

## **COLL 127**

### **SeaFood for Thought: A Fishy Investigation of Marine Resource Use**

Fall 2017

Time: Mondays, 6-7pm

Location: Rayzor 106

**Instructor:** Elaine Shen ([ews4@rice.edu](mailto:ews4@rice.edu)); office hours by appointment

#### **Course Description**

This course will examine contemporary issues in marine science as they relate to the seafood industry and associated resource use sectors.

About one billion people on Earth rely on fish as their primary protein source, largely in developing countries. Improvements in fishing technology and shipping have made it easier to catch desired fish and shellfish species, however the levels of fish catches in the world have remained fairly stable since the mid-1990s. With the United Nations predicting an addition of 2 billion people to the world's population within the next two decades, the pressure on marine ecosystems for seafood will continue to increase. Already, over 80% of the world's fish are reported as fully exploited or overfished and thus require "effective and precautionary management."

This course will consider overfishing and marine resource use through cultural, economic, and sociopolitical lenses. In other words, ***what kind of relationships do individuals and societies have to the ocean through food, and how does that translate to effective conservation efforts?***

Students will read scientific and sociological texts, watch relevant videos and documentaries, meet with various stakeholders, and present on an ocean-related issue of personal relevance. Discussion-based classes are central to this course and may include guest lecturers. Through these various experiences, students will develop the tools to consider consumption and conservation through nuanced perspectives.

#### **Expected Learning Outcomes:**

- Identify major fisheries industries and processes, along with their ecological impacts
- Source seafood menu items to their origin and relate the food items to larger economic and ecological processes
- Justify and analyze the drivers behind resource use and conservation from social, economic, political, and ecological perspectives
- Formulate best practices for the consumption of marine resources at an individual and societal level

#### **Grading Policy**

- 25% - Reading responses
- 10% - Seafood sourcing assignment
- 15% - Video response - *The Cove*
- 15% - Final presentation
- 15% - Role-play roundtable
- 20% - Class participation and attendance

#### **Required Texts and Materials**

- All required texts will be available on Canvas or viewed in class.

- Students will need to utilize at least one piece of academic literature (like a scientific paper or policy briefing) for their final presentation. Students are responsible for acquiring a copy of this work on their own.

## Assignments

NOTE: All assignments submitted to Canvas should have the student's name removed so that blind grading can be turned on to remove as much personal biases as possible and ensure fairness.

1. Reading responses: Students will submit at least 5 reading responses on Canvas that summarizes and reflects on the contents of the assigned readings and class discussion. Each reading response should be about 300-500 words. This assignment will be due on the last day of classes.
2. Seafood sourcing assignment: Students will choose a Houston restaurant and seafood menu item of their choice to source the origin of the marine organism(s) used. Students will provide the estimated mileage that the seafood traveled, ecological significance of their menu items, and a personal reflection. The report should only be one page, single-spaced with standard formatting. This assignment will be due at 11:59 pm on September 11, 2017.
3. Video response - *The Cove*: Students will also critically analyze the documentary *The Cove* towards the end of the semester using course readings and outside materials. This response should be 3-4 pages in length and submitted onto Canvas by the last day of classes (double-spaced with normal margins and font). This assignment is due on the last day of classes.
4. Role-play roundtable: Students will choose a character profile of a stakeholder (fisherman, policymaker, conservationist, consumer, etc) to act out in a moderated roundtable on a hypothetical conservation-based management scheme. Students will prepare arguments and defenses for the positions their character profile calls for. After the role-play roundtable, students will write a small reflection (300-500 words) about their experiences performing as a stakeholder.
5. Final presentation: Students will give a 7-minute presentation further developing a relevant issue in contemporary marine science (a *current* event). Relating this issue to personal experiences is recommended, but not necessary. A list of potential topics will be made available. Topics will be discussed and approved by the instructor in class. Powerpoints should be emailed to me 30 minutes before the scheduled presentation date.
6. Class participation: Students are expected to contribute to daily class discussions including summarizing readings, commenting on lecture material, sharing personal experiences, and working in groups to develop sustainable policies.

## Attendance Policy

Attendance is mandatory for all classes and excursions, which will happen during normal class time. Excursions that happen outside of normal class time will be optional. The instructor must know of legitimate conflicts at least 24 hours in advance. Two unexcused absences will result in an 'Unsatisfactory' grade for this course.

## Disability Support Services

If you have a documented disability or other condition that may affect academic performance you should (1) make sure this documentation is on file with Disability Support Services (Allen Center, Room 111/ [adarice@rice.edu](mailto:adarice@rice.edu) / x5841) to determine the accommodations you need; and (2) talk

with me by the first two weeks of class (or anytime) to discuss your accommodation needs. All information will be confidential and you can always come to me to discuss anything. ☺

### Honor Code

Students are expected to follow the Rice Honor Code for all work done in this course. Details on the Honor Code can be found in the Honor System Handbook at <http://honor.rice.edu/honor-system-handbook/>.

