

Biology 643/EVSS726
Introduction to Fisheries Science
Spring 2018

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Class Meets: Grice 202 (MRRI 145), Tuesday and Thursday, 5:00 - 6:15 PM - Spring 2017.

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

Texts (available on-line at no cost):

A Guide to Fisheries Stock Assessment (Cooper): http://sedarweb.org/docs/page/stockassessmentguide_NHSeaGrant.pdf

NOAA fisheries glossary: <http://www.st.nmfs.noaa.gov/st4/documents/FishGlossary.pdf>

Guide to Fisheries Science and Stock Assessments (Kilduff et al. 2009):

http://sedarweb.org/docs/page/GuideToFisheriesScienceAndStockAssessments_ASMFC.pdf

State of world fisheries and aquaculture 2016:

<http://www.fao.org/3/a-i5555e.pdf> (2016 report with most recent data from 2014)

SEDAR: <http://sedarweb.org>

FWS Report: www.doi.gov/news/pressreleases/upload/FWS-National-Preliminary-Report-2011.pdf

FAO Fisheries: <http://www.fao.org/fishery/statistics> and <http://www.fao.org/fishery/technology/capture/en>

SAFMC: www.safmc.net

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

The following references are useful:

Hart, P.J.B. & J.D. Reynolds. 2002. Handbook of fish biology-y and fisheries. Vol.1&2. 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%

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Disabilities accommodations

If there is a student in the class who has a documented disability and has been approved to receive accommodations through the Center for Disability Services / SNAP, arrangements will be made to accommodate that student. The student should contact the instructors prior to the start of the first class to discuss these accommodations.

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 - 2018 (dates and topics subject to change)

Lecture	Date	Topic	
1.	Jan 9	Introduction: What is fisheries science?	
2.	Jan 11	Fisheries ecology I - Basic principles	
3.	Jan 16	Stock Identification	
4.	Jan 18	Age determination	
5.	Jan 23	Fisheries ecology II – Feeding - production	
6.	Jan 25	Growth models	
7.	Jan 30	Mortality I	
8.	Feb 1	Mortality II	
9.	Feb 5	Fish reproduction I - Biology and fisheries management	
10.	Feb 7	Fish reproduction II - Methods and analysis	Guest Lecture
11.	Feb 13	Fishing gear I - Gears overview, selectivity, target species, bycatch	
12.	Feb 15	Fishing gear II – Cont'd	
13.	Feb 20	Gathering fisheries data	
14.	Feb 22	US fisheries governance	
15.	Feb.27	Management options	(Topic research paper due)
16.	Mar 1	Mid-Term EXAM	
17.	Mar 6	Case study - Guest lecture	
18.	Mar 8	Stock assessment I – Introduction & Mark/Recapture	
19.	Mar 13	Stock assessment II – Recruitment and Surplus production	
20.	Mar 15	Public meeting	
	March 18-24	Spring Break – No classes	
21.	Mar 27	Stock assessment III – Yield per recruit	
22.	Mar 29	Case study - Guest lecture	
23.	Apr 3	Stock assessment IV – SCAA and multi species models	(Research paper due)
24.	Apr 5	Case study - Guest lecture	
25.	Apr 10	Public trust doctrine - International Fisheries Governance	
26.	Apr 12	Class discussion on fisheries management	(Public meeting report due)
27.	Apr 17	Student Presentations	
28.	Apr 19	Student Presentations	
	TBD	Final EXAM	

NOTE: No late assignments accepted - No exceptions!

Details for the **Research Paper and Student Presentation** will be discussed in class.