



Dana and David Dornsife  
College of Letters, Arts and Sciences

**ENST 310: Sustainable Fisheries Management**

Fall 2020, TTH 11:00-12:20 pm

Section 33017; 4 units

Spring 2020, TTh 11:00-12:20 pm

**Location:** ONLINE

**Instructor:** Dr. David Ginsburg, Assoc. Prof. (Teaching), ENST

**Preferred Pronouns:** he, him, his

**Office:** ONLINE

**Office Hours:** Available by appointment (via Zoom) on MWF;

See: <https://calendly.com/ginsbuda> for details.

**Email:** dginsbur@usc.edu

**Course Description**

This course integrates scientific, social, political and economic factors of fisheries management, engaging students in key issues of coastal and marine sustainability. Fisheries are an important source of food and livelihood for societies across the planet. Yet many fisheries are in decline or collapse due to overfishing and habitat degradation. This course will present the historical and modern significance of fishing to society, the causes and implications of fisheries decline, as well as current and proposed strategies for achieving more sustainable fisheries.

**Recommended Preparation:** ENST 100

**Course Learning objectives**

Student learning objectives for this course are aligned with those of the Environmental Studies (ENST) Program (see [link](#) for details):

**Students will:**

- Learn about the physical, chemical and biological aspects of fisheries
- Discuss fishery issues facing the environment from a scientific and social perspective
- Examine how environmental issues affect humans from multiple perspectives
- Study fisheries through policy, science and human behavior
- Apply quantitative reasoning skills and analytical methods to fisheries-related data

**Course Overview**

ENST 310 will be taught online via Zoom. Outside of our regularly scheduled Zoom lectures, we will use Blackboard for communicating with one another, class updates and submitting assignments. PDF copies of lecture slides, links to topics discussed during class and lecture recordings will be made available after each lecture is given. Additional readings will be assigned throughout the semester, which will be announced during lecture, posted on Blackboard and via email messages sent to the class.

During some lectures, we will work with spreadsheet data (using Excel; see [link](#) for tutorial) and run simple simulations or experiments as a class and/or asynchronously (see course schedule for specific dates). You are responsible for all notifications and assignments discussed during lecture and posted online via BlackBoard. This is a 4-unit, upper division course and requires a significant amount of in-depth reading and critical analysis outside of lecture.

Participating in courses online can be challenge. Nevertheless, I will strive to work with each of you to the best of my abilities. Please contact me with any issues that are impacting your ability to learn (e.g., internet connectivity, or other obstacles) and I will do my best to help, or will refer you to someone that can.

### Required Readings

- Primary literature articles corresponding to each lecture are outlined on the course schedule (see below) and are available for download via Blackboard.

### Supplementary Materials (Optional)

- Marine Fisheries Ecology by Jennings et al. 2012, Blackwell Publishing, ISBN: 978-0-63205098-7 (available in USC Library).

### Description and Assessment of Exams and Assignments

You will be graded on the basis of your performance on exams, written assignments, live and asynchronous activities, as well as participation during lectures. Midterm exam questions will be drawn from course readings, lecture materials and any related assignments, activities and discussions. Each exam will cover the lecture and material immediately after the preceding exam (or starting on the first day of class for Midterm 1). Three separate midterm exams are scheduled over the course of the semester and are worth 100 pts each (300 pts total; see course schedule below for dates).

**If there is a scheduling conflict with an exam, assignment or activity you must notify me via email at least one-week in advance** to see if alternative arrangements can be made. **Otherwise, no make-up exams will be allowed.** If a student misses an exam, assignment or activity they will receive a zero for that portion of the course. Exams will be timed and administered via Blackboard (details will be released closer to the date listed on the course schedule). Failure to comply with exam policies will result in a zero for that particular exam and/or assignment.

**Late assignments will have 20% deducted each 24 hours**, with the first 24 hr deduction starting 15 min after the deadline. Regarding missed course activities and/or assignments: If you cannot make it to a class, you will need to let me know prior to the start of a class. If it is an excused absence (official USC travel, or you live overseas), then I will provide you with an alternative way to obtain the associated activity points outside of class

