

Food from the Sea

AFS 105G - 3 credits

Fall 2019

Instructors:

Dr. Austin Humphries; Office: Center for Biotechnology and Life Sciences (CBLS) room 187; Phone: (401)874-9839; Email: humphries@uri.edu; Office Hours Tuesday and Thursday 12:30 – 1:30pm, or by appointment

Meeting Time and Location:

Tuesday and Thursday, 9:30 am – 10:45 am in Quinn Hall 104; Section 1 (GenEd)

Tuesday and Thursday, 11 am – 12:15 pm in Avedisian Hall 105; Section 2 (AFS)

Catalog Description:

Introduction to capture fisheries and aquaculture and their contribution to food supply and nutrition, methods of production, management, environmental and ecological considerations, practices employed, with a regional New England focus.

Course Narrative:

Capture fisheries and aquaculture provide food that are vital sources of nutrition for humans and other species. Understanding and sustainably managing fisheries and aquaculture is a complex task that requires a broad set of multidisciplinary competencies; considering increasing demand and population growth, it can be challenging to provide safe, healthy, economic food in a sustainable way. This course is intended as a broad introduction for undergraduate students majoring in any subject relevant to fisheries and aquaculture in the ocean (Fisheries and Aquaculture Science, Marine Biology, Marine Affairs, etc.) or nutrition and food sustainability (Nutrition, Sustainable Agriculture and Food Systems, Nursing, Pharmacy, etc.). Classes will utilize local experts as necessary, and by doing so, this course will also introduce you to other professors at URI and practitioners within the state fisheries and aquaculture community (especially if you take the associated lab, AFS 106), as well as in the nutrition field.

Course Objective:

The objective of this course is for you to gain competency in the key concepts in fisheries and aquaculture within the context of production, management, and nutrition, using the coastal zone of New England as the focal study area. The course will be taught from a systems perspective and you will learn how components of fisheries and aquaculture industries are interconnected. We will use a combination of lectures, individual and group work, reading, writing, and interactive exercises. In doing so, topics will demonstrate how some of the principles you may learn about in other courses (e.g., chemistry, biology) are applied in a fisheries and aquaculture context.

Learning Outcomes:

By the end of the course, you will be able to:

- (1) identify important marine fisheries and aquaculture harvest and production systems,
- (2) appreciate the role of economic and social dimensions in seafood value chains,
- (3) recognize key nutritional aspects of seafood and the role of seafood in maintaining human health.

These specific course outcomes will be assessed by way of your answers to a series of essay questions on the exams specific to the learning outcomes listed above, as well as homework reading and writing assignments and in-class exercises utilizing group work.

This course counts as a General Education course that satisfies the STEM (A1) knowledge outcome category as well as Grand Challenge (G).

Expectations and Requirements:

This course is composed of *four elements*: three semester exams, and homework or class assignments. Three exams will be administered during the semester (25% each), and grading will be based on these, homework readings and class assignments (25%).

Grade scale: 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+, 67-69; D, 63-66; F, 62 or below.

Homework assignments will consist of 2-4 short-answer questions associated with readings and a few more involved reading assignments. I will collect responses to the short-answer reading questions **randomly** throughout the semester (i.e., not all of them will be collected and graded). These questions are meant to guide your reading and inform class participation and you will receive a score of 0 to 10 out of 10 when I collect them. Each reading or writing assignment will be different, but must be submitted by hand (i.e., printed) before the beginning of class. I suggest hand writing them to avoid the printer fail. Group work may be assigned for homework depending on how much you complete during class activities.

Exams will be a combination of multiple-choice questions and short- and long-answer essay questions. The exams are scheduled for **Oct 10** and **Nov 12** and **Dec 10** during regularly scheduled class. You will have the 75 mins scheduled for class to complete the exam unless you have obtained prior permission to take it outside of class without a time restriction. If you are unable to take an exam due to illness, you must obtain a valid medical excuse in order to take a make-up exam (this rule also applies to the final exam). Please incorporate this into your travel plans no make-up exams will be given.

Reference Text: All required text for readings will be on Sakai, which will include book chapters and/or excerpts from primary and secondary literature. See 'Readings' section below.

One recommended reference textbook for aquaculture: Lucas, J.S. and P.C. Southgate. 2003. Aquaculture: Farming Aquatic Animals and Plants. Blackwell, 502 p.

