Graduate Handbook

School of Fisheries, Fisheries and Marine Institute of Memorial University of Newfoundland

M.Sc Fisheries Science (Fisheries Science and Technology)
M.Sc Fisheries Science (Stock Assessment)
Ph.D Fisheries Science

Last updated: September 5, 2017

Current Version: 1.0

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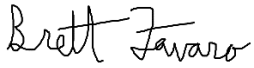
Welcome from the Academic Director

Welcome to graduate school. You are joining a dynamic, comprehensive institution populated by researchers who work on all aspects of fisheries. Research at the Marine Institute is multidisciplinary, applied, and exists at the cutting edge of fisheries science, and you will learn to become a key part of this. From now until graduation, you are a scientist-in-training. Your job is to ask questions and generate knowledge, and do it in a way that is robust, defensible, and advances the field in which you study. You are going to spend a lot of time outside your comfort zone, and you will grow as a result. It will be challenging, difficult, and rewarding.

The expectations are high, but we are not asking you to do this alone. You will be supported by faculty, staff, and your fellow students as you push the envelope of science. Our job is to give you the best possible training, help you develop the skills you need to succeed, and teach you to develop a support network for when things get tough. We also have a responsibility to create a safe, inclusive, and welcoming environment, and we are very serious about doing so. Our program is laser-focused on the student experience, and our goal is to help you become an expert researcher capable of achieving your career goals while making the world a better place through your work.

Graduate school is a transformative experience, and it is my sincere hope that your time here is impactful. Fisheries are only sustainable when they are supported by sound science, and by the time you graduate, my goal is for each and every one of you to be ready to advance the science and practice of fisheries here in Canada and around the world.



Brett Favaro, Ph.D

Overview of the Marine Institute and the School of Fisheries

The Fisheries and Marine Institute (MI) is a polytechnic institute nested within Memorial University of Newfoundland (MUN). MI was established in 1964, and was designed to train students for technical positions in the various maritime occupations that underpin the economy of Newfoundland and Labrador. Today, MI still fills this need, while also being a centre for applied scientific research on the ocean environment.

MI is divided into three schools: The School of Fisheries (SOF), the School of Maritime Studies (SMS), and the School of Ocean Technology (SOT). Within each School, there are specialized units and centres.

There are three research centres nested within MI. These are the Centre for Fisheries Ecosystems Research (CFER), the Centre for Sustainable Aquatic Resources (CSAR), and the Centre for Aquaculture and Seafood Development (CASD). Collectively, researchers within these centres conduct a mix of academic (i.e. published in peer reviewed journals) and industrial response (i.e. 'grey literature' commissioned by industry, government, or NGOs) research that covers the full spectrum of activities that occur within fisheries.

Researchers at MI hold various titles, including Research Scientist, Research Chair, Instructor, and Director. All are considered members of the SOF faculty. These faculty members are supported by Research and Technical Personnel (RTPs), who have a wealth of research experience and are critical to the functioning and success of the fisheries science program.

Handbook Purpose

This handbook is designed to provide you with an introduction to the Fisheries Science program, to outline important individuals in the program, and to provide clarity about tasks that need to be completed to complete a degree here at MI. This guide can be considered a 'living document' and should be updated regularly.

It also provides checklists and 'Plain English' interpretations of the calendar entry for each graduate program.

Fisheries Research Scientists and Directors

<table>
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phe@umassd.edu</td><td> 

Dr. Paul Regular
Paul.regular@dfo-mpo.gc.ca</td></tr>
</table>

*While cross-appointed faculty may serve as the senior supervisor to graduate students in the SOF graduate programs, adjunct faculty must co-supervise students with another faculty member

Other School of Fisheries Research Faculty

Dr. Jillian Westcott

Cyr Couturier
Aquaculture Scientist and Chair of Aquaculture Programs

Student Support Staff – Who to talk to and when

Name	Title	Contact them if you need…	Contact Info
 Krista Sweetland	Student Liaison Officer and Graduate Secretary	…to submit paperwork pertaining to the graduate program (e.g. progress reports, committee meeting documents)	Krista.Sweetland@mi.mun.ca 778-0611
 Erin Brocklehurst	Student Recruiter	…to know more about the Marine Institute, life in St. John's, info about the grad programs, etc.	Erin.Brocklehurst@mi.mun.ca
 Leah Condon	Coordinator of Advanced Programs	…help with the admissions process	Leah.Condon@mi.mun.ca
 Dinah Helpert	Administrative Assistant to the Head of SOF	…to book a meeting with the Head of School (Carey Bonnell)	Dinah.Helpert@mi.mun.ca 778-0441
 Angie Clarke	Director, Student Affairs	…to discuss or access student services	Angie.Clarke@mi.mun.ca 778-0565

Support Staff at CSAR, CFER, and CASD

Most students will be affiliated with CFER, CSAR, or CASD. Desk space, mailboxes, and printing services are available for students within each centre. Specific policies around these topics are determined by the Centre's director. Many students will be funded through research grants, and paperwork for each grant is held within the centre that the faculty member is based. **For students submitting payroll, reimbursements, etc. from a research grant** paperwork should be provided to the Centre's administrative assistant. These are:

CASD and CFER	CSAR
 Nancy Burt 778-0532	 Claudene Hartery 778-0521

Research and Technical Personnel (RTPs)

The SOF has a class of staff termed “Research and Technical Personnel” or RTPs for short. These are professional research staff that have specialized knowledge about field or labwork, and are a major asset to MI.

Much like faculty members, RTPs often propose and lead research projects. Some even assist with graduate student supervision and serve on supervisory committees.

CSAR		
 George Legge Facility Supervisor	 Harold DeLouche Senior Trawl Designer	 Philip Walsh Fishing Gear Technologist
 Tara Perry Net Maker	 Craig Hollett Electronics Technologist	 Terry Bungay Fisheries Technologist
 Roy Gibbons Instructor, Fishing Masters	 Rennie Sulllivan Fisheries Technician	

CFER		
 Gordon Adams Fisheries Acoustic Data Analyst	 Kiley Best Fisheries Technologist	 Susan Fudge Fisheries Biologist
 Wade Hiscock Fisheries Biologist	 Laura Wheeland Fisheries Technologist	

CASD: Aquaculture

Marsha Clarke
Aquaculture Technologist

Chris Dawe
Aquaculture Facility Supervisor

Tracy Granter
Senior Aquaculture Technologist

Mark Santos
Aquaculture Technologist

Candice Way
Aquaculture Technologist

CASD: Marine Bioprocessing

Wade Murphy
Food Technologist, Marine Bioprocessing Facility Supervisor

Julia Pohling
Marine Biotechnologist

Sheila Trenholm
Laboratory Technologist

Vegneshwaran V. Ramakrishnan
Marine Biotechnologist

CASD: Seafood Processing		
 Stephen King Mechanical Engineer	 Dwayne Moores Engineer	 Kim Snelgrove Quality Supervisor
	 Pete Brown Mechanical Engineer	

Resources and Services

Mail: Handled by the Centre. Inter and intra-campus mail is free. To mail outside of MI, use MI envelopes. No personal mail, please – business only.

Desk space: Handled by the Centre. Every student and postdoc will be assigned a workspace.

Facilities issues:
https://www.mi.mun.ca/departments/administrationandfinance/facilitiesandtechnicalservices/

If you're based in CSAR, first discuss with George Legge: 778-0508

Marine Institute Vehicles: Complete a vehicle request form and submit via your Centre's administrative assistant. Talk to your supervisor first though as this costs $$

Keys: Complete a key request form via your Centre's administrative assistant. Keys are dispersed by Wilf Muggeridge: 778-0341

Computers and Internet Access: For all network issues, contact the Help Desk at ICT
https://www.mi.mun.ca/departments/administrationandfinance/informationandcommunicationtechnologiesict/ictcontactinfo/

Some supervisors provide laptops for their students and others don't. Your mileage may vary. Discuss with your supervisor.

Photocopy and printing services: Handled by each Centre. Don't print personal stuff. Print scientific papers only when you really need to. Get used to reading on computer screens, since that's going to be your life now.

Telephone: Handled by your Centre. You may or may not have a desk phone assigned to you. Dial 9 to reach outside number. Long distance not included – use Skype (or equivalent) for that.

