2013 2014

DALHOUSIE UNIVERSITY

Oceanography Department

GRADUATE STUDENT

HAND BOOK

- A lot of times are listed. Add a timeline.
- shorten. Avoid repetition. Avoid contradiction. Decide whether to enforce all these "have" "must" time limits.
- add 'appeals' section.

Table of Contents

Rewrite (clarity)

A. GENERAL PROGRAM REQUIREMENTS

A1 REGISTRATION

Graduate students must maintain their registration in all three terms until their program is completed, except in cases where a formal Leave of Absence has been approved by the Faculty of Graduate Studies.

Registration consists of:

1. REGN 9999
2. Thesis Code
3. Courses (if applicable)

(4)

Students who fail to register within the approved deadlines will be considered to have lapsed registration. Such students will not be permitted to submit a thesis, nor will they receive any services from the University during that academic term. Students who allow their registration to lapse will be considered to have withdrawn and will be required to apply for readmission. [1]

A1.1 REGN 9999

Students must register at least one month prior to the beginning of each term.

Students must register for the Fee Generating Course (**REGN 9999**) in all three terms for the duration of their program. If REGN 9999 is not added for each term, graduate students are not considered to be registered. *Failure to register at least one month prior to the beginning of each term will result in non-payment of scholarships and stipends.*

The CRN for each term can be found in the Academic Timetable on the Registrar's Office website[2] as "Registration Course – Graduate".

(3) (2)

A1.2 THESIS CODE

Students must register at least one month prior to the beginning of each term.

Students must register for the Thesis Code in all three terms for the duration of their program. Failure to do so in a term during which formal classes are not being taken will result in a blank term on the student's transcript, which means that there will be no documentation demonstrating that work was done on the thesis.

The CRN for each term can be found in the Academic Timetable under the Oceanography course listings (MSc – OCEA 9000, PhD – OCEA 9530).

(5)

(1)

[1] FGS Regulations, section 5.2.3 Failure to Register (http://dalgrad.dal.ca/regulations/v/ - 5.2.3).
[2] Academic Timetable (http://www.dal.ca/academics.academic_timetable.html).

(1) Link looks broken. MUST check all cross-references.
(2) CRN not defined. Add a glossary.
(3) Repeats the above. Delete.
(4) not defined.
(5) repeats the above

readmitted, any subsequent 'F' will result in a final program dismissal. Any academic withdrawal and reinstatement will be recorded on the student's official transcript.

A2.4 REGISTERING FOR COURSES AT ANOTHER INSTITUTION

Classes approved by the Department and Faculty of Graduate Studies (after examination of class descriptions) can be taken at other universities as part of the graduate degree program, provided the class is not available at Dalhousie[7].

The Letter of Permission Form[8] must be completed and submitted to the Graduate Secretary in advance. Such approval will not be given retroactively.

A3 THESIS PROPOSAL

When a particular research area has been identified and an advisory committee appointed, students are required to provide their advisory committees with detailed thesis proposals. This document, typically developed in collaboration with the supervisor, should demonstrate the student's

- Background of appropriate literature
- Awareness of current research activity
- Ability to formulate pertinent scientific hypotheses
- Appreciation of the time, effort, and resources necessary to achieve the thesis objectives

The acceptance of a thesis proposal is a critical step in a student's program. The detailed requirements differ for MSc and PhD proposals (see sections B and C respectively).

A4 SEA TIME

Graduate students in Oceanography are required to spend time at sea on oceanographic ships to familiarize themselves with oceanographic techniques, even if their research does not require measurements at sea. Students are required to submit a Sea Time Form to the Graduate Secretary. The Curriculum Committee must approve completed forms. Requests for special consideration by the Curriculum Committee for fieldwork in lieu of sea time may be made in extenuating circumstances.

A5 SEMINARS

Students are required to attend the general departmental seminars and to attend, and participate in, the specialty seminars in their field of interest. Students who are unable to attend seminars regularly must have the specific agreement of their advisory committee that this requirement is waived and this must be communicated to the departmental office in a written memo signed by the supervisor. It is important to note that materials presented in these seminars may form part of the questions for the PhD Qualifying Exam and the PhD Thesis Proposal Defence.

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[7] FGS Regulations, section 7.6.6 Letters of Permission (http://dalgrad.dal.ca/regulations/vii/ - 7.6.6).
[8] Letter of Permission Form and Guidelines (http://dalgrad.dal.ca/currentstudents/forms/ - lop).

Membership on an Advisory Committee ~~is flexible and~~ may change during the course of a student's program. Students must complete a Graduate Student Program Update Form when a decision to make changes to committee membership is made. The Advisory Committee structure differs for MSc and PhD, as explained in sections B and C.

Advisory committees are formally sub-committees of the Department appointed both to provide expert advice to students and to evaluate and report on student progress.

All committee members must have Faculty of Graduate Studies membership (most commonly as an External Scholar). Memberships should be applied for through the Graduate Secretary.

Committees are changed by mutual consent within the committee or by the Chair of the committee and student in consultation with the Graduate Coordinator or Chair of the Department. Limits to changes are set by the availability of particular people as supervisors and of research facilities and funds (noting that most research grants are awarded for specific projects).

A9.1 ADVISORY COMMITTEE MEETINGS

There must be no less than two advisory committee meetings held per academic year[11].

