INTRODUCTION TO SUSTAINABLE FISHERIES AND AQUACULTURE
OCSC 2001 - Winter Semester 2020

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Ocean Sciences Main Office: 864-3220

Lecture: Tu, Th 5.30pm-6.45pm
          Classroom: Education (ED) 2018A

Office Hours: By appointment – please email or call the instructor to set up an appointment.
Please list subject line as OCSC2001. We will typically respond within 24 hours.

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.

<table>
<thead>
<tr>
<th>DATE</th>
<th>SUBJECT</th>
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<tbody>
<tr>
<td>Tue 07 Jan</td>
<td>Introduction &amp; state of the world fisheries</td>
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<tr>
<td>Thu 09 Jan</td>
<td>Primary production &amp; limits to seafood production</td>
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<tr>
<td>Tue 14 Jan</td>
<td>Fished species &amp; life histories</td>
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Thu 16 Jan  Fisheries and fishing techniques
Tue 21 Jan  Fish stock assessment
Thu 23 Jan  **Test 1**
Tue 28 Jan  Biocomplexity and fisheries induced evolution
Thu 30 Jan  Environmental impacts of fishing
Tue 04 Feb  Sustainable fisheries & Marine Stewardship Council
Thu 06 Feb  Socioeconomics of fishing
Tue 11 Feb  Fisheries management & the case of the Atlantic cod
Thu 13 Feb  **Test 2**
Tue 18 Feb  **Winter break no class**
Thu 20 Feb  **Winter break no class**
Tue 25 Feb  Introduction to aquaculture
Thu 27 Feb  Water quality
Tue 03 Mar  Nutrition and feeds
Thu 05 Mar  Environmental impacts of aquaculture
Tue 10 Mar  Species development and ASC
Thu 12 Mar  Salmon aquaculture - is it sustainable?
Tue 17 Mar  **Test 3**
Thu 19 Mar  Seaweed aquaculture
Tue 24 Mar  Carp aquaculture
Thu 26 Mar  Tilapia aquaculture
Tue 31 Mar  Bivalve aquaculture
Thu 02 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</th>
<th>Date</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Thu 23 Jan</td>
<td>25%</td>
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<tr>
<td>Exam 2</td>
<td>Thu 13 Feb</td>
<td>25%</td>
</tr>
<tr>
<td>Exam 3</td>
<td>Tue 17 Mar</td>
<td>25%</td>
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<tr>
<td>Final</td>
<td>TBA</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 use PowerPoint presentations during lectures and each of the presentations will be posted in a labeled file on Brightspace (D2L). You will be expected take notes during class and put in time to review the materials on your own, including the occasional assigned reading, and revise
your notes accordingly. I will discuss my teaching philosophy and expectations of students on the first day of class.

**Dr. Iain McGaw**

**Teaching Style**

I will post figures, tables and useful photos in labeled files on Brightspace (D2L). However, I tend to post very little text/notes on the slides. I prefer to write my own text during lectures. In this way I can pace myself so I am not going too fast and also make sure that I write down important points for the students. This takes a lot more effort on my part, but I feel that it is a more effective way for students to learn. In other words we are going to do some good old fashioned writing during lectures! You should be able to make notes in class but for every week of lectures, you should be putting in at least 2-3 hours on your own; reading through the text and revising your notes.

**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 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. Tests typically include a mix of multiple choice, true-false, fill in the blanks and short written questions.

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.** If we are not in the office, or outside of working hours a message can be left at the Department of Ocean Sciences (DOS) front desk, or DOS office phone (709 864 3220). Any make-up exams given will consist of essay type questions. If a make-up is given it will need to be taken as soon as you return to school and 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.

**Student Conduct and Supports**
During our last few years teaching, students have discussed things with us that distract/disturb them during lectures. Therefore the following policies are designed to provide a quiet environment with minimum distractions, where hopefully you will be able to assimilate and learn the material effectively.

1. There is to be no talking during the lecture, if you do not understand something please raise your hand before you ask a question. Whilst we answer a student’s question please remain quiet so that the student and other class members can hear the reply.

2. Lectures start promptly at 5:30 pm. As you expect us to be there on time to start the lecture, we also expect you to be ready at 5:30 pm. If for an unforeseen reason you arrive late, please seat yourself quietly in a place that will not disturb the other students. Likewise, we and some of your colleagues are distracted by people randomly wandering in and out of the room during the lecture, please avoid this unless absolutely necessary. Lecture finishes at 6.45 pm (on our watch), we would also be grateful if you remain seated quietly until we have finished talking, in this way you will avoid disturbing other class members before lecture is over.

3. Remember you are attending lectures to take notes and attempt to learn material, not to read your newspaper/magazine, go to sleep or distract the Professor or other students.

4. Please turn off all cellular phones and tablets before entering the lecture room. You should not need to access the internet/text people during class.

5. MUN policy states that there is no food or drink to be consumed in either lecture rooms or laboratories.

6. **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.

7. **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).

8. **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.*

9. 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.*