Fitness: Talk to Rose Hatfield 778-0455 and see
https://www.mi.mun.ca/currentstudents/recreation/

Student Wellness and Counselling Centre: This centre provides a variety of services pertaining to mental health and well-being: http://www.mun.ca/counselling/home/

Graduate Student Union: http://www.gsumun.ca/

Teaching Assistants' Union: http://www.mun.ca/taumun/

Lecturer's Union: http://www.mun.ca/lumun/

School of Graduate Studies: https://www.mun.ca/sgs/

Internationalization Office: https://www.mun.ca/international/

Graduate Profile and Learning Outcomes

A) Graduates of the M.Sc. in Fisheries Science program will be able to:
- Conduct original research
- Collect, manage, and analyze data
- Display and interpret quantitative information
- Demonstrate adherence to the principles of scientific integrity (i.e. NOAA, 2011)
- Effectively communicate their research
    - Through peer-reviewed publications in reputable science journals
    - In oral and poster-based presentations at scientific conferences and meetings
    - In formats accessible to stakeholders, including popular media, industry publications, and in other relevant venues
- Explain how their research fits within the broader policy environment of fisheries at local, national, and international scales

B) Graduates who complete the ***Fisheries Science and Technology*** option will complete a thesis containing at least one chapter of original research that is of sufficient quality to be considered for publication in a peer-reviewed journal. In addition to A, they will be able to plan and execute studies that collect new data.

C) Graduates who complete the ***Stock Assessment*** option will complete a thesis containing at least one chapter of original research that is of sufficient quality to be considered for publication in a peer-reviewed journal. In addition to A, they will demonstrate an advanced understanding of quantitative stock assessment.

D) Graduates who complete the **Ph.D. in Fisheries Science** program will complete a thesis containing three or more chapters of original research, as approved by their Supervisory Committee. In addition to A, and B or C, they will be able to:
- Craft impactful research questions that advance their discipline
- Lead the planning and execution of a research program
- Normally submit at least one chapter for publication to a peer-reviewed journal before submitting their thesis for examination

Admission Into the Program

So you want to do grad school in fisheries science? Here's how to make it happen.

The very first thing you should do is start contacting potential supervisors – and it's best to do this well in advance of wanting to actually start. You need one senior supervisor to commit to taking you on as a student, and you should have an idea of what you will be doing for research when you arrive.

Consult the School of Fisheries website for the current list of eligible supervisors, and their research areas of interest: https://www.mi.mun.ca/researchsupervisors/

At this stage, your main points of contact are:

Faculty members (potential supervisors – pages 7-11)

Erin Brocklehurst (recruitment)

Dr. Brett Favaro (academic director)

School of Graduate Studies (for admissions criteria)

When speaking with a prospective supervisor, some suggested points to discuss are:

- What will the research project be?
- How much funding is available to support you, and for how long? (**See Funding**)
- Is the project already tightly defined? To what extent will you be expected to figure it out when they arrive?
- How frequently will the supervisor meet with you?
- Does the supervisor hold regular lab meetings?
- Who might the supervisory committee members be, and what role will they play in the project?
- What is the supervisor's expectation with respect to authorship on papers produced from the work?
- What is the supervisor's expectation in terms of physical attendance on campus? Do they expect you to keep to regular business hours?

These are just examples, but having these conversations early on can make a program go more smoothly.

Funding

Normally, full time M.Sc students will receive a minimum of $17,500 per annum in salary support. Ph.D students will normally receive a minimum of $19,000 per annum.

These funds will normally come from multiple sources. Most commonly, students will be supported by a combination of their supervisor's research grants, scholarships held by the student (whether internal or external), School of Graduate Studies baseline funding, and Teaching Assistantships.

Student funding levels and sources may change from semester to semester. **It is important to have a clear understanding about the magnitude and sources of funding**. The **Funding Plan** document can assist you in having these conversations with your supervisor.

Scholarships

Consult the Searchable Awards and Scholarship Database. For Canadian citizens, NSERC awards are also an option. In certain circumstances, a Mitacs Accelerate award may be able to provide funding.

One of the best things you can do to improve your chances at getting accepted by a prospective supervisor is to earn a scholarship. Providing funding for students is among the biggest challenges, and if you can provide your own salary, it becomes much easier to take you on!

SGS Baseline Funding

The School of Graduate Studies provides every academic unit with an allocation of funds that can be used to pay students. In the School of Fisheries, we allocate these funds as follows:

M.Sc: $7,300 per year for two years

Ph.D: $8,800 per year for four years

Students must maintain eligibility to receive SGS Baseline Funds. Not all students will receive these funds, and our principles for allocating baseline funds are articulated here.

Teaching Assistantships

The Marine Institute does not offer TAships. While SOF graduate students can still hold TAships from other departments, be aware that, since TAships are used as funding mechanisms for students, SOF students will likely not be prioritized to hold these. See the TAUMUN website for more information.

Research Assistantships

A Research Assistantship is essentially when a faculty member pays a student to do something other than their core thesis activities. These are paid out at a rate of $22.22 per hour. Full-time students may only work a maximum of 24 hrs per week and maintain status as a full time student.

Student-Supervisor Agreement

Next, it's time to formalize the conversation that you just had with your prospective supervisor. You can either A) Do this before even applying to the program (a good idea) and then review again after acceptance, or B) Do this after being accepted into the program.

There are two steps to this

1. The School of Graduate Studies articulates the expectations of students and supervisors in this document: http://www.mun.ca/sgs/responsibilities.pdf - go over it with your prospective supervisor.

2. Work through the Letter of Understanding for Student-Supervisor Relationships with your prospective supervisor. Adjust as needed until you reach consensus, and then both student and supervisor should sign and give to the graduate secretary for inclusion in your file. Remember to also complete a **Funding Plan**. That funding plan is not binding, but is there to provide transparency and guidance.

   Once you've been accepted, both the Letter of Understanding and the Funding Plan should be provided to the graduate secretary for inclusion in your file.

Once you are accepted, a supervisory committee must be formed. Ultimately this is your supervisor's responsibility, but normally you would be included in the conversation as to who these individuals would be. At this stage, you and your supervisor should:

3. Work through the Letter of Understanding for Committee Members with each committee member, to be signed by the committee member, the student, and the supervisor.

Both the student-supervisor letter, and the committee member letter, should be reviewed annually (normally around each committee meeting) and if any revisions are made, the new agreement should be given to the graduate secretary (Krista Sweetland) to be included in your file. **If no revisions are made, then the most recently signed copy of the agreement will be assumed to be correct**.

Important Information about the Online Application System

Once All students MUST successfully complete an application using the online system (https://www.mun.ca/become/graduate/apply/). The SGS website contains most of the instructions you will need. However, a few things may not be obvious about the application:

1. On the **Program of Study Form** section, the following Subject / Area of Interest options correspond with our degree programs as follows:

Degree	*Subject / Area of Interest*
M.Sc Fisheries Science (Fisheries Science and Technology)	Fisheries Science and Technology
M.Sc Fisheries Science (Stock Assessment)	Stock Assessment
Ph.D Fisheries Science	Fisheries Science

2. You will be asked for two referees. You must enter their contact information on the online form. **However, they will not be contacted automatically.** YOU must forward this PDF: https://www.mun.ca/become/graduate/Academic_letter_of_appraisal_2012.pdf to each of your referees, and ask them to complete and submit electronically. They should email completed reference letters to gradapply@mun.ca

   Normally, at least one referee should be academic – usually a professor at an accredited university.

3. You must have **official transcripts from all post-secondary institutions you attended** sent **directly** to the School of Graduate Studies. This includes places from which you transferred credits, but didn't complete a degree! Official transcripts should be **mailed, directly from your previous university** to:

   School of Graduate Studies
   IIC-2012, Bruneau Centre for Research and Innovation
   Memorial University of Newfoundland
   230 Elizabeth Avenue
   St. John's, Newfoundland, Canada
   A1C 5S7

It is critical to complete this application correctly. The system will give you no error messages if it is incomplete, and we won't even know that you have applied.

There is fine print everywhere, and all of it matters. Be careful, read carefully, and be proactive about asking questions.

For Faculty – How to Recruit a Student

So you want to recruit a graduate student into the program? Here's the best way to do so:

1. Write an advertisement for the position you're trying to fill. Contact Marketing and Recruitment if you want help disseminating the ad.

2. Identify candidates and interview them in advance. See if they would be a good fit for your research group. **Discuss funding with them** and identify whether they would need to be supported by SGS Baseline.

3. Offer the student the position, conditional on them being accepted into the program after their application is formally reviewed. **Note: Please don't tell them they are ACCEPTED, as they are not formally accepted until they actually receive an acceptance letter**.

4. Tell them to complete the online application. Give them this handbook. Make them read page 23. Make them read it again.

