

**INTRODUCTION TO SUSTAINABLE
FISHERIES AND AQUACULTURE
OCSC 2001 - Winter Semester 2023**

Professors:	Dr. Ian Fleming Tel: 864-3586	Office AX 4022A OSC at Logy Bay email: ifleming@mun.ca
	Dr. Iain McGaw Tel: 864-3272	Office OS 4005A OSC at Logy Bay email: ijmcgaw@mun.ca

Ocean Sciences Main Office: 864-3220

Lecture: Tu, Th 5:30-6:45
Classroom: Engineering (EN) 2007

Office Hours: By appointment – please email the instructor to set up an appointment. Please list subject line as OCSC2001. We will typically respond within 24 hours. We can meet in person at our office or virtually using either WebEx or Skype.

Recommended readings - Placed on reserve in QEII library
Marine Fisheries Ecology by S. Jennings, M. Kaiser, J. Reynolds
Aquaculture by John S. Lucas and Paul C. Southgate

Pre-requisites Ocean Sciences 1000 or Biology 1002

Course learning/Outcome objectives

Upon completion of Introduction to Sustainable Fisheries and Aquaculture students should have a comprehensive understanding of the basic concepts of fisheries ecology, the different types of aquaculture and in depth knowledge of some cultured species. A review of the topics covered is listed in the schedule section. **Please read the schedule carefully**

Assessment: Assessment of the course will be in the form of three exams held during the lecture session (dates given in exam section) and one final exam (date TBA). Since this course is team taught we have a separate section on each of our lecturing styles and exam content.

Schedule: **This is a tentative schedule**, certain topics may overlap these dates, or we may cover others in less time, so you will need to attend all lectures. If you miss a lecture you are responsible for getting the notes taken by one of your colleagues who attended the class.

DATE	SUBJECT
Thu 05 Jan	Introduction & state of the world fisheries
Tue 10 Jan	Primary production & limits to seafood production

Thu 12 Jan	Fished species & life histories
Tue 17 Jan	Fisheries and fishing techniques
Thu 19 Jan	Fish stock assessment
Tue 24 Jan	Test 1
Thu 26 Jan	Biocomplexity and fisheries induced evolution
Tue 31 Jan	Environmental impacts of fishing
Thu 02 Feb	Sustainable fisheries & Marine Stewardship Council
Tue 07 Feb	Socioeconomics of fishing
Thu 09 Feb	Fisheries management
Tue 14 Feb	The case of the Atlantic cod
Thu 16 Feb	Test 2
Tue 21 Feb	Winter break – no class
Thu 23 Feb	Winter break – no class
Tue 28 Feb	Introduction to aquaculture
Thu 02 Mar	Water quality
Tue 07 Mar	Nutrition and feeds
Thu 09 Mar	Environmental impacts of aquaculture/ASC
Tue 14 Mar	Salmon aquaculture – is it sustainable?
Thu 16 Mar	Test 3
Tue 21 Mar	Unustainable aquaculture practices
Thu 23 Mar	Seaweed aquaculture
Tue 28 Mar	Carp aquaculture
Thu 30 Mar	Tilapia aquaculture
Tue 04 Apr	Bivalve aquaculture
Thu 06 Apr	Aquaponics/ Future of aquaculture
Final	TBA

Evaluation

The exams are on the following dates, the exams will include all material we have covered in class prior to that exam.

Exam 1	Tue 24 Jan	25%
Exam 2	Thu 16 Feb	25%
Exam 3	Tue 16 Mar	25%
Final	TBA	25%

Team Teaching

This course is taught by two Professors, we each have our own research specializations, teaching and examination styles and expectations of students. These are detailed below

Dr. Ian Fleming

Teaching Style

I will use PowerPoint presentations during lectures and each of the presentations will be posted in a labeled file on Brightspace (D2L). There will often be videos imbedded in the lectures. You will be expected take notes during class and put in time to review the materials, including videos, on your own. There will be the occasional assigned reading and questions to answer associated with the videos and you will be expected to revise your notes accordingly. I will discuss my teaching philosophy and expectations of students on the first day of class. Exams will consist of multiple choice, true-false, fill in the blank, short answer and somewhat longer answer questions.

