INTRODUCTION TO SUSTAINABLE FISHERIES AND AQUACULTURE
OCSC 2001 - Winter Semester 2021 (draft)

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Ocean Sciences Main Office: 864-3220

Lecture: Online – pre-recorded

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. Any meetings will be virtual typically using Skype, WebEx or Zoom.

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. There will also be a take home assignment.

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.

<table>
<thead>
<tr>
<th>DATE</th>
<th>SUBJECT</th>
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<tbody>
<tr>
<td>Thu 07 Jan</td>
<td>Introduction &amp; state of the world fisheries</td>
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<tr>
<td>Tue 12 Jan</td>
<td>Primary production &amp; limits to seafood production</td>
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<td>Thu 14 Jan</td>
<td>Fished species &amp; life histories</td>
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<tr>
<td>Tue 19 Jan</td>
<td>Fisheries and fishing techniques</td>
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Thu 21 Jan  Fish stock assessment
Tue 26 Jan  Test 1
Thu 28 Jan  Biocomplexity and fisheries induced evolution
Tue 02 Feb  Environmental impacts of fishing
Thu 04 Feb  Sustainable fisheries & Marine Stewardship Council
Tue 09 Feb  Socioeconomics of fishing
Thu 11 Feb  Fisheries management & Canada
Tue 16 Feb  The case of the Atlantic cod
Thu 18 Feb  Test 2
Tue 23 Feb  Winter break – no class
Thu 25 Feb  Winter break – no class
Tue 02 Mar  Introduction to aquaculture
Thu 04 Mar  Water quality
Tue 09 Mar  Nutrition and feeds
Thu 11 Mar  Environmental impacts of aquaculture/ASC
Tue 16 Mar  Salmon aquaculture – is it sustainable?
Thu 18 Mar  Test 3
Tue 23 Mar  Unstainable aquaculture practices
Thu 25 Mar  Seaweed aquaculture
Tue 30 Mar  Carp aquaculture
Thu 01 Apr  Tilapia aquaculture
Tue 06 Apr  Bivalve aquaculture
Thu 08 Apr  Aquaponics
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.

<table>
<thead>
<tr>
<th>Exam 1</th>
<th>Tue 26 Jan</th>
<th>25%</th>
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<tr>
<td>Exam 2</td>
<td>Thu 18 Feb</td>
<td>25%</td>
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<tr>
<td>Exam 3</td>
<td>Tue 18 Mar</td>
<td>15%</td>
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<tr>
<td>Final</td>
<td>TBA</td>
<td>20%</td>
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<tr>
<td>McGaw – Assignment (due Thu Apr 08 by 5pm)</td>
<td>15%</td>
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**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 post pre-recorded audio lectures (each class broken into two parts; a and b) on Brightspace (D2L). There will often be videos that accompany each lecture that you are expected to watch.
From the lectures and videos you will be expected to make notes for your reference, ensuring you put in the time to review the materials on your own, including the occasional assigned reading, and revise your notes accordingly. I will present 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 pre-recorded lectures with typed notes in the lectures just in case any have problems with the audio portion (all the required notes will be there). 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. The course schedule is tentative, in some cases we may cover material is 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 "contact 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 and assignments.

There will be no makeup exams given without a valid excuse. 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 date and times. Failure to take the make-up will result in an F for that 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](http://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](http://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.*