



Dana and David Dornsife  
College of Letters, Arts and Sciences

### **ENST 310: Sustainable Fisheries Management**

Spring 2025, TTH 11:00-12:20 pm

Section 33017; 4 units

Location: VHE 206

Instructor: Dr. David Ginsburg, Professor, Teaching, ENST

Preferred Pronouns: he, him

Office: CAS 116

Office Hours: Weds, 11:00-12:00 pm or by appointment

Email: dginsbur@usc.edu

#### **Course Description**

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 sustainable seafood for the future. *Recommended preparation: ENST 100*

#### **Classroom Ground Rules**

- Share responsibility for including all voices in a conversation
- Listen respectfully to your classmate's 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
- Take group work during class and outside of lecture seriously
- Understand that your classmates may have different experiences from your own
- Make an effort to get to know your classmates
- Understand that there are different approaches to solving problems

#### **Learning Objectives**

Student learning objectives are aligned with the ENST Program in which 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 Readings**

Primary literature articles corresponding to each lecture are outlined on the Course Schedule and are available for download via Brightspace (**Referred to below as Bsp**).

#### **Course Modality**

ENST 320a will be taught as a synchronous, in-person course and you are expected to be present for each lecture section. Recorded lectures will not be provided to students via Zoom (or any other platform) unless accommodations have been requested via [OSAS](#). Students that miss class are expected to get notes from their classmates.

This course will primarily use Bsp for communication, information and turning in assignments. PDF copies of lecture slides and links to topics discussed during class will be made available on Bsp after each lecture is completed.

Readings from the primary and secondary literature will be assigned throughout the semester and will be announced in class, posted on Bsp and/or via email. During some lectures, we may work with spreadsheet data (using MS Excel) and run data simulations or experiments as either a class or asynchronously.

### **Description and assessment of exams, assignments, etc.**

You will be graded on the basis of your performance on exams, written assignments, course activities and participation during lectures. 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. If it is an excused absence (official USC travel, medical reasons, religious observation, etc.), I will do my best to provide you with a way to obtain the associated points. Otherwise, no make-ups will be allowed.

Exam questions will be drawn from course readings, lecture materials and any related assignments, activities and discussions. Two separate exams (midterm and final) are scheduled over the course of the semester. The final exam is partially cumulative and will be comprised of ~20% cumulative and 80% new material covered in the course.

Both the midterm and final will be administered in the classroom electronically via Bsp (specific details will be discussed/posted closer to the date on the course schedule). Therefore, each student is *required* to bring a laptop computer to class on the day of the midterm and final (If you need to borrow a computer, see the [USC Computing Center Laptop Loaner Program](#) website for details).

During exams, students are NOT allowed to work as a group, use notes, books, mobile devices, complete the exam outside of the classroom, etc. Noncompliance with exam policies may result in a student being reported to the USC Office of Academic Integrity and/or receiving zero points for the given assignment.

All assignments must be submitted by the stated deadlines. Late assignments will have 15% deducted each 24 hours, with the first 24 hr deduction starting 15 min after the deadline. Reminder: USC policy prohibits sharing of any course content outside of the learning environment.

### **Overview of Graded Work:**

- **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 posted online, which they will submit individually via Blackboard. Students will discuss their findings during lecture on the day each assignment is due. Five separate article summaries are scheduled over the course of the semester (9 pts each; 45 pts total).
- **Data analysis:** Students will independently analyze (via Excel) a specific environmental and/or fisheries dataset and submit (via Bsp) 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, sustainability and/or ecosystem of a given fishery based on what we have learned in class. Two separate data assignments are scheduled over the course of the semester (45 pts each; 90 pts total).
- **Data interpretation:** In-class activity in which students review and analyze data from the primary literature in order to answer critical questions as a group. Approximately 5-6 data interpretation activities will be randomly assigned throughout the semester and are part of the participation

grade (40 points max). Students **MUST** be present in class to receive credit for these assignments (i.e., if absent, you will receive a zero for that particular assignment).

- **Fisheries presentation:** This is a group assignment in which students (two per group) will present a sustainable fisheries-related topic (instructor approved) related to the material being covered in class. Students will present their topic orally (10 min) during lecture and submit a written summary via Bsp (1-2 pages, single spaced). Each group presentation is worth a total of 65 points (5 points topic submission, 40 points oral presentation and 20 points written summary).

### Grading Breakdown

Assignment	Points	Grade %
Midterm exam	100	22%
Final exam	125	27%
Article analyses (5 x 9 pts)	45	10%
Data analysis #1	45	10%
Data analysis #2	45	10%
Fisheries presentation	65	14%
Participation (activities, discussions, etc.)	40	9%
<b>TOTAL</b>	<b>465</b>	<b>100%</b>

### Grading Scale

Final course grades 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, you must earn a letter grade of C- or greater in course. A final point score at or below a D+ grade will result in a “No Pass.”

A	94-100	C	73-76
A-	90-93	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	59 and below

### Additional Policies

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

You are responsible for all information, announcements, date changes and any other course material presented, regardless of your participation or presence in the classroom. The use of phones and other devices for text messaging, email, social media use, and web-browsing is not permitted in class except where required for in-class work.

