

**Biology 643: Introduction to Fisheries Science
2015**

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Class Meets: Grice 202 (MRRI 145), Tuesday and Thursday, 5:00 - 6:15 PM - Spring 2016.

Office Hours: By appointment: e-mail (preferred) or call.

Texts (links to these publications will be provided in class):

A Guide to Fisheries Stock Assessment, Cooper

NOAA fisheries glossary

Guide to Fisheries Science and Stock Assessments, Kilduff et al. 2009

State of world fisheries and aquaculture 2014

Other important references will be handed out or e-mailed to the class.

The following references are useful:

Hart, P.J.B. and J.D. Reynolds. 2002. Handbook of fish biology and fisheries. Vol.1. Fish biology. Blackwell. Malden, MA.

Hart, P.J.B. and J.D. Reynolds. 2002. Handbook of fish biology and fisheries. Vol.2. Fisheries. Blackwell. Malden, MA.

Description:

A general introduction to the principals of (marine) fisheries science, including fishing methods, fisheries management, stock assessment, and aspects of fish biology relevant to exploitation. Students will participate in discussion and debates of fisheries issues.

Goals:

Provide an introduction to fishery science, including ecology and biology of target species, fishing methods, stock assessments, and governance and management principles, strategies, and history. Although the material presented in class is broadly applicable, emphasis will on marine fisheries.

Student Learning Outcomes:

Upon completion of this course the students will have obtained basic knowledge of key components of fisheries science such as fisheries ecology, life history, technical aspects such as gear types and attributes, fisheries governance, stock assessments, etc. The knowledge should enable the students to understand and evaluate the basics of important fisheries related processes such as data collection, analysis and interpretation, stock assessments, fisheries management process and actions, and gear, socio-economic, and environmental aspects.

Requirements:

Prepare for and attend class, and complete assignments.

Actively participate in discussions and debates.

Submit a written research paper on a fishery (details will be discussed in class) and give an oral presentation on the research paper.

Attend a public hearing or meeting related to fisheries (appropriate meetings will be discussed in class)

Evaluation:

Tests (20% each)	40%
Research paper and oral presentation	25%
Class participation and other assignments	35%

Class schedule and case study topics are subject to change.

Student input in determining discussion topics and guest speakers is strongly encouraged.

Tentative Class Schedule - 2016 (dates and topics subject to change)

Lecture	Date	Topic	
1.	Jan 7	Introduction: What is fisheries science?	
2.	Jan 12	Fisheries ecology I - Basic principles	
3.	Jan 14	Fisheries ecology II – Feeding - production	
4.	Jan 19	Fishing gear I - Gears overview, selectivity, target species, bycatch	
5.	Jan 21	Fishing gear II – Cont’d	
6.	Jan 26	Fish reproduction I - Biology and fisheries management	
7.	Jan 28	Fish reproduction II - Methods and analysis	
8.	Feb 2	Age, growth, and mortality I - Age determination	
9.	Feb 4	Age, growth, and mortality II – Growth models, mortality	
10.	Feb 9	Gathering fisheries data	
11.	Feb 11	Management options	
12.	Feb 16	International fisheries Governance	
13.	Feb 18	Fisheries Governance in the US	
14.	Feb 23	TBD/review	<u>(Topic research paper due)</u>
15.	Feb 25	TBD (SCFWA meeting)	
16.	Mar 1	Mid-term Exam	
17.	Mar 3	Stock assessment Intro	
Mar 8-10		Spring Break	
18.	Mar 15	Guest lecture	
19.	Mar 17	Stock assessment 1	
20.	Mar 22	Stock assessment 2	<u>(Research paper due)</u>
21.	Mar 24	Guest lecture	
22.	Mar 29	Stock assessment 3	
23.	Mar 31	Guest lecture	
24.	Apr 5	Socio-Economic aspects of fisheries	
25.	Apr 7	Case study	<u>(Public meeting report due)</u>
26.	Apr 12	Case study / Review	
27.	Apr 14	Student Presentations	
28.	Apr 19	Student Presentations	
	April 29- May 6	Final Exam	

No late assignments accepted - No exceptions!

Research paper and oral presentation:

Details will be discussed in class.