

# **Oceanography 331 (SAMPLE SYLLABUS)**

## **Living Resources of the Sea: Mai Ke Kai, Mai Ke Ola**

Instructors: Rosie Alegado, office C-MORE 118, [ralegado@hawaii.edu](mailto:ralegado@hawaii.edu), 956-0565

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\*\*Syllabus schedule subject to change\*\*

### **Philosophy**

Our goal is to have a class open to students from a diversity of backgrounds that will provide them with a basic understanding of marine resource use, an issue affecting all of us.

### **Student Learning Outcomes:**

- Students will be able to explain how marine food web processes function to produce commercially important fisheries in various oceanic realms, and discuss reasons for limitations to fisheries catches.
- Students will be able to compare and contrast terrestrial and marine living resource management.
- Students should be able to integrate and frame the impact of indigenous fishery practices and the evolution of fishery technology to various commercially important fisheries throughout the world.
- Students will be able to discuss the basic principles of fisheries management, and deduce the practical and theoretical problems in their application.
- Students will be able to make links between the changing importance of aquaculture globally in supplying seafood to an increasing demand.
- Students will be able to compare and contrast the histories of fisheries and aquaculture in Hawaii, the Pacific Rim, and globally.
- Students will be able to estimate anthropogenic influences on the ocean such as climate change and pollution affecting fisheries.

### **Online Resources:**

Laulima!!!

### **Office hours:**

In addition to the office hours specified below you can make appointments and you are also welcome to email us (but please do not expect immediate email responses).

Alegado – T, Th – 10:30 - 11:30, MSB 306

Drazen – T, Th – 1:30 - 2:30, MSB 605

### **Course Schedule**

Your grade in the course is based on quizzes, discussion assignments/homework, two mid-term exams, and a final exam. Your grade on the quizzes will be based on your best 5 of 6 quiz scores. Quizzes will be take home but work independently. Discussion assignments are short answer responses to an in class activity or discussion.

## Grading Scheme

Quizzes (5 of 6)	50 points
'Discussion' assignments (4)	40 points
Midterm 1	100 points
Midterm 2 (take home)	100 points
Final Exam	100 points
<u>Class participation</u>	<u>10 points</u>
Total	400 points

## Outside Class Field trips (sign up for one – details TBA)

Attendance of the field trip you are assigned to is MANDATORY

*\*\*Failure to attend will result in the loss of one letter grade.\*\**

- He'eia Fishpond (Rosie): date TBD
- Fish market (Jeff): 5:00 am – 8:30 am, April 25
- Oceanic Institute Aquaculture facility (Jeff): date TBD

## Discussion assignments

These are in class activities with a written and graded component. These may include debates of a current topic, learning to solve theoretical problems, or assignment and discussion of a pertinent article. Please actively contribute in class! There will also be a short worksheet with questions or short exercises to complete and turn in during our next class meeting time.

## Quizzes & Midterms

Module 1: Introduction

Module 2: Fisheries management approaches

MIDTERM 1 (in class)

Module 3: Customary practices to co-management in the Pacific

Module 4: Industrial fishing

MIDTERM 2 (take home, this is due date in class)

Module 5: Climate change, pollution and fisheries

Module 6: Aquaculture

<b>Module</b>	<b>Week</b>	<b>Topic</b>
<u>Introduction</u>	1	The importance of fisheries – food, natural products, etc. (RA) Background Oceanography (JD)
	2	Marine food webs and limits to fisheries production (JD) Overview of fishing methods (JD)
<u>Fisheries Management Approaches</u>	3	The need for management – tragedy of the commons, differences between marine and terrestrial resources (RA); <b>Quiz 1 DUE</b> MSY and single species stock assessment (JD)
	4	Recruitment and recruitment assessment (JD) Catch and effort controls, marine protected areas (JD)
	5	<b>DISCUSSION (estimating allowable catch); Quiz 2 DUE</b> <b>In-class Midterm *****</b>
<u>Customary practices to co-management in the Pacific</u>	6	Customary resources management in the Pacific: Hawai'i as a case study (RA) Contemporary Hawaiian fisheries management (JD)
	7	Community Co-management in Hawai'i (RA) <b>Discussion (traditional and community-based management)</b>
<u>Industrial fishing (and industrialization of the industry)</u>	8	Highly migratory species: law of the sea, regional management (RA); <b>Quiz 3 DUE</b> Salmon and north Amerindian fisheries (RA)
	9	Tuna (JD) Gadoid and Clupeid fisheries (JD)
	10	Whaling (RA) <b>DISCUSSION – nearshore Hawai'i fisheries panel</b> <b>Quiz 4 DUE</b>

- 11 Spring break
- 12 **MONDAY – mail out take-home midterm**

Climate change, pollution and fisheries

- 12 Status of global fisheries
- 13 Natural cycles of change: El Nino and the Peruvian anchoveta (RA); **MIDTERM DUE\*\*\*\*\***  
Anthropogenic change: primary production, acidification (RA)
- 14 Pollution and the seafood supply (RA)  
Plastics and our seafood supply (RA)

Aquaculture

- 15 **DISCUSSION (synergistic effects, plastics – paper discussion), Quiz 5 DUE**  
Aquaculture 1 (RA)
- 16 Aquaculture 2 (JD)  
Fieldtrip to fish Auction (5:00 am); Aquaculture guest lecture
- 17 **Native Hawaiian fishponds (Guest: Keli'i Kotubetey, POH)**  
**DISCUSSION (the future of seafood), Quiz 6 DUE**

**FINAL EXAM: Tues, 12:00-2:00pm**

**Title IX**

*The University of Hawai'i is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. If you or someone you know is experiencing any of these, the University has staff and resources on your campus to support and assist you. Staff can also direct you to resources that are in the community. Here are some of your options:*

***As members of the University faculty, your instructors are required to immediately report any incident of potential sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and your instructors cannot guarantee confidentiality, you will still have options about how your case will be handled. Our goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.***

*If you wish to remain ANONYMOUS, speak with someone CONFIDENTIALLY, or would like to receive information and support in a CONFIDENTIAL setting, contact the Title IX office directly*

(Hawai'i Hall 124, 2500 Campus Road [\(808\) 956-2299](tel:8089562299)) or use the **confidential resources available here:** <http://www.manoa.hawaii.edu/titleix/resources.html#confidential>

*If you wish to directly REPORT an incident of sex discrimination or gender-based violence including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence or stalking as well as receive information and support, contact: Dee Uwono Title IX Coordinator [\(808\) 956-2299](tel:8089562299) [t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu)*