

## Syllabus – Spring Semester 2022

### Course and Instructor Information

**Course Title:** Ecology of Fishes

**Credits:** #3

**Prerequisites:** MARN 3014 or consent of instructor

**Professor:** Hannes Baumann

**Email:** [hannes.baumann@uconn.edu](mailto:hannes.baumann@uconn.edu); default method of contact: via HuskyCT messages

**Telephone:** (860) 405-9297

**Other:** n/a

**Class dates/times:** 18 Jan – 29 Apr 2021; Tuesday, Thursday 12:30 – 1:45 PM, MAR122

**Office Hours/Availability:** Thu 2:00-3:00 PM

### Course Materials

**Required course materials should be obtained before the first day of class.**

Texts are available through a local or online bookstore. The [UConn Co-op](#) carries many materials that can be shipped via its online [Textbooks To Go](#) service. For more information, see Textbooks and Materials on our [Enrolled Students](#) page.

**Required Materials:**

R.J. Wootton. Ecology of Teleost Fishes. 2<sup>nd</sup> edition. 1998. Kluwer Academic Publishers. Fish and Fisheries Series 24 (selected chapters will be provided as pdf's)

**Optional Materials:**

S.D. Gerking. Feeding Ecology of Fish. 1994. Academic Press, Inc. San Diego.

J.S. Diana. Biology & Ecology of Fishes. 1995. Cooper Publishing Group LLC.

P.B. Moyle and J.J. Cech Jr. Fishes: an introduction to ichthyology. 5<sup>th</sup> edition. Prentice Hall, 2004

Q. Bone, N.B. Marshall, J.H.S. Blaxter Biology of fishes. 2nd ed. xi, 332p. Chapman and Hall, 1995

*Additional course readings and media are available within HuskyCT, through either an Internet link or Library Resources*

### Course Description

“Ecology of Fishes” will introduce and discuss classic topics of fish ecology such as distribution, feeding, bioenergetics, growth, larval fish ecology, biotic interactions or life history evolution, with the additional goal of providing a forum to discuss contemporary research of these topics. Each week, Tuesday lectures will be followed on Thursday by discussions on topic-relevant primary literature that students will choose and present. Instead of merely passing on what is already known, the main objective of each class is to identify issues that are still insufficiently understood and thus require further research. Lectures will emphasize one or two particular issues of each topic that are somehow still debated, novel, or unresolved. Although we won't be able to avoid touching on basic fish anatomy, physiology, or taxonomy, these have been covered elsewhere (MARN 3014) and

are thus not the priority of this course. Early during the semester, we will visit the Mystic Aquarium and complete assignments in fish diversity + zoogeography. In addition, we usually have one special seminar covered by a guest speaker.

**Discussion:** On the second class each week (**Thursday**), all of us have a scientific discussion together about research **related to the week's topic** in fish ecology (e.g. growth). This is the part that really makes this a great experience, because students will largely shape its contents. If you do and actively participate, it will be tremendous fun for everybody. If you don't contribute and just try to hang in, it's going to be a boring waste of time for us all.

It works like this: Students select a paper of their choice – PERTAINING to the week's topic - to talk about in class. Be prepared to give a 5-minute overview of its questions, goals, results, and implications. Select a paper that you believe is important or find very interesting, don't just take the first thing that pops up in Google Scholar. Try to bring that point across when introducing it. Bring at least one printout and upload the pdf on a weekly HuskyCT discussion forum! NO Powerpoint, but you are more than welcome to draw stuff on the board to visualize. The rest of us – including me - will ask questions about methods, implications, perhaps how one could do a similar study better *et cetera*. Everybody has to participate in these discussions; it's a requirement for this class & will partially determine (30%) your grade based upon your participation in the discussions.

**Exams:** The topics covered in each weeks lecture will form the basis for one mid-term and a final exam at a difficulty level tailored for undergraduate students.