No adequate contemporary introductory fisheries textbook exists, but a useful higher-level reference text is: Jennings, S. and M.J. Kaiser. 2001. Marine Fisheries Ecology. Blackwell, 432 p.

One recommended reference textbook for nutrition: Pope, J. and S. Nizelski. 2018. Nutrition for a Changing World, 553 p.

Sakai will be used for this course and the site will contain the syllabus, all lecture presentations given in class (posted after they are delivered), homework assignments and readings, and any other relevant course materials. Announcements for the course will also be posted on the site, so please check it frequently and *make sure you have the correct email address associated with your Sakai profile* (i.e., the one you frequently check).

Course Policies:

Late assignments will be accepted and read, but for each (calendar) day they are late your grade will be reduced by 10% (or from a check-plus to a check).

Email messages (or Sakai messages) will be responded to within 48 hours of being received (excluding weekends).

Attendance is mandatory. You are allowed only *two excused* absences during the semester OR *one unexcused* absence. Please arrive to class on time. If you arrive to class more than 20 minutes late,

you will be marked absent for that meeting. Excused absences will only be granted if sufficient evidence is provided by a doctor's note or family emergency (also see below). Please see the University handbook for details.

Religious Holidays: It is the policy of the University of Rhode Island to accord students, on an individual basis, the opportunity to observe their traditional religious holidays. Students desiring to observe a holiday of special importance must provide written notification to us.

Technology: Do not use cell phones during class. Put them on silent and do not keep them on your desk – put them in your bag. You may use computers to take notes but do not have other windows or programs open, or do things that will disrupt the concentration of others in the class. Generally, I discourage the use of computers for note taking and think you can do just fine hand writing notes since all the PowerPoint slides will be posted to Sakai after class.

Discussion: Throughout the course of the semester we will be addressing a variety of issues which people will have diverse opinions. It is critical to respect one another's thoughts. No demeaning or threatening language will be tolerated. There will also be no tolerance for talking while others are talking.

Plagiarism: All submitted work must be your own. If you consult other sources (class readings, articles or books from the library, articles available through internet databases, or websites) these must be properly documented or you will be charged with plagiarism and will receive an F for the assignment. In some cases, this may result in a failure of the course as well. In addition, the charge of academic dishonesty will go on your record in the Office of Student Life. If you have any doubt about what constitutes plagiarism, visit the [UNIVERSITY MANUAL sections on Plagiarism and Cheating](#).

Disabilities: Any student with a documented disability is welcome to contact us as early in the semester as possible so that we may arrange reasonable accommodations. As part of this process, please be in touch with Disability Services for Students Office at 330 Memorial Union, 401-874-2098.

Academic Enhancement Center and Writing Center: Nearly all students recognize that regardless of how well or poorly they are doing in a given class, there are ways to improve their learning and studying. The Academic Enhancement Center (AEC) and Writing Center (WC), located in Roosevelt Hall, offers several kinds of support that help students improve their learning and academic performance in this class as well as other classes. For information on any of these programs, visit [AEC's website](#) or call the AEC's main number at (401) 874-2367, or follow the specific suggestions below.

WEEK	TOPIC	THEME
Sept 5	a) Seafood systems intro	Introduction
Sept 9 - 13	a) Seafood big picture b) Fisheries harvest	Fish as Data Harvest and Production
Sept 16 - 20	a) No class (Austin away) b) Aquaculture production	
Sept 23 - 27	a) Aquaculture gears and methods b) Fisheries gears and methods	
Sept 30 - Oct 4	a) Historical and current status b) Historical and current status	
Oct 7 - 11	a) Wrap-up and review b) Exam #1	
Oct 14 - 18	a) No class (Columbus Day) b) No class (power outage happened)	
Oct 21 - 25	a) Supply chain basics b) Seafood traceability	
Oct 28 - Nov 1	a) Value chain analysis b) Seafood certification	
Nov 4 - 8	a) Post-harvest processing b) Market-based management	
Nov 12	a) Exam #2	
Nov 14	a) Seafood macronutrients (Brie Oaks)	Fish as Food Consumption and Uses
Nov 18 - 22	a) Seafood micronutrients b) Non-human uses	
Nov 25 - 29	a) Risks and benefits to humans b) No class (Thanksgiving)	
Dec 2 - 6	a) Ethics and GMOs (Marta Gomez-Chiarri) b) Seafood carbon emissions (Lauren Josephs)	
Dec 10	a) Exam #3	