**Objectives:** To examine the principles of fisheries science from the basic biology of individuals to dynamic processes of populations, whole fisheries, and how mathematical models are derived to predict changes in fisheries for management purposes.

**Instructor:** Francis Juanes, 116 Petch, 721-6227, juanes@uvic.ca

**TA:** Cameron Freshwater, 114 Petch, camfresh@uvic.ca

**Texts:**

**Weekly readings** — from library

**Grading:**
- 3 Exams each exam 15% of grade
- Exercises 20%
- Paper 20%
- Presentations 10%
- Attendance 5%

**Grading Policy:** You are expected to attend all class sessions. All homework exercises must be handed in by 3 pm on the due date. Late assignments will incur a 20% penalty during the first 7 days past the due date. No assignments will be accepted more than 7 days past the due date.

**Exams:** Exams will be held during class time. Any makeup exams will be ORAL exams honored only with the accompaniment of a medical/personal emergency excuse.

**Academic honesty** Students will be expected to adhere to the UVic *Policy on Academic Integrity* standards ([http://web.uvic.ca/calendar2012/FACS/UnIn/UARe/PoAcI.html](http://web.uvic.ca/calendar2012/FACS/UnIn/UARe/PoAcI.html)). You may discuss how to solve homework assignments together, but are expected to compute and write your results separately.

**Paper:** A brief summary of the fisheries biology and management of a (marine) species of your choice. A handout outlining appropriate literature and paper format will be distributed in class. For library research help, see our course library guide, [http://libguides.uvic.ca/FisheriesEcology](http://libguides.uvic.ca/FisheriesEcology)

**Species choice and references:** Due October 19

**Final:** Due November 19

**Length:** 5-7 pages (Double-spaced, 12 point font, 1 inch margins)

**Presentations and Readings:** Students will present a reading summary that includes review questions (3-5), submit the electronic version, and deliver an oral presentation on species papers during the last week of classes or on final exam date. Graduate students will lead book review and present oral and written summaries of assigned chapters, and work on a data project.

**Grading scale** (GPA):
- A+=90-100 (9); A=85-89 (8); A-=80-84 (7); B+=77-79 (6); B=73-76 (5); B-=70-72 (4); C+=65-69 (3); C=60-64 (2); D=50-59 (1); F=<50 (0)
Course Outline

Part 1. Introduction

Basic definitions
Marine Fisheries Management:
- Current Issues
- Objectives and goals
- Marine ecology and production
- Fishery Resources
- Fishing Gear and Methods
- History of Fisheries
- Aquaculture production
- Fisheries today: wild vs aquaculture
  Global
  Canada

EXAM 1—OCTOBER 15

Species choice and references due OCTOBER 19

Part 2. Population dynamics

- Age and Growth
- Density-independent mortality
- Density-dependent mortality
- Reproduction
- Recruitment
- Stock-recruitment models
- Age-structured models

EXAM 2—NOVEMBER 12

Part 3. Fishery processes

- Surplus production models
- Dynamic Pool models
- Cohort models (Virtual Population analysis)
- Management tactics and strategies
- Socio- and Bio-economic models

Papers due on NOVEMBER 19

EXAM 3—December 3

Part 4. Student presentations (November 26, 30, Dec 3, Final exam day)

NOTE, Monday October 12 and Monday November 9 are both holidays.