**Final paper:** For graduate students, an additional requirement is to write a final paper on any 'fish ecology' topic that is particularly dear to you. Think ahead! You could do a small review of the literature dealing with a certain topic, develop a question, an argument or a new idea. Again, the emphasis is on identifying potential future research needs. At least 2,000 but no more than 5,000 words. A consistent citation style and formatted reference list are expected (a good incentive to start using Endnote, Reference Manager or equivalent citation software). Yes, you have to cite published literature. That's the whole point.

**\*\*\*\* CORONA-VIRUS SYLLABUS AMENDMENTS \*\*\*\***

**Due to the online-only requirement instated by UConn for the first two weeks of the semester, lectures and discussions during these weeks will be online via Blackboard Collaborate.**

**The current plan is to hold a written, in person mid-term and one final exam.**

#### Course Objectives

By the end of the semester, students should be able to:

1. To have a basic comprehension of the general concepts in fish ecology, such as factors affecting feeding, growth, and reproduction, as well as predator-prey interactions, migration patterns or the general patterns of geographical distributions.
2. To use internet resources such as Web of Science or Google Scholar to find topic-relevant primary literature that deals with contemporary issues related to aspects of fish ecology.
3. Read, comprehend, and briefly synthesize primary literature in front of class
4. Use a citation managing software to cite research papers properly in their final essays (graduate students)

Course Outline and Calendar SS2022

Date	Day	Type	Topic
18-Jan	Tue	Lecture	Intro, origin and radiation of early fish groups
20-Jan	Thu	Lecture	Overview of the major teleost groups
25-Jan	Tue	Lecture	Fish zoogeography
27-Jan	Thu	Discussion	
1-Feb	Tue	Excursion	Mystic Aquarium – fish diversity, zoogeography, assignments
3-Feb	Thu	Lecture	Fish feeding
8-Feb	Tue	Lecture	Fish bioenergetics
10-Feb	Thu	Discussion	
15-Feb	Tue	Lecture	Fish growth
17-Feb	Thu	Discussion	
22-Feb	Tue	Lecture	Fish reproduction
24-Feb	Thu	Discussion	
1-Mar	Tue	Lecture	Larval fish ecology
3-Mar	Thu	Discussion	
8-Mar	Tue		Review
10-Mar	Thu		Midterm exam (written, in person)
Spring recess 13-19 March			
22-Mar	Tue	Lecture	Biotic interactions I: Predator-prey
24-Mar	Thu	Discussion	
29-Mar	Tue	Lecture	Biotic interactions II: Competition, parasitism, mutualism
31-Mar	Thu	Discussion	
5-Apr	Tue	Lecture	Fish life history strategies
7-Apr	Thu	Discussion	
12-Apr	Tue	Lecture	Fish behavior & personality
14-Apr	Thu	Discussion	
20-Apr	Tue	Lecture	Fish migrations
22-Apr	Thu	Discussion	
27-Apr	Tue	Lecture	Climate change effects on fishes
29-Apr	Thu	Discussion	
3-May	Tue		Review
5-May	Thu		Final exam (written, in-person)

\*\*\* online only due to COVID-19 pandemic

## Course Requirements and Grading

### Summary of Course Grading:

Course Components	Weight (UGrad)	Weight (Grad)
Attendance, paper contribution & discussion participation	30%	20%
Mid-term	25%	25%
Final	45%	30%
Final Term Paper		25%

**Attendance, paper contribution & discussion participation:** This will encompass not just your physical attendance, but also how well you are prepared for discussing the paper you selected and how actively you have participated in the discussion. Important: in a discussion, there are no wrong questions and having no answer to a particular question is normal. What I focus on is level of participation, i.e., whether you infuse this course with your engagement or just merely try to hang in, doze off and bide time.

**Corona: When lectures/discussion occur in Blackboard Collaborate, you are required to have your video and sound on.**

### Exams

Exams will be tailored to senior undergraduate knowledge level.

### Final Term Paper

This is the result of your acquired skills in accessing and working with primary contemporary research literature. Grading will look at overall content, the soundness of the review or issue raised and how well primary literature was used to support statements in the text.