5. Email the chair of the AAC (Brett Favaro) to let us know that you've offered to supervise this student if accepted. If your student will be requesting SGS Baseline funds, and explain how that will fit into the student's funding plan. We have a finite amount of funding, and we will disburse it according to our current guiding principles for baseline allocation.

6. When the application is complete, it will be reviewed by the AAC. Our goal is to turn around solicited applications within two weeks, but this may not always be possible.

7. AAC will deliver a judgment on both acceptance and baseline funding allocation.

8. A Program of Study form will be generated. Identify a supervisory committee and write in the funding plan. **If you write funds onto the program of study form, it represents a commitment to pay the student those funds**. If you're not sure you will be able to provide those funds, do not write them onto that form! Note: While it's best to designate the supervisory committee right away, it can be done after accepting the student.

9. Commence training the next generation of HQP.

Note: If you are adjunct, you must co-supervise with another SOF faculty member (who is not adjunct themselves)

If you are cross-appointed, you may act as the senior supervisor of the student.

The course schedule is designed around the assumption of a Fall semester start date, so that students can complete courses early in their program.

Alternate Recruitment Procedure

Maybe you don't have a student in mind for a position. If that's the case, here's a second way to supervise a graduate student in the program:

1. Students will apply to one of the programs using the online form, without having identified a supervisor.

2. The pool of unassessed applicants will be made available to all PI's for a one week period, starting on the date of the application deadline (Either May 15, Sept 15, or Jan 15).

3. If one of the unassessed candidates interests you, then contact them and interview them to determine fit.

4. If you make an offer to supervise them, email the AAC chair (Brett Favaro). The AAC will review the student's file and determine whether to accept the student into the program.

5. The student will be reviewed by the AAC and accepted if they meet the qualifications for the program.

Remember – if you do not inform the AAC chair that you have made an offer to a student, we will assume that the student has not secured a supervisor and will reject the applicant after the application deadline. **It is up to you to pre-screen students before asking the AAC to review them**, and it is expected that you would supervise the student if they are accepted unless something disqualifying is discovered during the AAC's review.

Current Students

First Week Checklist

	Task	To do this, you must…	Talk to…
☐	Get a key	Submit a Key Requisition Form, and get a FOB if required	CSAR or CFER/CASD admin assistant
☐	Get student card	Go to the Registrar's office	Administrative office
☐	Set up your MI computer account	Register with ICT	helpdesk@mi.mun.ca
☐	Get a parking pass	Fill out a parking permit application on the Intranet	Administrative office
☐	Establish direct deposit (for payroll)	Fill this out: https://www.mun.ca/sgs/newstudents/Direct_Deposit_Form.pdf and submit to Graduate Secretary, who will submit to SGS	Graduate Secretary
☐	Establish payroll	Discuss with your supervisor. Make sure they fill out the form and submit it to the Graduate Secretary, who will submit it to SGS	Your supervisor
☐	Complete animal care training*	Get your supervisor to enroll you in the online ACS program by emailing acs@mun.ca	Your supervisor

*May not be required, depending on your research agenda. Discuss with your supervisor.

If you will be working on boats, you may need to complete one or more of:

☐ Marine First Aid

☐ Marine Emergency Duties A1 (note: requires *Marine Institute Medical* approval: https://www.mi.mun.ca/programsandcourses/shortcourses/marineinstitutemedicalpolicy/)

If you will be OPERATING a boat, you also need:

☐ Small Vessel Operator Proficiency (SVOP)

☐ Restricted Operator Certificate-Maritime Commercial (ROC-MC)

Discuss with your supervisor.

Program Duration

The M.Sc programs should normally be completed in two years, and the Ph.D programs should normally be completed in four years.

The **absolute maximum** amount of time that a student can be enrolled in a graduate program at Memorial University is **seven years**. No extensions beyond that are permitted.

Thesis Proposals and Seminars

M.Sc Students

In both M.Sc programs, students must produce a thesis proposal, which should be done as early in the program as possible. This proposal can be as detailed or sparse as the committee would like, and its purpose is to ensure that the student has a clear research plan as early as possible in their program. Suggested sections include a project description, workplan, timeline, and budget.

It is understood that research questions often change over the course of executing a study – therefore this proposal is meant to help the student get started early on their research, rather than constraining them to a single question over the course of their program.

The M.Sc Proposal and Public Seminar will take place in FISH 6000

In FISH 6000, writing a proposal – in the form of an NSERC or other scholarship application – will be an assignment in the class. It is recommended that proposal be used to satisfy the proposal requirement.

It is also a requirement that students conduct a seminar, open to the public, based on their proposal. **Again, this will be done within FISH 6000.**

Ph.D Students

Ph.D students are required to produce a research proposal no more than five pages in length, which should include a description of objectives, methods, a timetable, and funding for the project.

As Ph.D students are in training to become independent research scientists, expectations are higher for this proposal than one produced by an M.Sc student. However, it is understood that a proposal is subject to change as a project evolves. A scholarship or grant application may serve as the basis for this proposal provided it describes an entire Ph.D program, rather than just a single study.

Once the proposal is complete and approved by the Supervisory Committee, the student must complete a research seminar – normally by the end of the third semester. This talk should represent a higher level of scholarly thinking than an equivalent M.Sc seminar, and the supervisory committee should be present for this talk.

Ph.D students enrolled in FISH 6000 may use the proposal assignment to write their proposal, as with M.Sc students. However, Ph.D students should be prepared to conduct a research seminar based on their proposal that will be beyond the scope of FISH 6000.

Ph.D – Comprehensive Examination Guidelines

Ph.D students have to complete a **Comprehensive Examination** before the end of their 7th semester of enrollment. This is serious business – if a student does not complete and pass a comprehensive examination within this time frame, they will be terminated from the program (that's an SGS rule!).

Here's how it works:

First, the student's supervisor will identify an **examination committee**. See the checklist below for committee structure. At least **three months prior** to the examination, the student will be informed of the 'sub-disciplines' that the student will be examined upon. The sub-discipline and examination committee are both assigned by the *Recommendation for PhD Comprehensive Examination* form. https://www.mun.ca/sgs/PhD_comp_recommend.pdf

Note: The Academic Advisory Committee is still deliberating on the precise structure of comprehensive exams. It will be determined by the end of the Fall 2017 semester, and this guide will be updated accordingly.

On conclusion of the question period, the examination committee will determine an outcome for the student. The outcomes can be pass with distinction, pass, re-examination, and fail. These outcomes are explained in the calendar regulations:
http://www.mun.ca/regoff/calendar/sectionNo=GRAD-0024

Ph.D – Comprehensive Examination Checklist

	Task	Due by	Relevant form or action
☐	The supervisor notifies the Academic Director of the intent to organize a comprehensive exam. The Academic Director, in conjunction with student and supervisor, identifies examination committee members. The committee must consist of: - Chair: Head of the academic unit, or a delegate - Candidate's supervisor - Dean of Grad Studies, or a delegate - Three (or more) other members*	Before end of 7th semester	Discuss with supervisor
☐	Examination committee notifies student of sub-disciplines		Recommendation for PhD Comprehensive Examination
☐	Identify a date and location for the comprehensive examination. Ensure all examination committee members receive and accept the invitation.		Retain a copy of the meeting request, accepted by all members
☐	Student submits examination proposal to committee**	One week prior to examination	
☐	Student is examined. Chair of Examination Committee notifies Head of SOF of result, who reports that result to the Dean of SGS	Examination day	Submit report by email, retain copy of email for student's record

*There must be an odd number of people on the examination committee. All committee members, including the Chair – but EXCLUDING the Dean of Grad Studies' delegate – are voting members

**It is good practice to remind all examination committee members of the forthcoming examination a week prior to the exam

Transferring Directly to the Ph.D Program ("Rolling-up" a.k.a. "Fast-track")

In certain cases, students in one of the M.Sc programs may want to transfer directly into the Ph.D program. This may be considered when a student is excelling in their program, is demonstrating substantial scholarly achievement early on, and has a clear plan for how they would complete an appropriate Ph.D research program.

In deciding whether this is right for you, remember that a Ph.D is not just a 'bigger' M.Sc. As specified in the Graduate Profile and Learning Outcomes, a Ph.D graduate should be able to demonstrate a higher level of independence and leadership, and their research should aim to advance a discipline. Therefore, a transfer to a Ph.D program should usually involve a recalibration of the aims of the student's research project.

A student who 'rolls up' (some universities call this 'fast-tracking' or simply 'transferring') gets awarded a Ph.D at the conclusion of their program, and skips the M.Sc altogether.

