

Ichthyology ZOO3454, Fall 2023

This course provides an introduction to fish biology and covers (in varying amounts of detail) the following topics: diversity, systematics, functional anatomy, physiology, ecology, evolution and conservation.

Course Objectives

At the end of the semester, the student will be able to perform the following:

- Understand morphological and physiological adaptations of fishes and their role in the aquatic environment
- Understand the general form, function and diversity of fishes
- Understand general concepts of biogeography and evolution of fishes

PREREQUISITES:

A grade of C or better in BSC2011C.

TIME AND PLACE: MW 12:00-1:20 pm, BA2 0207

LECTURE INSTRUCTOR and UTA
Instructor: Michelle R. Gaither
Department of Biology, Office: BMS 132A (Biology building behind the elevators)
E-mail: michelle.gaither@ucf.edu
Undergraduate Teaching Assistant: Jewel Rehkopf
E-mail: jrehkopf@knights.ucf.edu

OFFICE HOURS:

Will be held between 1:30 pm – 2:50 Monday and Wednesday.

WEBCOURSES SITE:

I have a course web site set up on Webcourses (<https://webcourses.ucf.edu>) that I will use to post materials for the course, including the syllabus, quizzes, and your grades.

If you need to contact me, please do so using the Inbox function in Webcourses.

REQUIRED MATERIALS:

- 1) Facey DE, Bowen BW, Collette BB, and Helfman GS. 2023. The Diversity of Fishes: Biology, Evolution, and Ecology, Third Edition. Wiley-Blackwell Publishers.

CLASS POLICIES:

1. Attendance is not strictly required but many studies have shown that students who do not attend class do poorly. In addition, material not covered in the text will be presented class. This material will be on the exams. Lastly, in class assignments count toward extra credit (up to 5% of total grade).
2. Only materials covered in the lecture will be on the exams. Lectures will emphasize important concepts and not necessarily present details. Therefore, reading text that corresponds to the lectures is *highly* recommended.
3. Exam make ups will not be given without valid documentation that is presented **prior** to the absence or **within 24 hours** of the administration of the test.
4. Quizzes are due BEFORE midnight on the Thursday after the due date. Late quizzes will not be accepted and the student will receive a zero for any late or missed quiz. Quizzes will cover all assigned readings for that week.
5. Assigned readings should be completed before attending class and taking quizzes. Quizzes will assess your knowledge of assigned readings and material covered in class.

6. You are encouraged to discuss any and all portions of the class with me. Please feel free to come to my office hours or make an appointment to discuss the class, especially if you are having trouble in the class.
7. Respect should be given to fellow students and the instructor. Please do not arrive late to class, walk out in the middle of class, or leave early.
8. Hateful or offensive speech or writing will not be tolerated.
9. Cell phones, iPods, and other electronic devices should be turned off and put away before class starts. If one of these devices disrupts class the owner will be asked to leave.
10. Academic dishonesty (cheating and plagiarism) is strictly prohibited and will be taken very seriously and will result at least in an "F" for that assignment (and may, depending on the severity of the case, lead to an "F" for the entire course) and may be subject to appropriate referral to the Office of Student Conduct for further action. See the UCF Golden Rule for further information.

COURSE ACCESSIBILITY:

It is my goal that this class be an accessible and welcoming experience for all students, including those with disabilities that may impact learning in this class. If anyone believes the design of this course poses barriers to effectively participating and/or demonstrating learning in this course, please meet with me to discuss reasonable options or adjustments. You may also contact SDES (Ferrell Commons 185; 407-823-2371; sas@ucf.edu) to talk about academic accommodations.

EVALUATION:

The grade for this course will be based on:

- (1) Three exams: Two midterms will be given. The first will be worth 20% and the second and final exams will be worth 25% of your grade. The final exam will *NOT* be cumulative. Exams will consist of multiple choice, short answer, fill in the blank, illustrations, etc. **(70% of total)**
- (2) Online quizzes: These will be administered through Webcourses approximately once a week. You will be expected to read assigned readings and take a short quiz to assess your knowledge of the chapters. **All quizzes open on Friday and due BEFORE midnight on the following Thursday**. Check syllabus for due dates. You may take each quiz only once but there is no time limit. The lowest quiz score will be dropped. **(10% of total)**
- (3) Group presentation: Each student will be expected to participate in a group project and PowerPoint presentation. Groups will consist of 3-4 students based on taxonomic group choice. In week two each student will choose their top three groups from a list. Presentations will be of approximately 20 min in length. The details of this assignment can be found on webcourses and will be discussed in class. **(10% of total)**.
- (4) In class assignments: These will involve written input by students on group presentations. The lowest assignment will be dropped. **(10% of total)**

GRADES:

The following scale will be used to assign course grades.

