questions for each chapter before the lecture. Do NOT wait until Saturday night. Saturday night internet or website issues are not a valid excuse for late assignments and will not be considered. In-class participation will also be required.	15%
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Grading Scale

Percent	Grade	Percent	Grade
≥ 93.00%	A	≥ 73.00%	C
≥ 90.00%	A-	≥ 70.00%	C-
≥ 87.00%	B+	≥ 67.00%	D+
≥ 83.00%	B	≥ 63.00%	D
≥ 80.00%	B-	≥ 60.00%	D-
≥ 77.00%	C+	< 60.00%	E

"Life Happens" Policy

Everyone has an off week sometimes! Because of this, I'll be **dropping your lowest 2 Top Hat assignment grades.**

If you miss assignments, don't worry about asking for extensions UNLESS you already have the maximum number of zeros allowed under this policy which will automatically be dropped from your grade. If you miss additional assignment due dates in excess of those allowed by this policy AND your absence is excusable based on UF policy, please see the Attendance & Make-ups section below for guidelines.

ATTENDANCE & MAKE-UPS

If you have a planned conflict, discuss it with me in advance. If there is an unforeseen circumstance, please let me know as soon as possible. I know that special circumstances may come up, and we will stay in communication to ensure your success. Please see the UF policy for excused absences here: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

For some assignments, **extensions MAY be granted** if and only if you have already received other zeros that will be dropped based on the "Life Happens" policy (See the Assessments and Grading section above). You must have a documented excused absence lasting at least the three days before and including the due date. For example, if the assignment is due Sunday, your documentation of absence must include Friday, Saturday, and Sunday to be granted an extension. Submit documentation here: <https://care.dso.ufl.edu/instructor-notifications/> and request a letter be sent to the instructor, then message me in Canvas after your letter has been sent to let me know what assignments you are requesting extensions on, and we will discuss any modified due dates.

No make-up exams without prior permission or documentation of illness. Students missing an exam due to a university-approved excused absence should let the instructor know in advance. In case of illness or emergency on exam day, students must submit documentation here: <https://care.dso.ufl.edu/instructor-notifications/> and request a letter be sent to the instructor.

ACADEMIC HONESTY

Any acts of cheating, plagiarism, or other forms of academic dishonesty will result in, at minimum, **a 0 grade for the assignment or test AND a reduction in the course grade by 1 letter**. Sharing information about tests or homework answers with students in future or past classes, or posting on social media information about same, is a serious act of academic dishonesty. Sharing answers for homework, exams, etc. with others (ex. Groupme, Course Hero) or receiving same is cheating. Turing in assignments that match classmates' is plagiarism. **Unauthorized or undisclosed use of generative AI is plagiarism**. If you witness any instances of academic dishonesty in this class, notify the instructor.

UF students are bound by The Honor Pledge which states, "*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Student Honor Code. On all work submitted for credit by Students 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."* The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. For additional information on academic honesty, please refer to the UF student honor code at: <https://policy.ufl.edu/regulation/4-040/>

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Students with disabilities requesting accommodations should first register with the Disability Resource Center in Reid Hall (352-392-8565) by providing appropriate documentation. Please see the website for more information at: <https://disability.ufl.edu/>. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester. Accommodations are only available to students with this documentation from the DRC, and accommodations are not retroactive (i.e. accommodations cannot be made for assignments submitted prior to Dr. Meadows receiving the letter).

WITHDRAWAL POLICY

The add/drop deadline and the last day to withdraw from a course with a W on your transcript are listed online here: Dates and Deadlines: <https://catalog.ufl.edu/UGRD/dates-deadlines/>

UF EVALUATIONS PROCESS

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/>.

GETTING HELP

If you don't understand something in the **course content or are concerned about a grade**, talk to me ASAP. Do not wait until a failed exam!

However, I **cannot** solve most technical issues because I can't access your account and I am just super not a tech wizard. Instead, please see the resources below for technical difficulties.

Technical Difficulties

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

- **UF IT Help Desk:** For general troubleshooting or issues with **Canvas**, the Help Desk has your back! <https://it.ufl.edu/helpdesk/>. Available by phone 24/7 at (352) 392-4357, email helpdesk@ufl.edu, or connect via chat on the website. Walk-in at The Hub available, too.
- **Top Hat:** For issues with your Top Hat account, see the support center website: <https://success.tophat.com/s/>. There's a chat on the website as well as many helpful support articles. They can be contacted by phone during business hours at (888) 663-5491.

Health and Wellness

- [U Matter, We Care](#) ASKING FOR HELP IS A SIGN OF STRENGTH. If you or a friend is in distress, contact If you or someone you know is in distress, please contact counseling 24/7 352-392-1575, or visit umatter.ufl.edu to refer or report a concern and a team member will reach out to the student in distress. The Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. In case of emergency, call 911
- [Dean of Students Office](#) (352-392-1261) provides a variety of services to students and families, including [Field and Fork](#) (UF's food pantry) and [New Student and Family programs](#)
- [Counseling and Wellness Center](#) (352-392-1575) provides counseling and support as well as crisis and wellness services including a [variety of workshops](#) throughout the semester (e.g., Yappy Hour, Relaxation and Resilience).
- [Office of Student Veteran Services](#) (352-294-2948 | vacounselor@ufl.edu) assists student military veterans with access to benefits.
- [Career Connections Center](#) (352-392-1601 | CareerCenterMarketing@ufsa.ufl.edu) connects job seekers with employers and offers guidance to enrich your collegiate experience and prepare you for life after graduation.
- [UF Police Department](#) (352-392-1111 or 9-1-1 for emergencies)
- [Student Health Care Center](#) (352-392-1161) provides 24/7 information to help you find the care you need.