According to SGS General Regulations (4.1.3), students can be admitted into a Ph.D program during their M.Sc if:

- They have been registered in an M.Sc program for at least 12 months
- They have not been enrolled for more than five semesters

In plain English – this means **you can apply to transfer in your 4th and 5th semester of enrollment**. In practice, we can be a bit flexible about this… within reason.

Students who transfer into a Ph.D program are treated by SGS as if they have 'always' been in the Ph.D program – meaning date of first enrollment becomes the date that you first began your Ph.D.

Fast-track Checklist

Students who wish to transfer should extensively discuss it with their supervisor and supervisory committee. Admission criteria for the Ph.D program is the same from a transfer as it is for a first-time applicant (see Calendar for details).

When all parties agree that a transfer is warranted, the following steps should occur:

	Task	Due by	Relevant form
☐	Secure written support from all committee members to transfer to Ph.D*. This normally occurs at the annual committee meeting.	Semester 4 or 5	A simple email is sufficient
☐	Supervisor notifies academic advisory committee of student's intent to transfer (in writing), declares committee's support for the transfer, and includes updated funding plan	Semester 4 or 5	Funding Plan
☐	Academic Advisory Committee approves transfer (or not) – Reports result to Supervisor and Student		
☐	If approved, supervisor completes and submits Change of Program form*		Change of Program
☐	Student is now enrolled in the Ph.D program. See Ph.D checklist.		

*Note that the Supervisor Committee can be expanded or re-formed at this time. For example, if a committee member does not wish to commit to supervision for an entire Ph.D, they may ask to be removed from the committee. Likewise, additional committee members can be added.

Ongoing Requirements – All Students

Every six months, a Supervisory Report form (https://www.mun.ca/sgs/Supervisory_Report.pdf) should be completed and included in the student's file.

At least once per year, the entire supervisory committee must meet with the student for a committee meeting (committee members may attend by teleconference if needed, though physical presence is preferred). In addition to submitting a Supervisory Report, the student, supervisor, and committee members should revisit their respective letters of understanding, and update the funding plan.

It's okay for things to change! But it's critical to be transparent about it.

It is a requirement to complete progress reports every six months, and to hold a committee meeting every year. All reports should be submitted to the Graduate Secretary, who will forward them on to SGS.

Visiting Students

Memorial University is a great place to visit. Anyone interested in pursuing graduate studies on a visiting basis must, in addition to reaching an arrangement with a supervisor, complete this SGS form: http://www.mun.ca/sgs/current/visiting.php

Graduating

M.Sc Exit Seminar and Examination

Prior to submitting the thesis for examination, M.Sc students must complete an Exit Seminar in which they synthesize and communicate their research and key findings to the MI community.

Here's how it works:

1. The student and supervisor should discuss a time and location for the exit seminar, ideally so that all committee members and examiners are able to attend, either in person or via teleconference.

2. A room should be booked for the seminar, and all committee members should be notified of the date, time, and location. The room should be booked for 1.5 hours.

3. **On the exam day:** Students will deliver a ~20-30 minute oral presentation about their thesis research. The presentation will be open to the public. A brief break will be offered at the end of the oral presentation, and before questions, so that members of the public may leave if they choose.

4. After conclusion of the oral presentation, a Question and Answer period will ensue. The supervisor and committee members will get the first chance to question the student. The student should expect questions that are broad, critical, and that will challenge them to place their research findings in the context of the academic field.

5. Once the supervisor and committee members have concluded asking questions, the remainder of the audience may ask questions as well. Normally, the entire seminar (presentation plus Q&A) should take place within a 1.5 hour period.

Once the exit seminar is complete, the M.Sc examination procedures should be followed. This is governed by the SGS regulations on M.Sc examinations (https://www.mun.ca/sgs/current/graduation.php)

Ph.D Defense and Examination

Ph.D Defenses are governed exclusively by the SGS regulations on Ph.D examinations (http://www.mun.ca/sgs/PhD_examinations.pdf).

Program Checklists

M.Sc Fisheries Science (Fisheries Science and Technology)

	Task	Due by	Relevant form
☐	Identify a supervisor, secure their agreement to take you on as a student		
☐	Apply to the program – **Your application will only be reviewed if someone has agreed to supervise you if accepted**	May 15, Sept 15, or Jan 15	SGS Online Application
☐	Supervisor submits completed forms to Graduate Secretary: Program of Study, Funding Plan. Student completes and submits Accept/Decline form		Program of Study, Funding Plan, Accept/Decline
☐	Complete student-supervisor letter of understanding, and committee member letters of understanding	ASAP	Letters of Understanding
☐	Complete first committee meeting, submit meeting report to Graduate Secretary	End of 3rd month	Graduate Student Annual Program and Supervisory Report
☐	Complete thesis proposal*	ASAP	
☐	Orally present thesis proposal in open presentation*	ASAP	
☐	Complete FISH 6000, 6001, 6002, 6003**	End of 4th semester	
☐	Complete any additional courses assigned by committee	As specified by committee	
☐	Complete second committee meeting, submit meeting report	Second year of program	
☐	Perform exit seminar	Near completion of thesis	
☐	Complete thesis		
☐	Submit thesis for formal review. Initiate examination procedure: http://www.mun.ca/sgs/masters_examinations.pdf		Supervisory Approval Form. Also see page 32
☐	Complete defense, receive decision		~6 weeks after above
☐	Conduct revisions as required		
☐	Re-examine thesis as required		
☐	Initiate graduation procedures as per https://www.mun.ca/sgs/current/graduation.php		Recommendation for the Award of a Graduate Diploma/Degree, Thesis/Report Deposit, and Request to Include Copyright Material

*Students will complete proposals and a presentation open to the public as part of FISH 6000. Therefore, these items will normally be completed as part of that class.

All students will normally complete all of these courses. If a student has **exceptional skills in one of the subject matter areas, their committee may exempt them.

In addition to above: One supervisory report must be completed **every six months**, and one committee meeting must be held **every year**. At the committee meeting, Letters of Understanding between student and supervisor, and for committee members, should be reviewed and revised as needed.

M.Sc Fisheries Science (Stock Assessment)

	Task	Due by	Relevant form
☐	Identify a supervisor, secure their agreement to take you on as a student		
☐	Apply to the program – **Your application will only be reviewed if someone has agreed to supervise you if accepted**	May 15, Sept 15, or Jan 15	SGS Online Application
☐	Supervisor submits completed forms to Graduate Secretary: Program of Study, Funding Plan. Student completes and submits Accept/Decline form		Program of Study, Funding Plan, Accept/Decline
☐	Complete student-supervisor letter of understanding, and committee member letters of understanding	ASAP	Letters of Understanding
☐	Complete first committee meeting, submit meeting report to Graduate Secretary	End of 3rd month	Graduate Student Annual Program and Supervisory Report
☐	Complete thesis proposal*	ASAP	
☐	Orally present thesis proposal in open presentation*	ASAP	
☐	Complete FISH 6000, 6001, 6002, 6004, 6005**	End of 4th semester	
☐	Complete any additional courses assigned by committee	As specified by committee	
☐	Complete second committee meeting, submit meeting report	Second year of program	
☐	Perform exit seminar	Near completion of thesis	
☐	Complete thesis		
☐	Submit thesis for formal review. Initiate examination procedure: http://www.mun.ca/sgs/masters_examinations.pdf		Supervisory Approval Form. Also see page 32
☐	Complete defense, receive decision		~6 weeks after above
☐	Conduct revisions as required		
☐	Re-examine thesis as required		
☐	Initiate graduation procedures as per https://www.mun.ca/sgs/current/graduation.php		Recommendation for the Award of a Graduate Diploma/Degree, Thesis/Report Deposit, and Request to Include Copyright Material

*Students will complete proposals and a presentation open to the public as part of FISH 6000. Therefore, these items will normally be completed as part of that class.

All students will normally complete all of these courses. If a student has **exceptional skills in one of the subject matter areas, their committee may exempt them.

In addition to above: One supervisory report must be completed **every six months**, and one committee meeting must be held **every year**. At the committee meeting, Letters of Understanding between student and supervisor, and for committee members, should be reviewed and revised as needed.