For the best learning experience, you are expected to have read the assigned material by the date it is discussed in class. Course materials will be posted online on Bsp. The readings and schedule of topics may be adjusted throughout the semester depending on progress of the class.

## Course Schedule

Week/Date	Topic	Readings
W1: Jan 14	Fisheries: Intro & Overview	
W1: Jan 16	Fisheries: Fisheries Success in Bristol Bay, AK	Hilborn 2006
W2: Jan 21	Sustainability: MSY, Environ Change & Regime Shifts	Hilborn et al. 2016; Finley & Oreskes 2013
W2: Jan 23	Sustainability: MSS, Ecosystems & Ecolabeling	deYoung et al. 2008; Jacquet & Pauly 2022
W3: Jan 28	Management: Traditional & Western Models, Modern Fisheries Management; <b>Article analysis #1</b>	Hilborn & Ovando 2014; Beddington et al 2007
W3: Jan 30	Management: Community Management, Regulatory Processes, Deciding What Works	Duarte et al. 2020
W4: Feb 04	<b>Data Analysis #1: Topic TBA (Excel)</b>	<b>In-Class Activity (see Bsp)</b>
W4: Feb 06	Fishing Rights: The Commons, EEZs & Limited Entry	Jackson et al. 2001; Pauly et al. 2002
W5: Feb 11	Fishing Rights: ITQs & Other Allocation Methods	Costello et al. 2010
W5: Feb 13	Global Fisheries: Gloom and Doom	Meyers & Worm 2003
W6: Feb 18	Global Fisheries: A Sustainable Future Exists I; <b>Article analysis #2</b>	Worm et al. 2006; Hilborn 2010
W6: Feb 20	Global Fisheries: A Sustainable Future Exists II	Melnichuk et al. 2021
W7: Feb 25	<b>Fisheries Presentations #1: Groups 1-5</b>	<b>In-Class Activity (Peer Evals)</b>
W7: Feb 27	<b>**MIDTERM EXAM: 11:00 am 12:20 pm**</b>	
W8: Mar 04	Environmental Impacts of Fishing: From Trawling to Extinctions	Worm et al. 2009; Jackson 2008
W8: Mar 06	Recreational Fisheries: Impacts & Management	Cooke & Cowx 2004; Arlinghaus et al. 2015
W9: Mar 11	Mixed-Species Fishing & Bycatch; <b>Article analysis #3</b>	Lewison et al. 2004; Hilborn et al. 2011
W9: Mar 13	Forage Fish: Bust and Boom	Chavez et al. 2011; Checkley et al. 2017
W10: Mar 18	<b>Spring Recess – No Class</b>	
W10: Mar 20	<b>Spring Recess – No Class</b>	
W11: Mar 25	<b>Data Analysis #2: Topic TBA (Excel)</b>	<b>In-Class Activity (see Bsp)</b>
W11: Mar 27	Illegal, Unregulated & Unreported Fishing	Melnichuk et al. 2017; Pauly 2015
W12: Apr 01	Seafood Certification and NGOs: Northern Cod & Best Intentions	Christian et al. 2013
W12: Apr 03	Seafood Certification and NGOs: Commercial Fisheries & Consumer Confusion; <b>Article analysis #4</b>	Roheim et al. 2018; Micheli et al. 2014; Jonell et al. 2013
W13: Apr 08	Ecosystem-Based Management & MPAs I	Pikitch et al. 2004; Hilborn 2011
W13: Apr 10	<b>Fisheries Presentations #2: Groups 6-10</b>	<b>In-Class Activity (Peer Evals)</b>
W14: Apr 15	Ecosystem-Based Management & MPAs II	Lubchenco & Grorud-Colvert 2015; Lenihan et al. 2021
W14: Apr 17	Aquaculture & Fisheries Enhancement; <b>Article analysis #5</b>	Naylor et al. 2021
W15: Apr 22	Ocean Climate Change: What's Known & What's Next	Pinsky et al. 2013; McCauley et al. 2015
W15: Apr 24	The Future of Ocean Fisheries	Costello et al. 2016; Costello et al. 2020
W16: Apr 29	Lecture topic: TBA	
W16: May 01	<b>Fisheries Presentations #3: Groups 11-15</b>	<b>In-Class Activity (Peer Evals)</b>
May 13	<b>**FINAL EXAM: 11:00 am to 1:00 pm**</b>	

## Statement on Academic Conduct and Support Systems

### Students and Disability Accommodations

USC welcomes students with disabilities into all of the University's educational programs. [The Office of Student Accessibility Services \(OSAS\)](#) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at [osas.usc.edu](https://osas.usc.edu). You may contact OSAS at (213) 740-0776 or via email at [osasfrontdesk@usc.edu](mailto:osasfrontdesk@usc.edu).

### Student Financial Aid and Satisfactory Academic Progress

To be eligible for certain kinds of financial aid, students are required to maintain Satisfactory Academic Progress (SAP) toward their degree objectives. Visit the [Financial Aid Office webpage](#) for [undergraduate-](#) and [graduate-level](#) SAP eligibility requirements and the appeals process.

### Support Systems

[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.

[988 Suicide and Crisis Lifeline](#) - 988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline consists of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#) - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#) - (213) 740-5086

Information about 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.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-2500

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue 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.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or [otfp@med.usc.edu](mailto:otfp@med.usc.edu)

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.