BIOLOGY/OCEAN SCIENCES 7000
GRADUATE CORE SEMINAR COURSE - Being a Researcher in the Biological Sciences
Fall 2019

Class Time – Monday 9:00 – 11:00 am

Location – CW Andrews Conference Room (SN-3125A)

**Audience:** mandatory for all graduates as they enter graduate school

**Instructor:** Ian Fleming and Paul Marino  
E-mail: ifleming@mun.ca, pmarino@mun.ca; Phone 864-3586, 864-4339

**Office Hours:** By appointment – please email or call to set up an appointment. Please list subject line as Biol/OCSC7000

**Purpose:**  
The objectives of the course are to: (1) explore what it is to be a graduate student at Memorial University; (2) gain an understanding of the process underlying science and the significant ethical issues that confront a biologist; (3) explore the “culture” and responsibilities of modern research and science (such as responsibility to society, etc); and (4) develop, draft and present a preliminary research proposal for the M.Sc. or Ph.D degree (to be peer reviewed).

The course will address scientific philosophy, research ethics, grant and research writing and presentation, accessing resources and support, safety and training requirements during research activities, budgeting, and career strategies.

**Format:**  
The class format will be participatory discussions, case studies, visiting speakers and student seminars. PhD students will be expected to lead at least one discussion on a topic of relevance to the course. This topic can come from within or outside those listed below.

Reading for each class will be posted on the Brightspace (formerly D2L) course site.

**Student Evaluation:**  
As the course is pass or fail, evaluation is based on class participation and successful completion and presentation of a preliminary research proposal, as well as the constructive review of other student proposals.

**TOPICS**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic 1</td>
<td>Welcome to Memorial University of Newfoundland (MUN); Field and Lab Safety, and Responsibilities – MUN regulations, training and applications.</td>
</tr>
<tr>
<td>Topic 2</td>
<td>What it means to be a graduate student (resources, support, etc) &amp; Student-supervisor relationships and communication</td>
</tr>
</tbody>
</table>
Topic 3 Funding & Proposal Writing – the funding world and how to write a great grant proposal, writing your thesis proposal and generating a budget.

Topic 4 Scientific Writing and Publication Strategies (authorship issues; review process).

Topic 5 Accessing and making use of Library and Electronic Resources.

Topic 6 Time Management (& PhD student lead discussions).

Topic 7 How to Prepare Talks & Posters (& PhD student lead discussions).

Topic 8 Integrity in the Practice of Science.


Topic 10 Careers after Graduate School (invited guests; preparing CV; bargaining).

Classes 11-12 Pre-proposal seminars (15 minute talk; review and discussion = 30 min/student).

Some Selected Readings:
Amir, D. 2018. Modest advice for new graduate students. Medium 
(https://medium.com/@dorsaamir/modest-advice-for-new-graduate-students-b0be6b8dbc22)


NSERC. Tips on applying for an NSERC scholarship or fellowship. (http://www.nserc-crsng.gc.ca/Students-Etudiants/Videos-Videos/SFTips_eng.asp)
O'Connor, C.M. 2012. How to find a good graduate advisor and make the most of graduate school. Fisheries 37: 126-128.
Other Source Materials:
- Chakrabarty, P. 2012. A guide to academia; getting into and surviving grad school, postdocs and a research job. Wiley-Blackwell, Chichester, UK.
- How to give a great poster (http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm)

NOTE: Assigned readings will, in part, be from the above literature.

The following statement is in regard to Memorial University’s 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).”

The following statement is in regard to Memorial University’s policy 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.