Dr. Iain McGaw

Teaching Style

I will post my lectures as Powerpoint files with figures, I have also added notes as people may be stricken down with the pestilence and can get most of the material required from the notes. During lectures I will add some notes to the files and discuss the notes in more detail. In the event of a snow day I will post an audio Powerpoint file so you do not miss any material. I will also set several videos for you to watch and to make notes on. Most of my questions in tests will be short written answers, but there will also be some longer essay type questions, fill in the blanks and True-False questions.

General

Exams

The exams are challenging, and during the lectures you will be introduced to many new terms and concepts. It is therefore, essential that you keep up with the work. Quite often we will give examples or words not included in the textbooks, so you must attend all lectures. The course schedule is tentative, in some cases we may cover material in a lesser or greater time than specified. Most of the exam questions will come from lecture notes. The textbooks will be helpful if you do not understand anything and will help broaden your understanding of the topic. For each test you should start looking through the material and familiarizing yourself with it, at least a week beforehand. In most cases you will not be able to get away with a few hours of work the night before and attain a satisfactory grade. If you find that you are having problems "see us", in this way we can make an attempt to try and overcome them.

Grading and Exam Policy

Grades will be assigned according to a 90-80-70 etc. system. No curve will be employed in the assignment of a final grade. There is no extra credit given, so do not ask for it! All points toward the grade will come from the above listed examinations.

There will be no makeup exams given without a valid excuse (oversleeping or forgetfulness are not valid excuses!). These include family tragedy or severe illness. You must contact us, or get someone else to contact us by 10am the following day, if you miss an exam for any reason. Any make-up exams given will consist of essay type questions. If a make-up is given we shall arrange the dates and times, not you. Failure to turn up for a make-up will result in an F for that exam. Make a note of the exam dates, if you have travel tickets booked or social events booked for these dates unbook them now. Exams are scheduled to begin promptly when the class is scheduled to start, if you arrive more than ten minutes late, for whatever reason, you will be given an essay make-up exam.

Statement on Holidays

It shall be the responsibility of the student to notify the instructor no later than the last day of late registration of their intention to participate in religious holidays which do not fall on State holidays or periods of class recess. This policy shall not apply in the event that administering the test or examination at an alternative time would impose an undue hardship on the instructor or University that could not have been reasonably avoided.

Statement on academic integrity: Students are expected to adhere to those principles which constitute proper academic conduct. A student has the responsibility to know which actions, as described under Academic Offences in the University Regulations, could be construed as dishonest or improper. Students found guilty of an academic offence may be subject to a number of penalties commensurate with the offence including reprimand, reduction of grade, probation, suspension or expulsion from the University. For more information regarding this policy, students should refer to the University Regulations for Academic Misconduct (Section 6.12) in the University Calendar.

Statement regarding commitment to accommodation of students with disabilities: Memorial University of Newfoundland is committed to supporting inclusive education based on the principles of equity, accessibility and collaboration. Accommodations are provided within the scope of the University Policies for the Accommodations for Students with Disabilities (www.mun.ca/policy/site/policy.php?id=239). Students who may need an academic accommodation are asked to initiate the request with the Glenn Roy Blundon Centre at the earliest opportunity (www.mun.ca/blundon).

Academic supports include: *Memorial in Teaching University Libraries, The Commons (QEII Library), The Glenn Roy Blundon Centre, The Writing for Innovation and Learning, Information Technology Services, Academic Advising, and Centre.*

Memorial has the following **student life supports** that can be availed of: *Student Wellness and Counselling Centre, Student Support and Crisis Management, MUN Chaplaincy, Sexual Harassment Office, The Circle: First Nations, Inuit & Métis Students Resource Centre, Disability Information Support Centre, International Students Resource Centre, Sexuality and Gender Advocacy, Student Parent Assistance & Resource Centre, Students Older Than Average, Intersections – A Resource Centre for Marginalized Genders, and specific departmental societies.*