

Biology 643/EVSS726
Introduction to Fisheries Science
Spring 2019

Instructors: Dr. Marcel Reichert (reichertm@dnr.sc.gov) 953-5778, MRRRI Room 160
Dr. Joseph Ballenger (ballengerj@dnr.sc.gov) 953-9046, MRRRI Room 163

Class Meets: Grice 202 (MRRRI 145), Tuesday and Thursday, 5:00 - 6:15 PM - Spring 2019.

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>

NOAA fisheries statistics: <https://www.fisheries.noaa.gov/about/office-science-and-technology>

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

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

SEDAR: <http://sedarweb.org>

FWS Report: <https://www.census.gov/library/publications/2018/demo/fhw-16-nat.html>

FAO Fisheries: <http://www.fao.org/fishery/statistics> and <http://www.fao.org/fishery/technology/capture/en>
2018 State of the World Fisheries: <http://www.fao.org/3/i9540en/I9540EN.pdf>

SAFMC: www.safmc.net

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

The following reference is 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%

**Biology 643/EVSS726
Introduction to Fisheries Science
Spring 2019**

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 - 2019 (dates and topics subject to change)

Lecture	Date	Topic
1.	Jan 8	Introduction: What is fisheries science?
2.	Jan 10	Fisheries ecology I - Basic principles
3.	Jan 15	Stock Identification
4.	Jan 17	Fisheries ecology II – Feeding – production
5.	Jan 22	Fish reproduction I
6.	Jan 24	Fish reproduction II - David Wyanski
7.	Jan 29	Fishing gear I
8.	Jan 31	Fishing gear II
9.	Feb 5	Gathering fisheries data
10.	Feb 7	Age determination
11.	Feb 12	Growth models
12.	Feb 14	Mortality I
13.	Feb 19	Mortality II
14.	Feb 21	Public meeting
15.	Feb 26	Stock assessment I (Intro) (Topic proposal due)
16.	Feb 28	Mid-Term EXAM (through lecture 13)
17.	Mar 5	Lt. Warren Fair (US coast guard)
18.	Mar 7	Stock assessment II – Surpl.prod. & yield per recruit
19.	Mar 12	Stock assessment III – Age structured models
20.	Mar 14	Stock assessment IV – Other assessment techniques
	March 19-21	Spring Break – No classes
21.	Mar 26	US fisheries governance
22.	Mar 28	Management options
23.	Apr 2	Class discussion on fisheries management (Proposal due)
24.	Apr 4	John Carmichael (SEDAR)
25.	Apr 9	Public trust doctrine – Int.Fish. Governance
26.	Apr 11	George Sedberry MPAs
27.	Apr 16	Emerging issues in fisheries (Public meeting paper due)
28.	Apr 18	Student Presentations
29.	Apr 23	Student Presentations
	TBD	Final EXAM

NOTE: No late assignments accepted - No exceptions!

Details for the **Research Proposal and Student Presentations** will be discussed in class.