### Overview of Assignments and Activities

- **Article analysis:** Approximately 0.5-1 page article summary (single spaced) from either the primary or secondary literature, which is based on a topic covered in class. Students will critically read an article and provide written answers to questions (available online), which they will submit individually via Bb. Students will discuss their findings during lecture on the day each assignment is due. Three separate article summaries are scheduled over the course of the semester (20 pts each; 60 pts total).
- **Data analysis:** For this assignment, students will independently analyze (via Excel) a specific environmental and/or fisheries dataset and submit (via Bb) a 1-2 page written summary (single spaced) of their experimental results and conclusions (which we will subsequently discuss during class). Write-ups will include a discussion on the health and sustainability of a given fishery and/or ecosystem based on what we have learned in class. Three separate data assignments (1. Alaskan groundfish, 2. Bahamian conch and 2. Santa Monica Pier seawater) are scheduled over the course of the semester (30 pts each; 90 pts total).
- **Fisheries presentation:** This is a group assignment in which students (two per group) will present a fisheries-related topic (instructor approved) that is unrelated to the material being covered in class. Students will present their topic orally (10 min) during lecture and submit a

written summary via Bb (1-2 pages, single spaced). Each group presentation is worth a total of 75 point (50 points presentation and 25 points summary) and will be scheduled on three different days over the course of the semester (see Course Schedule for details).

- **Seawater study:** Lastly, students will have to opportunity to participate in a study focused on measuring temporal changes in the biological and physical properties of seawater collected off the Santa Monica Pier (see Course Schedule). This is NOT a mandatory activity, but one that I think is beneficial for students interested in conducting research in the field. Note: Conducting class activities in the field are subject to stay at home orders issued by the county and state, as well as guidance provided by the university.

### Grading Breakdown

Assignment	Points	Grade %
Midterm 1	100	17.4%
Midterm 2	100	17.4%
Midterm 3	100	17.4%
Research article analyses (3 x 20 pts)	60	10.4%
Data analysis #1: Alaskan groundfish	30	5.2%
Data analysis #2: Bahamian conch	30	5.2%
Data analysis #3: SM Pier seawater	30	5.2%
Fisheries Presentation	75	13.0%
Participation (activities, discussions, etc.)	50	8.7%
<b>TOTAL</b>	<b>575</b>	<b>100%</b>

### Grading Scale

Your final grade will be determined based on the percentage of points earned as outlined below. This scale may be adjusted depending on the progress of the class. If course taken as a “Pass” grade student must earn a C- or greater in course (scores at or below a D+ grade = “No Pass”).

>93 = A; 90-92 = A-

87-89 = B+; 83-86 = B; 80-82 = B-

77-79 = C+; 73-76 = C; 70-72 = C- (Note: C- is minimum score required for Pass grade)

67-69 = D+; 63-66 = D; 60-62 = D-

<59 = Fail

### Ground rules for classroom (online and in-person)

- Share responsibility for including all voices in a conversation
- Listen respectfully to your classmates and your instructor’s viewpoints
- Be open to changing your perspectives based on what you learn from others
- Understand that we are bound to make mistakes in this space
- Understand that your words have effects on others
- Take group work during class and outside of lecture seriously
- Understand that others will come to these discussions with different experiences from yours
- Make an effort to get to know your classmates
- Understand that there are different approaches to solving problems

### Additional Policies

Routine attendance and active participation are an important part of each class session. Participation will be evaluated via thought exercises, reading assignments and in-class questions. You are responsible

for information, announcements, date changes and any other course material presented, regardless of your participation and/or presence in the classroom.

### Course Schedule

For the best learning experience, you are expected to have read the assigned material by the date it is discussed in class. Articles, supplemental readings and in-class data sets will be posted online. Note: The readings and schedule of topics may be adjusted throughout the semester depending on progress of the class.