Ph.D Fisheries Science

	Task	Due by	Relevant form
☐	Identify a supervisor, secure their agreement to take you on as a student		
☐	Apply to the program – **Your application will only be reviewed if someone has agreed to supervise you if accepted**	May 15, Sept 15, or Jan 15	
☐	Supervisor submits completed forms to Graduate Secretary: Program of Study, Funding Plan. Student completes and submits Accept/Decline form		Program of Study, Funding Plan, Accept/Decline
☐	Complete first committee meeting, submit meeting report	End of 3rd month	Graduate Student Annual Program and Supervisory Report
☐	Complete Ph.D thesis proposal*	Prior to delivering research seminar	
☐	Conduct research seminar**	End of 3rd semester	
☐	Complete FISH 6000, 6001, 6002, and 6003 or 6004/6005***	End of 4th semester	
☐	Pass comprehensive exam See: http://www.mun.ca/regoff/calendar/sectionNo=GRAD-0024#GRAD-0778	End of 7th semester	Recommendation for PhD Comprehensive Examination
☐	Complete any additional courses assigned by committee	As specified by committee	
☐	Every year: Do a committee meeting, file report	Annually	Graduate Student Annual Program and Supervisory Report
☐	Complete thesis and submit for formal review. See: http://www.mun.ca/sgs/PhD_examinations.pdf		Supervisory Approval Form, Thesis/Report Deposit, and Request to Include Copyright Material
☐	Supervisor recommends examiners. Examination begins		Appointment of Examiners form
☐	Schedule defense in conjunction with graduate officer. Defend thesis		
☐	Conduct revisions as required. Resubmit		
☐	Initiate graduation procedures as per https://www.mun.ca/sgs/current/graduation.php		Recommendation for the Award of a Graduate Diploma/Degree

* Ph.D students who complete FISH 6000 will do a proposal as an in-class assignment – if the committee is supportive, this assignment could be used to meet the project proposal requirement

**The Research Seminar should be larger in scope than the presentation M.Sc students will complete in FISH 6000. It is recommended that the committee be present for this. Options are to conduct this talk as part of a seminar series, or to host a special seminar at MI for this purpose.

***All Ph.D students will normally do FISH 6000, 6001, and 6002 unless they possess **exceptional** skills in these areas (or completed those courses as part of an M.Sc). Ph.D students must obtain strong statistics skills through 6003 or 6004/6005, or an alternative approved by their committee.

Responsibilities and Safety

The School of Graduate Studies Academic Council lays out the responsibilities of supervisors and graduate students here: https://www.mun.ca/sgs/responsibilities.pdf

All students should review the above document with their supervisor as early as possible.

Students at Memorial University are expected to abide by the School of Graduate Studies Code of Conduct: http://www.mun.ca/student/sscm/conduct/code_of_conduct.php and the Respectful Workplace Policy: http://www.mun.ca/policy/site/policy.php?id=167

Some important links follow:

MUN Sexual Harassment Office: https://www.mun.ca/sexualharassment/

MUN Sexual Harassment Policy: https://www.mun.ca/policy/site/policy.php?id=192

MUN Student Wellness and Counselling Centre: http://www.mun.ca/counselling/home/

Sexual Assault Support and Response Guide, Marine Institute: https://www.mun.ca/sexualharassment/reporting/response/marine/index.php

Marine Institute Emergency Management: https://www.mi.mun.ca/emergencymanagement/

To Report an Emergency

Dialed from a Campus Phone:

- **Marine Institute**: 9-911;
- When calling 911, a follow-up call should be made to Department of Transportation and Works Security 709-778-0644.

Calling 911

City Emergency Service:

- Dialed from a campus phone in St. John's: 9-911.

Additional Numbers

- **Security, Marine Institute**: 709-778-0644;
- **Facilities and Technical Services**: 709-778-0510;
- **Information and Communications Technologies**: 709-778-0628.
- **24-hour mental health crisis line**: 737-4668 (local) or 1-888-737-4668 (province-wide).
- **Mobile Crisis Response Team**: 1-888-737-4668 St. John’s Region.
- **Psychiatric Assessment Unit**: 777-3021 or 777-3022 24 hour Walk-in Crisis Service at the Waterford Hospital Site on Waterford Bridge Rd.
- **Health Sciences Emergency Department** on Columbus Drive in St. John’s 777-6335.

Conflict Resolution

You will likely experience interpersonal conflict during your time at graduate school. You should be able to deal with most of these situations informally, on a person-to-person basis.

In the event that a situation cannot be solved informally, here's the process:

Complaints involving students

Complaints against fellow students are guided by the MUN code of conduct: http://www.mun.ca/student/sscm/conduct/code_of_conduct.php

Since the code is written for the main campus, there are some terminology issues you should be aware of:
- The Student Conduct Officer and Complaints Coordinator for MI is Angie Clarke.
- The Head of Campus for MI is Dr. Rob Shea
- There is no form for a 'written complaint.' Just send an email.

Complaints involving faculty or staff

If you have a formal complaint about a faculty or staff member then you must follow the 'non-academic appeals' process: http://www.mun.ca/main/non_academic_appeals.php

If you are initiating a complaints process, you do so at the Student Affairs Office.

Change of supervisor

In rare cases a situation may develop where a student and supervisor mutually determine that the relationship isn't working and can't be fixed. In these cases, a switch to a different supervisor may be possible.

The student and supervisor should both make their concerns known to the academic director, who will attempt to mediate. Every effort should be made to reach a decision based on consensus. Note that intellectual property issues, including ownership of data collected to date, will arise during these discussions.

If it is determined that a change in supervisor is the only viable option, then changes are initiated by a Change of Program form: https://www.mun.ca/sgs/ChangeProgram.pdf which then has to be approved by the head of the academic unit (i.e. Carey Bonnell) as well as the School of Graduate Studies.

Special Case: If your supervisor is also the academic director

In cases where a student's supervisor is also the academic director, another member of the academic advisory committee will serve as an alternative mediator.

Academic Integrity

Memorial University has general regulations on academic misconduct: http://www.mun.ca/regoff/calendar/sectionNo=REGS-0748 and we take these very seriously within this program.

However, we strive to exceed the basic requirements outlined in the regulations above. We recommend the United States' National Oceanic and Atmospheric Administration as an example of an outstanding scientific integrity policy: http://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_202/202-735-D.html

Note especially section 4: NOAA principles of scientific integrity. If you abide by these, you will have a bright future in science.

Intellectual Property

MUN has several intellectual property policies. These include:

The School of Graduate Studies IP policy: https://www.mun.ca/sgs/current/essentials/intellectual_property.php

The Memorial University IP policy: https://www.mun.ca/policy/site/policy.php?id=143

The MUNFA IP policy (if your supervisor is a MUN professor or research chair): https://www.mun.ca/hr/services/my_employment/CA2014-2017.pdf

For students funded by NSERC, or for projects funded by NSERC http://www.nserc-crsng.gc.ca/NSERC-CRSNG/policies-politiques/ip-pi_eng.asp

Also: Be aware that individual funders aside from NSERC may have their own IP policies.

Take-home message: Intellectual property is very complicated! Seek advice as needed – and do so early if you think there will be an issue.

Fisheries Science Courses

FISH 6000: Science Communication for Fisheries

This course will train students in the full spectrum of science communication. The fundamentals of scientific writing, academic publishing, and oral and poster presentations will comprise the first half of the course. The second half will focus on communicating outside the academic environment, and how to responsibly disseminate research across a range of media. **Offered in Fall.**

FISH 6001: Ecology, Management, and Practice of North Atlantic Fisheries

In this overview course on fisheries science, several researchers from the School of Fisheries will deliver two week modules on their areas of expertise. Students will be exposed to the diversity of research conducted at MI - including fisheries ecology, conservation and sustainability, harvesting technology, post-capture processing, and fisheries policy. **Offered in Fall.**

FISH 6002: Data Collection, Management, and Display

Modern fisheries scientists work in a complex data environment. This course will introduce students to the basics of R statistical software – including programming best-practices, optimizing workflows, and producing tidy data. A focus on data display and visualization will be present throughout this course, reflecting the importance of good graphing habits in science. **Offered in Fall.**

FISH 6003: Statistics and Study Design for Fisheries Science

This course will provide an overview of modern statistical techniques used in fisheries research. A broad range of approaches will be covered, and students will learn the advantages and disadvantages of each, how they relate to one another, when they are applicable, and how to implement them in R. Special focus will be placed on designing powerful experiments. **Offered in Winter. Normally taken after FISH 6002.**

FISH 6004: Overview of Statistical Stock Assessment

Students will get an introduction to basic concepts in fish stock assessment, including survey sampling theory, basic population dynamics, optimal harvest strategies, and stock assessment models. Students will learn how to fit several growth, reproduction, and stock assessment models using R software. This will include training in statistical estimation and inference methods involving maximum likelihood, profile likelihood, and bootstrap procedures. **Offered in Winter. Normally taken after FISH 6002.**

FISH 6005: Advanced Statistical Stock Assessment

This course will address cutting-edge topics in stock assessment. Students will gain a robust understanding of advanced stock assessment models, and will demonstrate this understanding by applying the course material to a current problem in this field. Students will be trained in state-of-the-art state-space stock assessment models that integrate multiple types of data to produce more realistic and reliable assessments of fish stocks. **Offered in Fall, Beginning Sept 2018**

Program Administration

The Fisheries Science graduate program consists of two M.Sc programs and one Ph.D program, and is housed in the School of Fisheries at the Fisheries and Marine Institute. The School of Fisheries is the *academic unit*, and the head of that unit is Carey Bonnell.