### Grading Scale:

Grade	Letter Grade	GPA
93-100	A	4.0
90-92	A-	3.7
87-89	B+	3.3
83-86	B	3.0
80-82	B-	2.7
77-79	C+	2.3
73-76	C	2.0
70-72	C-	1.7
67-69	D+	1.3
63-66	D	1.0
60-62	D-	0.7
<60	F	0.0

### **Due Dates and Late Policy**

All course due dates are identified in the syllabus. Deadlines are based on Eastern Standard Time; if you are in a different time zone, please adjust your submittal times accordingly. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.*

### **Feedback and Grades**

I will make every effort to provide prompt feedback and grades. To keep track of your performance in the course, refer to My Grades in HuskyCT.

## **Student Responsibilities and Resources**

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. This section provides a brief overview to important standards, policies and resources.

### **Student Code**

You are responsible for acting in accordance with the [University of Connecticut's Student Code](#). Review and become familiar with these expectations. In particular, make sure you have read the section that applies to you on Academic Integrity:

- [Academic Integrity in Undergraduate Education and Research](#)
- [Academic Integrity in Graduate Education and Research](#)

Cheating and plagiarism are taken very seriously at the University of Connecticut. As a student, it is your responsibility to avoid plagiarism. If you need more information about the subject of plagiarism, use the following resources:

- [Plagiarism: How to Recognize it and How to Avoid It](#)
- [Instructional Module about Plagiarism](#)
- [University of Connecticut Libraries' Student Instruction](#) (includes research, citing and writing resources)

### **Copyright**

Copyrighted materials within the course are only for the use of students enrolled in the course for purposes associated with this course and may not be retained or further disseminated.

### **Netiquette and Communication**

At all times, course communication with fellow students and the instructor are to be professional and courteous. It is expected that you proofread all your written communication, including discussion posts, assignment submissions, and mail messages. If you are new to online learning or need a netiquette refresher, please look at this guide titled, [The Core Rules of Netiquette](#).

### **Adding or Dropping a Course**

If you should decide to add or drop a course, there are official procedures to follow:

- Matriculated students should add or drop a course through the [Student Administration System](#).
- Non-degree students should refer to [Non-Degree Add/Drop Information](#) located on the registrar's website.

You must officially drop a course to avoid receiving an "F" on your permanent transcript. Simply discontinuing class or informing the instructor you want to drop does not constitute an official drop of the course. For more information, refer to the:

- [Undergraduate Catalog](#)
- [Graduate Catalog](#)

## Academic Calendar

The University's [Academic Calendar](#) contains important semester dates.

## Academic Support Resources

[Technology and Academic Help](#) provides a guide to technical and academic assistance.

## Students with Disabilities

Students needing special accommodations should work with the University's [Center for Students with Disabilities \(CSD\)](#). You may contact CSD by calling (860) 486-2020 or by emailing [csd@uconn.edu](mailto:csd@uconn.edu). If your request for accommodation is approved, CSD will send an accommodation letter directly to your instructor(s) so that special arrangements can be made. (Note: Student requests for accommodation must be filed each semester.)

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from <http://www.blackboard.com/platforms/learn/resources/accessibility.aspx>)

### Software Requirements and Technical Help

- Word processing software
- [Adobe Acrobat Reader](#)
- Internet access

This course is completely facilitated online using the learning management platform, [HuskyCT](#). If you have difficulty accessing HuskyCT, online students have access to the in person/live person support options available during regular business hours in the Digital Learning Center ([www.dlc.uconn.edu](http://www.dlc.uconn.edu)). Students also have 24x7 access to live chat, phone and support documents through [www.ecampus24x7.uconn.edu](http://www.ecampus24x7.uconn.edu).

### Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the [Computer Technology Competencies](#) page for more information.

### Evaluation of the Course

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the [Office of Institutional Research and Effectiveness \(OIRE\)](#).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.