- [UF Health Shands Emergency Room/Trauma Center](#) (352-733-0111) for immediate health care, call or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608
- [GatorWell Health Promotion Services](#) (352-273-4450) includes prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success.

Academic and Student Support

- [Career Connections Center](#) (352-392-1601 | CareerCenterMarketing@ufsa.ufl.edu) connects job seekers with employers and offers guidance to enrich your collegiate experience and prepare you for life after graduation. Visit in the Reitz Union Suite 1300.
- [UF Libraries Support](#) (866-281-6309 | ask@ufl.libanswers.com) offers various types of assistance with respect to using the libraries or finding resources.
- [CLAS Academic Resources](#) (352-392-2010) offers general study skills and free tutoring.
- [UF Writing Studio](#) (352-846-1138) can help with brainstorming, formatting, and writing papers.
- [Dean of Students Office](#) (352-392-1261) provides a variety of services to students.

SCHEDULE

Week	Date	Reading & Lecture Topic	Ch.	Lab
1	1/15 - Wed	Introduction	1	NO LAB
	1/17 - Fri	Body plans, reproduction, development, & our own phylum	2	
2	1/22 - Wed	Phylum Chordata	3	Lab 1: Hemichordata and Chordata
	1/24 - Fri	Phylum Hemichordata	4	
3	1/29 - Wed	Phylum Echinodermata	5	Lab 2: Echinodermata
	1/31 - Fri	Phylum Echinodermata	5	
4	2/5 - Wed	EXAM 1 (CH 1 – 5)		Lab 3: Mollusca
	2/7 - Fri	The Lophophorates: Phylum Phoronida, Phylum Brachiopoda, & Phylum Bryozoa	6	
5	2/12 – Wed	Phylum Mollusca Part 1	7	Lab 4: Annelida, Nemertea, Platyhelminthes

Week	Date	Reading & Lecture Topic	Ch.	Lab
	2/14 - Fri	Phylum Mollusca Part 2	8	
6	2/19 - Wed	Phylum Mollusca Part 3	9	Lab 5: Field Trip TBA + Study for Lab Exam 1
	2/21 - Fri	Phylum Mollusca Part 3	9	
7	2/26 - Wed	Phylum Annelida	10 11	LAB EXAM 1
	2/28 - Fri	EXAM 2 (CH 6 – 11)		
8	3/5 - Wed	Phylum Nemertea Phylum Platyhelminthes	12 18	Lab 6: Arthropoda and Friends 1
	3/7 - Fri	Phylum Nematoda, Phylum Priapulida, Phylum Onychophora, and Phylum Tardigrada	13	
9	3/12 - Wed	Phylum Arthropoda Part 1: Introduction	14	Lab 7: Arthropoda 2 Hexapods
	3/14 - Fri	Phylum Arthropoda Part 2: Subphylum Chelicerata	15	
SPRING BREAK 3/15 – 3/23				
10	3/26 - Wed	Phylum Arthropoda: Subphylum Hexapoda (Insects and friends)	16	Lab 8: Arthropods 3 Crustacea
	3/28 - Fri	Phylum Arthropoda: Subphylum Hexapoda (Insects and friends)	16	
11	4/2 - Wed	EXAM 3 (CH 12 – 16, 18)		Lab 9: Cnidaria, Ctenophora, Porifera
	4/4 - Fri	Phylum Arthropoda: Subphylum Crustacea	17	
12	4/9 - Wed	Phylum Arthropoda: Subphylum Crustacea	17	Lab 10: Field Trip TBA + Study for Lab Exam 2
	4/11 - Fri	Phylum Cnidaria	20	

Week	Date	Reading & Lecture Topic	Ch.	Lab
13	4/16 - Wed	Phylum Ctenophora	19	LAB EXAM 2
	4/18 - Fri	Phylum Porifera	21	
14	4/23 - Wed	EXAM 4 (CH 17, 19 – 21)		

TIPS FOR SUCCESS



Attend and Participate: Studies show that the more you discuss, draw, analyze, and actively participate in class, the more you learn!



Read: Read assigned chapters before lectures. Then use lectures to hone understanding and apply your knowledge.



Take notes: Do not be a passive listener! Take active notes during class, especially on questions asked in the lecture.



Ask questions: Ask immediately. Don't be afraid to ask me to go over something again! Chances are, others need a clarification, too.



Use your resources: Use this syllabus to answer questions about the course and locate help when you need it. Use Canvas. Use each other!



Plan ahead: Plan to devote ~15 hrs/wk, including 10 hrs for lecture, discussion, and lab and 5 hrs on reading, assignments, and studying. A 4 credit-hour class takes ~180 hours of work over a semester.



Study effectively: Visit learningscientists.org to learn the 6 strategies for effective learning. Guess what the first one is? NO CRAMMING! Also check out videos from [Academic Resources!](#)



I care: I am deeply invested in YOU and your happiness and success. Email me, make an appointment for student office hours, etc. to go over course material, talk about life, or just say hi!