Applications to the program are made directly to the School of Graduate Studies (http://www.mun.ca/become/graduate/apply/). Complete applications will then be reviewed by the School of Fisheries' **Academic Advisory Committee**. This committee is composed of:

Dr. Brett Favaro (Graduate Officer and Committee Chair)

Dr. Noel Cadigan

Dr. Deepika Dave

Dr. Arnault Le Bris

Dr. Paul Regular (Adjunct)

Dr. Craig Purchase (Cross-appointed)

The graduate secretary will also serve as a non-voting member on this committee.

There are three application deadlines: May 15 (to start in the fall), Sept 15 (to start in the winter), and Jan 15 (to start in the spring). However, if you wish to apply – **don't wait for the deadline** as we will process applications as they arise, and as time and resources permit.

You may apply to the program without identifying an academic supervisor, but **you cannot be accepted into the program** without one, **nor will your file be reviewed until a supervisor has committed to supervising you if you are approved by the AAC**.

Also see the general regulations for graduate students;
http://www.mun.ca/regoff/calendar/sectionNo=GRAD-0015#GRAD-0016

Policies on Leaves of Absence

Memorial University's Guidelines for Leaves of Absence (which includes Parental leave) are articulated here: https://www.mun.ca/sgs/loa.pdf

The above Request for Leave of Absence form should be submitted to the department's graduate secretary, where it will be forwarded to the School of Graduate Studies.

Note that external funding may have separate policies surrounding leaves of absence. For example, NSERC has a set of Family and Medical Leave policies (http://www.nserc-crsng.gc.ca/NSERC-CRSNG/policies-politiques/Wleave-Fconges_eng.asp). Students and supervisors should familiarize themselves with any external policies associated with funding they hold.

Disclaimer

This handbook is subject to change without notice. It is meant to reflect a “Plain English” interpretation of the calendar entry for the SOF research-based graduate program.

All graduate education at Memorial is governed by the policies of the School of Graduate studies.

Where there are discrepancies between this guide and the calendar, or this guide and the School of Graduate Studies, the calendar or SGS respectively takes precedence.

Appendix A: Academic Advisory Committee Terms of Reference

Last update: May 4, 2017

Purpose

This Academic Advisory Committee (AAC) will serve to assist the Fisheries and Marine Institute's School of Fisheries in effectively operating its research-based graduate program. This program consists of three sub-programs:

M.Sc Fisheries Science (Fisheries Science and Technology)
M.Sc Fisheries Science (Stock Assessment)
Ph.D Fisheries Science

The AAC has three main responsibilities:

1) Process student applications and make decisions on whether to accept students into the program, conditionally accept them, or reject them

2) Determine which students will receive SGS baseline funding

3) Meet once per year to provide a general review of the program and identify opportunities for improvement

Membership

This committee will consist of six members:

1. Chair – The Academic Director of the Fisheries Science graduate program.

2. Three core faculty from the School of Fisheries. These should be actively-publishing scientists. Ideally, each Centre should be represented by at least one committee member.
    - At least one committee member should primarily be a stock assessment researcher, and should be prepared to assess whether applicants to the M.Sc Fisheries Science (Stock Assessment) program possess a sufficient background in mathematics and statistics to warrant acceptance.

3. Two members whose primary appointment is external to the Marine Institute, but who hold either adjunct or cross-appointed status at the School of Fisheries.

Appointments to the AAC will be normally be held for three-year terms.

The current members of the AAC are:

Dr. Brett Favaro (Academic Director, AAC Chair)

Dr. Noel Cadigan

Dr. Deepika Dave

Dr. Arnault Le Bris

Dr. Craig Purchase (as cross-appointee)

Dr. Paul Regular (as adjunct)

The current term will expire in September 2019. Committee membership will be determined by the Head of School on recommendation by the Academic Director of the fisheries science graduate programs.

In the event that a committee member needs to remove themselves from the AAC, remaining members will identify a replacement to complete the term. In the unlikely event that an AAC member needs to be removed from the committee, a unanimous consensus must be reached by all other AAC members to do so.

Meeting Arrangements

The task of admitting students and allocating SGS baseline funds will occur on a year-round basis. The committee will review applications remotely, and the task of coordinating this effort will fall on the Chair.

The SOF Sharepoint site will be the primary tool for disseminating student applications, and for AAC members to render judgment on applications. This site can be found here.

It is expected that committee members be prepared to process applications in a timely manner to facilitate rapid intake of highly qualified students, and students who PI's are attempting to recruit into their respective research programs. If members are unable to complete their duties during a specific time period (e.g. because they are in the field, on vacation, etc) they should notify the Chair.

Once per year, the entire AAC will meet physically or via videoconference to conduct a review of the program. The review may be as comprehensive as the AAC wishes to undertake in any given year.

Admissions Criteria

Admissions criteria are specified in the calendar entry for each SOF graduate program. For students applying to the Stock Assessment stream, AAC members with specific expertise in stock assessment should be prepared to assess the student's mathematics and statistics background.

The AAC Chair will notify members if a PI has made an offer to supervise a student who has applied to the graduate program, and the committee will make an effort to expedite these reviews.

If applicants have not identified an academic supervisor, then their admission will be conditional on securing a supervisor. No students may be fully admitted without an identified academic supervisor that has agreed to supervise them throughout their program.

SGS baseline funding will be allocated by the AAC as per the academic unit's policies that are in place at the time of review, and in accordance with SGS guidelines on baseline allocation. These policies may change as the program evolves. The Chair should make available the current policies (which will be developed in consultation with SOF core faculty) to the AAC.

Additional information admissions and applications can be found in the program handbook.

Deliverables

Committee members should be prepared to respond to applications within **two weeks** of notification by the Chair, unless they have indicated their inability to process applications.

Committee members will vote on whether to accept, conditionally accept, or reject each student applicant. Decisions will be reached by a simple majority vote (i.e. more than 50% must agree). However, reasonable efforts should be made to achieve consensus among AAC members, and dissenting views should be considered.

In the event that no committee members are available to discuss applications in a timely manner, the Chair has the right to make sole decisions on admissions. If the Chair is unavailable for an extended period, they will designate an acting Chair.

The AAC will also make decisions about which students will receive SGS baseline funding. While a simple majority vote is acceptable for these decisions, extra effort to achieve consensus should be made on SGS baseline allocations.

Review

Once per year, the committee will produce a document reviewing the program to date, and make recommendations about how to improve it. This document need not be formal, lengthy, or complex - minutes from an AAC meeting would suffice.

These TOR should be reviewed every three years, with the first review occurring in FY 2019.

Appendix B: School of Fisheries SGS Baseline Allocation Principles

Last revision: May 4, 2017

The School of Graduate Studies allocates funds to all academic units with graduate programs to be paid to graduate students (hereafter: SGS Baseline). SGS provides guidelines on eligibility, but decisions on which students get funded, and to what extent, are left up to the academic unit.

This document provides guidance to the Academic Advisory Committee (AAC) on how to reach decisions about baseline funding disbursements. By articulating these principles in writing, we hope to provide transparency in decision-making processes within the SOF. If there are any conflicts between these principles and SGS Guidelines, the SGS Guidelines take precedence. This document is subject to revision at any time.

Principles:

- SGS Baseline funds allocated to the SOF support full-time students enrolled in the M.Sc Fisheries Science (Fisheries Science and Technology), M.Sc Fisheries Science (Stock Assessment), and Ph.D Fisheries Science programs. These funds may not support students in other programs.

- Decisions on allocations are made by the AAC. Decisions will be made by simple majority (i.e. more than 50%) vote, but every effort will be made to achieve consensus.

- There is no guarantee that a student will receive baseline funding when they apply to the program.

- Funding will normally be allocated to M.Sc students for two years, and to Ph.D students for four years (and to receive funds, they must maintain eligibility).