Date	Topic	Readings
Jan 19	Marine Fisheries: Intro and Overview	Pauly 2018 Halpern et al. 2008
Jan 21	Overfishing & Shifting Baselines	Pauly 2015 Pauly & Watson 2003
Jan 26	Fisheries Oceanography	Petersen et al. 2014
Jan 28	Bycatch & Ecosystem Impacts	Lewison et al. 2004 Maxwell et al. 2013
Feb 2	<b>Data analysis #1: Alaskan groundfish stocks (Excel)</b>	<b>Asynchronous Activity (see Bb)</b>
Feb 4	Population Dynamics and Stock Assessment I	Cury et al. 2014
Feb 9	Population Dynamics and Stock Assessment II	Cowen & Sponaugle 2009
Feb 11	MSY & Sustainable Harvesting	Finley 2011 Roberts 2007
Feb 16	<b>Fisheries Presentations #1: Groups 1-4</b>	
Feb 18	<b>**Midterm Exam #1 (online via Bb)**</b>	
Feb 23	Ecosystem Based Management I	Estes et al. 2011
Feb 25	Ecosystem Based Management II	Sala & Jackson 2011
Mar 2	<b>California Abalone Recovery and Conservation</b>	<b>Asynchronous Lecture (see Bb)</b> Karpov et al. 2000 Xia 2019
Mar 4	Aquaculture & Wildcaught Fisheries I	Golden et al. 2016
Mar 9	Aquaculture & Wildcaught Fisheries II	Bush et al. 2014
Mar 11	<b>Data analysis #2: Bahamian conch (Excel)</b>	<b>Asynchronous Activity (see Bb)</b>
Mar 16	Case Studies: West Coast Fisheries (invertebrates)	Anderson et al. 2011
Mar 18	Case Studies: West Coast Fisheries (fishes)	Chavez et al. 2003
Mar 23	USC Wellness Day – No Class Scheduled	
Mar 25	<b>Fisheries Presentations #2: Groups 5-8</b>	
Mar 30	<b>**Midterm Exam #2 (online via Bb)**</b>	
Apr 1	<b>Santa Monica Pier Seawater Sampling</b>	<b>Santa Monica Pier: In-person*</b>
Apr 6	Recreational Fisheries & Ecosystem Impacts	Coleman et al. 2004 Freire et al. 2020
Apr 8	<b>Data analysis #3: Santa Monica Pier seawater (Excel)</b>	<b>Asynchronous Activity (see Bb)</b>
Apr 13	Whaling & Fisheries	Shellenberger 2015
Apr 15	Seafood for the Future I	Zeller and Pauly 2020
Apr 20	Seafood for the Future II	Worm & Branch 2012
Apr 22	USC Wellness Day – No Class Scheduled	
Apr 27	Lecture topic: TBA	
Apr 29	<b>Fisheries Presentations #3: Groups 9-12</b>	
May 11	<b>**Midterm Exam 3 (Final; online via Bb): 11:00 am to 1:00 pm**</b>	

\*Based on guidelines provided by Los Angeles County Department of Public Health and USC on necessary safety requirements to conduct class activities remotely.

## Statement on Academic Conduct and Support Systems

**Computer Support:** *Zoom or general IT USC Support:* Phone: 24/7 on call: 213-740-5555; Email: [consult@usc.edu](mailto:consult@usc.edu). *Blackboard Support:* Phone: 213-740-5555 (option 2, 24/7 on call); Email: [blackboard@usc.edu](mailto:blackboard@usc.edu)

**Academic Conduct:** Plagiarism is an academic offense with serious consequences. Familiarize yourself with its definition in [SCampus](#). Other forms of academic dishonesty are equally unacceptable. See additional information in [SCampus and university policies](#) on scientific misconduct.

**Counseling and Mental Health:** (213) 740-9355; 24/7 on call. Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops and crisis intervention. See [link](#) for details.

**National Suicide Prevention Lifeline:** (800) 273-8255; 24/7 on call. Free and confidential emotional support to people in suicidal crisis or emotional distress. See [link](#) for details.

**Relationship and Sexual Violence Prevention Services:** (213) 740-9355; 24/7 on call. Free and confidential therapy services, workshops, and training for situations related to gender-based harm. See [link](#) for details.

**Office of Equity and Diversity:** (213) 740-5086; Title IX: (213) 821-8298. Information on how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors and applicants. See [link](#) for details.

**Reporting Incidents of Bias or Harassment:** (213) 740-5086 or (213) 821-8298. Report incidents of bias, hate crimes and microaggressions to the Office of Equity and Diversity, Title IX for appropriate investigation, supportive measures and response. See [link](#) for details.

**The Office of Disability Services and Programs:** (213) 740-0776. Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology and support for individual needs. See [link](#) for details.

**USC Campus Support and Intervention:** (213) 821-4710. Assists students and families in resolving complex personal, financial and academic issues adversely affecting their success as a student. See [link](#) for details.

**Diversity at USC:** (213) 740-2101. The Provost's Diversity and Inclusion Council provides information on events, programs and training resources students at each academic school. See [link](#) for details.

**USC Emergency:** UPC: (213) 740-4321; HSC: (323) 442-1000; 24/7 on call. Emergency assistance and means to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. See [DPS link](#) and [Emergency link](#) for details.

**USC Department of Public Safety:** UPC: (213) 740-6000; HSC: (323) 442-120; 24/7 on call. Non-emergency assistance or information. See [link](#) for details.