90-100 = A
89-80 = B
79-70 = C
69-60 = D
≤59 = F

LECTURE SCHEDULE AND DISCUSSION TOPICS

This schedule will change! Changes will be announced in class and posted on Webcourses!

Date	Topic	Readings/Facey Chapter	Quiz
8/21	Introduction to Fish Diversity	1&2	
8/23	Structure and Function	3&4	Quiz 1 (1&2)
8/28	Structure and Function cont.	4	
8/30	Hurricane Idalia		Quiz 2 (3-5)
9/4	Labor Day (no class)		
9/6	Circulation, Gas Transport, Metabolism, Digestion and Energetics	5	Quiz 3 (6)
9/11	Nervous System and Sensory Organs	6	
9/13	Homeostasis	7	Quiz 4 (7,8,17)
9/18	Reproduction	8 &17 (pg 388-406)	
9/20	Larvae, Juveniles, Adults, Age, & Growth	9	Quiz 5 (9&17)
9/25	Exam I		
9/27	The History & Evolution of Fishes	11	
10/2	Jawless Fishes (student presentations)	13	Student input on talks
10/4	Chondrichthyes & Primitive Fishes (student presentations)	12	Student input on talks
10/9	Chondrichthyes & Primitive Fishes (student presentations)		Student input on talks
10/11	Primitive Fishes (student presentations)		Student input on talks
10/16	Teleosts (student presentations)	14	Student input on talks
10/18	Teleosts (student presentations)	15	Student input on talks
10/23	Teleosts (student presentations)		Student input on talks
10/25	Exam II		
10/30	Special Habitats & Special Adaptations	10	
11/1	Predators & Prey	16	Quiz 6 (10&16)
11/6	Fishes as Social Animals	17	
11/8	Cycles of Behavior	18	Quiz 7 (17&18)
11/13	Zoogeography and Phylogeography	19	
11/15	Zoogeography and Phylogeography		Quiz 8 (19)
11/20	Study Day (no class)		
11/22	Thanksgiving Wednesday (no class)		
11/27	Conservation	22	
11/29	Catch up day-TBD		
12/ 6	Final Exam (10:00 AM – 12:50 PM)		

UCF CORE SYLLABUS STATEMENTS

Academic Integrity

Students should familiarize themselves with UCF's Rules of Conduct at <https://scai.sdes.ucf.edu/student-rules-of-conduct/>. According to Section 1, "Academic Misconduct," students are prohibited from engaging in

1. Unauthorized assistance: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
2. Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
3. Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
4. Falsifying or misrepresenting the student's own academic work.
5. Plagiarism: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
6. Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.
7. Helping another violate academic behavior standards.
8. Soliciting assistance with academic coursework and/or degree requirements.

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, *The Golden Rule* <https://goldenrule.sdes.ucf.edu/>. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and respond to academic misconduct when necessary. Penalties for violating rules, policies, and instructions within this course can range from a zero on the exercise to an "F" letter grade in the course. In addition, an Academic Misconduct report could be filed with the Office of Student Conduct, which could lead to disciplinary warning, disciplinary probation, or deferred suspension or separation from the University through suspension, dismissal, or expulsion with the addition of a "Z" designation on one's transcript.

Being found in violation of academic conduct standards could result in a student having to disclose such behavior on a graduate school application, being removed from a leadership position within a student organization, the recipient of scholarships, participation in University activities such as study abroad, internships, etc.

Let's avoid all of this by demonstrating values of honesty, trust, and integrity. No grade is worth compromising your integrity and moving your moral compass. Stay true to doing the right thing: take the zero, not a shortcut.

Course Accessibility Statement

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need access to course content due to course design limitations should contact the professor as soon as possible. Students should also connect with Student Accessibility Services (SAS) <<http://sas.sdes.ucf.edu/>> (Ferrell Commons 185, sas@ucf.edu, phone 407-823-2371). For students connected with SAS, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential course access and accommodations that might be necessary and reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student. Further conversation with SAS, faculty and the student may be warranted to ensure an accessible course experience.

Campus Safety Statement

Emergencies on campus are rare, but if one should arise during class, everyone needs to work together. Students should be aware of their surroundings and familiar with some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Students should make a note of the guide's physical location and review the online version at <<https://centralflorida-prod.modolabs.net/student/safety/index>>.
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.
- If there is a medical emergency during class, students may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see <<https://ehs.ucf.edu/automated-external-defibrillator-aed-locations>>.
- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <<https://my.ucf.edu>> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- Students with special needs related to emergency situations should speak with their instructors outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video (<<https://youtu.be/NIKYajEx4pk>>).

Deployed Active Duty Military Students

Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.