- The following values should underpin allocation decisions:
    - The primary purpose of baseline funding is to **grow the program**, and enable SOF PI's to take on more students than we would be able to in absence of the funds.
    - Our goal is for every student in the program to achieve the minimum annual financial support target ($17,500 for M.Sc, $19,000 for Ph.D from all sources).
    - SGS baseline funds should first be allocated to students that are below the minimum funding target. If additional money is available, then top-ups are acceptable.
    - Baseline funds should broadly be allocated so that all core faculty in the SOF can benefit – they should not normally be concentrated among the students of a minority of supervisors.
    - Any changes to a student's SGS Baseline funding amount should be communicated well in advance to the student and supervisor.
    - SGS Baseline funding should never be removed for punitive reasons, provided the student remains eligible to receive funds.

Procedures

In their application to the graduate school, students will indicate whether they are in need of baseline funds. **If a PI has made an offer to supervise that student, the PI should notify the AAC Chair if the student will need baseline as part of their funding package.** The AAC may follow up with that student's prospective supervisor to discuss the student's funding plan.

If an eligible student is already enrolled in the program and they need to apply for baseline funds, their supervisor should alert the AAC and explain the student's funding situation and why they need this support.

Normal Value

M.Sc students (whether in FST or SA) will normally be offered $7,300 per year for two years, while Ph.D students will normally be offered $8,800 per year for four years.

If students exceed the funding cap as defined by SGS, or become ineligible, some or all of the baseline funds allocated to them will be redistributed to another student (or students).

Assigning Funding

The procedure for allocating funding works as follows:

1. AAC makes decision on funding
2. Program of Study form is sent to SGS. The internal SGS is as follows:
    a. If the form has funding, it is forwarded to the fellowships team for assessment and to add the information to the appropriate worksheet. If there is an issue with the funding, SGS will contact the Graduate Officer in the unit.
    b. The POS is sent back to admissions team to have letter sent with a of the POS
3. When student arrives, department completes payroll form to have funding started. Any changes in funding is initiated at the department level unless we tell you otherwise.

Appendix C: Letter of Understanding for Supervisors and Graduate Students Template

Creating a Letter of Understanding

for Advisors/Supervisors and Graduate Students

This document was prepared by the Canadian Association of Graduate Studies (CAGS-November 2012) to provide member institutions with a comprehensive resource for the development of a *Letter of Understanding* between Advisors/Supervisors and Graduate Students. In an attempt to create a generic template that is applicable to many disciplines, some suggestions may be more appropriate than others. Please use these ideas and others that may be appropriate to develop suitable agreements.

WHY DEVELOP A *LETTER OF UNDERSTANDING*?

Graduate studies are not only a life and career enhancing activity for students, but also a vital component of research and scholarship in Canada, important drivers of the nation's productivity and essential for global competitiveness. The role of supervisors and supervisory committees, as well as the relationship between students and their supervisors, are key components affecting the success of research-stream students in their programs. Superimposed upon the student-supervisor relationship are the roles of supervisory committees, graduate program committees, departmental bodies, and offices of faculties/schools of graduate studies. Further complicating the issue of graduate student supervision is the diversity in supervision culture across the University, where the relationship may range from a very structured "master to apprentice" scenario to a very unstructured, "subtle guide of an independent scholar" (CAGS, 2008, p 1-2).

Since conflict and tension can arise in situations where expectations, roles, and responsibilities are unclear or mismatched, it can be helpful for parties to develop a written agreement on such issues. A *Letter of Understanding* provides a basis for developing a shared understanding of the responsibilities of students, directors and academic units in the pursuit of graduate education. The discussion creates an opportunity to clarify individual expectations and inform one another of challenges which may arise during the course of study.

This document should be viewed as a tool to initiate discussion during the early stages of the graduate program, with an awareness that the relationship and expectations will evolve with time. The parties may wish to use this template not only for verbal discussion but also as a written letter of understanding that will help to guide the relationship and expectations of the student, their advisor/supervisor, and the relevant departments/faculties.

ROLES & RESPONSIBILITIES

The student is the main party responsible for the study program and the performance of related activities, such as the submission of a master's or doctoral thesis and should demonstrate a deep commitment to the course of study and interest in the selected research topic.

Roles and responsibilities, especially those assigned to the graduate unit, may vary between institutions. The graduate unit may refer to the faculty/school of graduate studies or the department/centre in which the student is enrolled. ***Feel free to modify this document so that it best meets the needs of the student, advisor/supervisor and best describes the situation for your program and institution.***

Academic Development

It is the student's responsibility to:

- ❒ Develop the necessary skills and learning approaches suitable for an advanced degree;
- ❒ Exhibit independent judgment, academic rigor, and intellectual honesty;
- ❒ Complete research, course work and/or thesis within the period that is typical for specific degree program;
- ❒ Give due consideration to workload and exercise care in the performance of the work assigned;
- ❒ Submit their material in a timely manner so as to receive an adequate assessment;
- ❒ Make timely progress towards completion of degree and spend the required number of hours carrying out research activities;
- ❒ Be available to complete the work assigned and reduce any time devoted to paid activities unrelated to their studies;
- ❒ Determine with the assistance of the advisor/supervisor, a yearly renewed or revised collaboration/study plan (or more frequently if the need arises).

It is the advisor/supervisor's responsibility to:

- ❒ Ensure that the student's master's or doctoral thesis is suitably aligned with the number of credits awarded and that the project is manageable with respect to the educational program objectives and the time allocated for the completion of the program;
- ❒ Ensure that student's project has an appropriate hypothesis/question and achievable goals;

- ❒ Assist the student in developing their research interests and help the student modify the program when unforeseeable problems arise;
- ❒ Determine how and when the supervisory committee should be formed;
- ❒ Provide the student with suitable resources and work space;
- ❒ Provide supervision in a way which leaves the student with room for autonomy (especially for doctoral students);
- ❒ Provide timely feedback to thesis drafts and writings submitted by the student in accordance with an agreed upon schedule;
- ❒ Be open, honest and fair with the student when academic performance is not meeting expectations;
- ❒ Provide appropriate mentorship and guidance;
- ❒ Establish with each student a yearly renewed or revised collaboration/study plan (or more frequently if the need arises).

It is the graduate unit's responsibility to:

- ❒ Have procedures in place to connect students and potential supervisors, and to allow and/or ensure a change in supervisor in the unlikely event that this becomes necessary;
- ❒ Provide mechanisms to assist students with selection of a supervisor and with major program milestones such as the beginning of research or thesis writing. Examples include: assigning senior graduate students as mentors; arranging for a temporary faculty advisor if choice of supervisor is not immediately available and workshops on healthy supervisory relationships.
- ❒ Advocate for and work with other departments at the university to ensure adequate resources such as Library, writing resources, computer labs, and space, are available to support the student in fulfilling their program requirements.

Communication

It is the student's responsibility to:

- ❒ Meet regularly/weekly/monthly (as determined) with advisor/supervisor and advisory/supervisory committee to report on research progress and to meet deadlines, in compliance with established program terms;
- ❒ Provide the advisor/supervisor with a written report to allow time for review and comment before meeting;

- ❒ Hold face-to-face meetings with advisory/supervisory committee at least once per year, but preferably every six months and provide a progress report and future plans to the committee at least a week in advance of meetings;
- ❒ Participate in departmental meetings, seminars and training regularly as determined with advisor/supervisor;
- ❒ Attend meetings to assess the performance of their study program, more specifically with respect to the preparation and submission of his or her master's or doctoral thesis.

It is the advisor/supervisor's responsibility to:

- ❒ Meet regularly/weekly/monthly with the student to provide guidance, assess progress and assist student in the goal of completing the program on time;
- ❒ Monitor the accuracy, validity, and integrity of student's progress and respond in timely manner with comments/revisions to drafts of applications, reports or research presentations;
- ❒ Meet with the student to discuss specific provisions related to their course of study, especially regarding intellectual property and financial support;
- ❒ Ensure that the student is aware of relevant policies and procedures for the conduct of research;
- ❒ Assist the student in the presentation of their work as it progresses, in accordance with preset program parameters;
- ❒ Be available to meet with the student and at the student's request to provide support to the student towards the progress and completion of the program;
- ❒ Make arrangements to ensure the continuity of supervision during leaves or extended periods of absence.

It is the graduate unit's responsibility to:

- ❒ Make available through appropriate media clear and understandable information about program requirements, regulations and procedures, the faculty and staff responsible for the graduate program and graduate faculty members and their areas of research expertise;
- ❒ Ensure that approved supervisory committees are established by the appropriate deadlines;
- ❒ Ensure that the student's supervisory committee meets at least once a year with the student, that this meeting is substantive, and that a written report of this meeting containing sufficiently useful detail is given to the student and filed in the official student file with the graduate unit.