### Syllabus Change

This syllabus is only a guide for the course and is subject to change with advance notice.

### Schedule

Date	Class Activity	Assignments
8/21	Introductions and syllabus review	<p><u>Reading:</u>            Kittinger, John N., et al. "Committing to socially responsible seafood." <i>Science</i> 356.6341 (2017): 912-913.</p>
8/28	<i>No class - Harvey</i>	<p><u>Reading:</u>            Fabinyi, Michael. "Historical, cultural and social perspectives on luxury seafood consumption in China." <i>Environmental Conservation</i> 39.01 (2012): 83-92.</p> <p>Work on restaurant sourcing assignment</p>
9/4	<i>No class – Labor Day</i>	<p><u>Reading:</u>            Live Science - Overfishing Goes Back Centuries, Log Book Reveals <a href="http://www.livescience.com/5445-overfishing-centuries-log-books-reveal.html">http://www.livescience.com/5445-overfishing-centuries-log-books-reveal.html</a></p> <p>Work on restaurant sourcing assignment</p>
9/11	<p><i>Why do we fish?</i>            Topics: worldwide and domestic fishing trends, diet + health, recreational fishing</p> <p>Case study: Shark fin soup</p> <p>Discussion: Houston restaurant findings</p>	<p><u>Video:</u>            TED Talk – Dan Barber: How I fell in love with a fish <a href="https://www.youtube.com/watch?v=4EUAMe2ixCI">https://www.youtube.com/watch?v=4EUAMe2ixCI</a></p> <p><u>Reading:</u>            National Geographic, How to Farm a Better Fish <a href="http://www.nationalgeographic.com/foodfeatures/aquaculture/">http://www.nationalgeographic.com/foodfeatures/aquaculture/</a></p>
9/18	<p><i>How do we fish?</i>            Topics: industrial, artisanal, recreational fisheries strategies, aquaculture</p> <p>Case studies: tilapia in closed-loop systems</p>	<p><u>Reading:</u>            Warner, Kimberly, et al. "Oceana study reveals seafood fraud nationwide." <i>Oceana</i> 11 (2013): 1-69. (Pages 1-5, 57-59)</p> <p>NOAA Fisheries – Bycatch Bites <a href="http://www.fisheries.noaa.gov/stories/2016/02/bycatch_bites.html">http://www.fisheries.noaa.gov/stories/2016/02/bycatch_bites.html</a></p>

9/25	<p><i>What are the problems of fishing today?</i> Topics: Mislabeled, bycatch</p> <p>Student presentations</p>	<p><b>**Come up with questions for guest speaker**</b></p> <p><u>Readings:</u> Scientific American – How Hunger for Shrimp and Slavery Destroy Mangroves <a href="https://www.scientificamerican.com/article/how-hunger-for-shrimp-and-slavery-destroy-mangroves-excerpt/">https://www.scientificamerican.com/article/how-hunger-for-shrimp-and-slavery-destroy-mangroves-excerpt/</a></p> <p>Ratner, Blake D., Björn Åsgård, and Edward H. Allison. "Fishing for justice: Human rights, development, and fisheries sector reform." <i>Global Environmental Change</i> 27 (2014): 120-130.</p>
10/2	Guest speaker	
10/9	<i>No class – Midterm Recess</i>	
10/16	<p><i>What are the problems of fishing today?</i> Topics: Human rights, slavery, food access</p> <p>Introduce Roleplay Roundtable and work on it in class</p>	Work on Roleplay Roundtable
10/23	<p>Roleplay Roundtable</p> <p>Student presentations</p>	<p>Gill et al. 2017. Capacity shortfalls hinder the performance of marine protected areas globally. <i>Nature</i>; doi: 10.1038/nature21708.</p> <p>Write reflection on Roleplay Roundtable</p>
10/30	<p><i>How do we combat fishing problems today?</i> Topics: MPAs, gear restrictions, policy-measures, sustainable seafood movement</p> <p>Group activity: brainstorming innovative policies</p>	<p><u>Video:</u> TED - Sylvia Earle: How to protect the oceans (TED Prize winner!) <a href="https://www.youtube.com/watch?v=43DuLcBFxoY">https://www.youtube.com/watch?v=43DuLcBFxoY</a></p>
11/6	Watch part of <i>The Cove</i> in class	<p>Work on <i>The Cove</i> Paper</p> <p>Work on presentation</p>
11/13	Potential guest speaker	<p>Work on <i>The Cove</i> Paper</p> <p>Work on presentation</p>
11/20	Presentations	Work on <i>The Cove</i> Paper
11/27	Discussion - <i>The Cove</i> , tying it all together, presentations (if necessary)	Work/catch-up on journal entries (if necessary)