



University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE

Scaling Fisheries: an early history
of fisheries science
Number of credits: 1

MEES
608T
Spring 2020

Course Objectives / Overview

This seminar will explore the development of fisheries theory and the history of the use of fisheries science to inform management. Discussions will center around readings from Tim Smith's classic book "Scaling Fisheries: the science of measuring the effects of fishing, 1855-1955", using examples from both national and international fisheries. The goal of this course is to provide fisheries graduate students a solid historical framework for understanding modern approaches to fisheries science and management.

Expected Learning Outcomes

- Ability to explain, defend, and criticize core fisheries science theories of surplus production, spawner recruit, and yield per recruit relationships.
- Familiarity with classic examples of successes and failures in fisheries science and management with an understanding of the reasons and historical context.
- Demonstrated improvement in leading group discussion.

Course Assessment / Grading

Students will be expected to read book chapters in advance, participate in weekly discussions, and co-lead group discussion twice during the semester. Students will submit a discussion plan to the instructor 1 week in advance of their assigned date.

Participation: 50%

Co-lead Discussion 1: 25%

Co-lead Discussion 2: 25%

Tentative Weekly Course Schedule

Week 1: Introduction to scaling fisheries, course organization, how to lead a group discussion, discussion plans

Week 2: How and why fishery catch varies

Week 3: Research approaches of the mid-late 1800s

Week 4: Measuring the effects of fishing during the turn of the last century

Week 5: ICES and The Great Fishing Experiment

Week 6: Predicting fluctuations (1920-1930)

Week 7: A priori methods (1930-1940)

INSTRUCTOR DETAILS:

Geneviève Nesslerage

nesslage@umces.edu

410-326-7223

CLASS MEETING DETAILS:

Dates:

Times:

Originating Site: CBL BFL 1120

IVN bridge number: 800414

Room phone number: 410-326-7381

CURRICULUM FULLFILMENT:

Elective

Prerequisites

N/A

Teaching Assistant

N/A

Week 8: Surplus production theory, Part 1
Week 9: Surplus production theory, Part 2
Week 10: Spawner recruit theory, Part 1
Week 11: Spawner recruit theory, Part 2
Week 12: Yield per recruit theory, Part 1
Week 13: Yield per recruit theory, Part 2
Week 14: Current state of these “partial theories”: have we made progress?
Week 15: Synthesis and future directions

Required textbooks, reading and/or software or computer needs

Required textbook: Scaling Fisheries: the science of measuring the effects of fishing, 1855-1955 (\$89.99 paperback)

Course Communication

Course readings, assignments, communications, and assessments will be made available through the web-based program Moodle (moodle.cbl.umces.edu). Feel free to contact the instructor via email or phone to schedule an appointment.

Campus Policies

The University of Maryland Center for Environmental Science has drafted and approved of various academic and research-related policies by which all students and faculty must abide. Please visit <http://www.umces.edu/consolidated-usm-and-umces-policies-and-procedures> for a full list of campus-wide academic policies.