Interpersonal and Professional Conduct

It is the student's responsibility to:

- ❒ Be receptive to any advice or suggestions given by the supervisor/advisor or other faculty member involved in their education;
- ❒ Interact with fellow students, both graduate and undergraduate, staff and faculty in a professional and mature manner;
- ❒ Seek assistance from the advisor/supervisor especially making important decisions about the course of study or while looking to define or redirect their master's or doctoral thesis project;
- ❒ Advise the advisor/supervisor, in a timely manner, of any issues arising throughout the course of his or her program (difficulties of integration, learning or financial issues, selection of courses, availability of the advisor/supervisor, absence or delay in feedback material concerning their work or any other difficulty related to his or her supervision framework);
- ❒ Advise the advisor/supervisor, in a timely manner, of any foreseen prolonged absence and negotiate amount of time and timing of holidays;
- ❒ Be aware of policies and rules and regulations in effect at the university as well as any communications which may be directed to them.

It is the advisor/supervisor's responsibility to:

- ❒ Establish a professional working relationship to guide the student in their approach to research;
- ❒ Guide the student in learning to work independently and as a member of a team;
- ❒ Implement a plan of action to help overcome any unforeseen difficulties;
- ❒ Advise students concerning the preparation and submission of their master's or doctoral thesis or drafting of scientific papers;
- ❒ Maintain good professional and personal relationships with trainees in the research group and treat all members of the laboratory (and their work) with verbal and intellectual respect;
- ❒ Avoid personal or business relationships that may constitute a conflict of interest;
- ❒ Give credit in an appropriate manner to graduate student contributions to scholarly activity, whether presented at professional meetings, publications, or in applications for grants.

It is the graduate unit's responsibility to:

- ❒ Provide mechanisms for resolving problems that may arise between graduate students, supervisors, and/or members of the supervisory committee.

Funding Considerations

Graduate student support may come from a variety of sources such as Graduate Teaching Assistantships, scholarship funding from the Faculty of Graduate Studies, internal and external scholarships and bursaries as well as research funds acquired by the advisor/supervisor (designated as Research Assistantships).

The *Letter of Understanding* should outline the level of support and the period during which financial assistance is provided. The stipend schedule should also be defined.

It is the student's responsibility to:

- ❒ Seek Graduate Teaching Assistantships/Research Assistantships to gain teaching experience at the direction of their supervisor;

- ❒ Apply for scholarships appropriate to program of study.

It is the advisor/supervisor's responsibility to:

- ❒ Provide consultation about scholarship and bursary applications in advance in order to look at ways of optimizing the student's chances of success.

Safety

Different programs have various safety course requirements and training needed.

It is the student's responsibility to:

- ❒ Complete the required safety courses (***WRITE THESE COURSES HERE***);

- ❒ Pass the appropriate courses on the use of animals in research (if applicable).

It is the advisor/supervisor's responsibility to:

- ❒ Assist the student in determining the level of training and course(s) required for their study program;
- ❒ Make every reasonable effort to ensure that student's learning and research environment is safe and adequately supported.

Laboratory Etiquette and Computer Use

It is the student's responsibility to:

- ❒ Keep space tidy, respect the space of others, clean glassware, and participate in periodic laboratory cleanup;
- ❒ Follow all procedures specific to the Research Centre in which they are based;
- ❒ Understand that space and equipment is shared and that care must be exercised with problems reported as they arise;
- ❒ Refrain from borrowing the supplies of others and removing items from the laboratory without permission;
- ❒ Maintain good professional and personal relationships within the research group and treat all members of the laboratory (and their work) with verbal and intellectual respect;
- ❒ Leave laboratory books and primary data within the department (or if signing out use a pre-determined process);
- ❒ Use laboratory computers for research and science communication purposes only *(e.g.,* email, data analysis, literature searches and other forms of scientific communication).

Publications and Intellectual Property

Individual institutions will have varying policies and procedures regarding publications and intellectual property. As such, please review this information as it pertains to your academic unit and school. Students and advisors/supervisors are encouraged to enter into an agreement regarding intellectual property early in the program to determine how these issues will be addressed, should they arise. Refer to the policies at your institution.

It is both the student and advisor/supervisor's responsibility to:

- ❒ Present research results that are publishable in reputable, externally refereed journals, thereby achieving the goals of creating new knowledge and reporting it to the appropriate community;
- ❒ Determine an authorship process for shared and non-shared authorship and identify the importance of first authorship for the student;
- ❒ Recommend timely completion and publication of manuscripts before completion of the program to facilitate preparation of thesis;
- ❒ Publish the findings from the research. Agree that if original research is carried out by students, the intellectual property component may wholly or in part belong to the student;

- ❒ Maintain appropriate confidentiality concerning research activities, in accordance with existing practices and policies of the discipline.

Professional Development

It is both the student and advisor/supervisor's responsibility to:

- ❒ Work together to find opportunities for students to attend suitable conferences and present research findings and seek funding sources for associated travel costs.

It is the supervisor/advisor's responsibility to:

- ❒ Encourage participation in non-academic programs for professional development, such as effective writing courses, teaching training programs, conflict resolution and workshops on research grants.

_____	_____
Supervisor	Date
_____	_____
Graduate student	Date

Appendix D: Funding plan

Note: This plan is for guidance and transparency purposes only. It is understood that plans may change as the program progresses.

Please try to forecast two years into the program, and indicate all sources:

Program:	☐ **M.Sc Fisheries Science (FST)**	☐ **M.Sc Fisheries Science (SA)**	☐ **Ph.D Fisheries Science**
Semester (Fall, Winter, or Spring)	**Amount**	**Source(s)** (underline sources that are CERTAIN)	
Notes:			

Supervisor _____ Date _____

Graduate student _____ Date _____

Sample Completed Funding Plan

Note: This plan is for guidance and transparency purposes only. It is understood that plans may change as the program progresses.

Please try to forecast two years into the program, and indicate all sources:

Program:	☐ **M.Sc Fisheries Science (FST)**	☐ **M.Sc Fisheries Science (SA)**	☒ **Ph.D Fisheries Science**
Semester (Fall, Winter, or Spring)	**Amount**	**Source(s)** (underline sources that are CERTAIN)	
Fall 2018	**$6,333.33**	**My Research Grant**	
Winter 2019	**$6,333.33**	**My Research Grant**	
Spring 2019	**$11,667.00**	**NSERC CGS-D**	
Fall 2019	**$11,667.00**	**NSERC CGS-D**	
Winter 2020	**$11,667.00**	**NSERC CGS-D**	
Spring 2020	**$11,667.00**	**NSERC CGS-D**	

Notes:

Philip Fry has five publications out of his M.Sc and a 4.0 GPA. We are confident he will be likely to receive the NSERC award.

If he does not receive NSERC funding I will allocate a portion of my research grant to his stipend, to bring him to the recommended minimum of $19,000 per year.

Professor Farnsworth — August 10, 2018

Supervisor — Date

Philip J Fry — August 10, 2018

Graduate student — Date

Appendix E: Letter of Understanding for Committee Members of Graduate Studies in the Marine Institute School of Fisheries

Students in the SOF Fisheries Science programs must have a supervisory committee, as defined in the SGS general regulations. This letter is designed to clarify expectations between students, supervisors, and committee members.

We recognize that projects evolve over time, and arrangements may change. Please complete this agreement at every annual committee meeting.

Authorship

- ❒ I expect to be a co-author on all papers deriving from the thesis*
- ❒ I expect to have the opportunity to earn authorship on any paper derived from the thesis
- ❒ Authorship discussions will be held on a paper-by-paper basis
- ❒ Other: _____

*Except when doing so would violate the policies of the academic journals to which the work is being submitted (e.g. if a committee member does not meet the journal's authorship criteria)

Financial

- ❒ I am committing direct financial support to the project. Specify: _____
- ❒ I am not committing direct financial support to the project
- ❒ Other: _____

Mentorship

- ❒ I expect to be closely engaged in the conception and execution of the project**
- ❒ I will be regularly available, but expect the student and supervisor to primarily lead the project
- ❒ I will be sporadically available
- ❒ I will be only be available for annual committee meetings
- ❒ Other: _____

**Would co-supervision be a better model? _____

Data

Do you foresee any issues about data ownership or dissemination?

Other (please articulate):

_____	_____
Committee Member	Date
_____	_____
Supervisor	Date
_____	_____
Graduate student	Date