Advisory committee meetings may be held as often as required by the student and/or supervisor. **It is the responsibility of the student to ensure that committee meetings are held.** The **supervisor** will ensure that brief minutes of these meetings are recorded and are filed with the Graduate Secretary.

Following approval of the research proposal by the advisory committee, the student should have several meetings in addition to the regular committee meetings as follows:

- An interim progress meeting to verify that the research is on track.
- A final progress meeting at which the committee agrees that sufficient research has been conducted, and that thesis writing may proceed.
- Individual meetings with advisory committee members to receive input on drafts or chapters.
- A meeting at which the advisory committee agrees that the thesis is defensible and that a defence may be scheduled. Alternatively, the advisory committee may request further revision prior to approving a defence.

A9.2 COMMITTEE APPROVAL

At several points in a student's program the approval of the advisory committee is essential:

- Initial discussion of research ~~plan and direction~~; this should occur as early as possible in the student's program.
- ~~Approval of research plan and direction for thesis proposal.~~
- Acceptance of a thesis proposal.
- Change of status, such as advancement to the PhD program.

[11] FGS Regulations, section 9.3 Supervisory Committees (http://dalgrad.dal.ca/regulations/ix/ - 9.3).

(1) Not sure on wording (e.g. a prof. in stats - ok?)
(2) weird. Delete.
(3) Basically, seldom done. SO WHAT DOES SAY?

B. MSc PROGRAM REQUIREMENTS

B1 MSc COURSE REQUIREMENTS

MSc students must complete a minimum of 5 half-credits at the 5000-level or higher, at least three of which must be chosen from the introductory core courses (refer to section A2.1).

Any student who anticipates a transfer to the PhD program should complete the course-work and other requirements as listed in the PhD program requirements.

B2 MSc COMMITTEE STRUCTURE

The Thesis Advisory Committee must be formed within one month of the start of the student's program.

The MSc Advisory Committee consists of at least three members. There must be two full-time faculty members from the Oceanography Department (not Adjunct Professors). If a regular faculty member serving on the committee leaves the department, a replacement with another faculty member must be made. One member will be from another sub-discipline, and it is desirable that at least one member of the committee be from outside the Department.

B3 MSc THESIS PROPOSAL

MSc students are expected to produce an approved proposal within one year of enrolling in the program.

The thesis proposal should be developed in consultation with the supervisor and advisory committee. The scope of the research should be such that it can be accomplished and the thesis written within one year. Students should consult with their supervisors on the content of a proposal.

The Supervisor will notify the Oceanography Office that the proposal requirement has been satisfied and **a copy of the approved proposal must be placed on file with the Graduate Secretary.** MSc students may be required to defend the research proposal at the discretion of their committee.

Because a large portion of a student's first year is consumed by course work, the thesis proposal serves primarily as a well-reasoned course of action, and not as an exhaustive literature review nor as a deeply detailed description of methods. Fifteen pages of text should provide ample space.

B4 MSc THESIS

Graduate students should pay particular attention to the Faculty of Graduate Studies deadlines for submission of a thesis for graduation and fee payment schedules.

- Submit a Thesis Binding Submission Form and payment to the Graduate Secretary
- Submit an electronic copy of the abstract to the Graduate Secretary
- Provide copies of the thesis to the supervisor for distribution to the examining committee

Four Weeks Prior to Defence:
- Notify the Graduate Secretary of any Audiovisual requirements

Two Weeks Prior to Defence:
- Submit a printed copy of the thesis to the Graduate Secretary

Following a successful Defence:
- Have Examining Committee Members sign the signature page
- Submit required changes to the supervisor within the specified timeframe
- Have a final format check of the thesis done by FGS
- Electronically submit the final version of the thesis via DalSpace[14]
- Submit original completed forms to FGS (National Library of Canada Form, Title Page of Thesis, Signature page with original signatures, Copyright Page, Ethics Pages (if applicable), Student Contribution to Manuscripts (if applicable)
- Submit final copies of thesis to the Graduate Secretary for binding (include copies of the signed signature page, and the Copyright Page with original signatures)
- Complete Exit Survey

B4.3 MSc THESIS DEFENCE OUTCOME

Outcomes: All theses are either approved or not approved. The categories are:
- Approve as submitted
- Approved pending corrections and a clear timetable for completion (normally within one month)
- Rejected but with permission to re-submit a revised thesis for re-examination with a clear timetable for completion (within one year)
- Rejected outright

A simple majority determines the outcome, based on all the examiners except the Departmental Representative, who will vote only in the event of a tie.

Following the defence, the candidate will receive a letter from the Chair of the examining committee indicating the nature of any corrections to be made and the time frame within which they are to be completed. In the event of an unsuccessful defence, an explanation of the negative outcome is provided. A copy of the report will be provided to the Graduate Secretary.

B5 TRANSFER TO PhD

Request for transfer to the PhD program should be completed no later than one month prior to the anniversary of the student's admission date.

[14] DalSpace (http://dalspace.library.dal.ca/).

C. Other Classes, as required by the Advisory Committee

C1.3 GEOLOGICAL OCEANOGRAPHY GUIDELINES

The normal course requirements for a PhD in Geological Oceanography are:

n=3

A. Core Classes: Geological Oceanography (5110) and two other Introductory Classes.
B. Other Classes, as required by the Advisory Committee

C1.4 PHYSICAL OCEANOGRAPHY GUIDELINES

The normal course requirements for a PhD in Physical Oceanography are:

n=7

A. Core Classes: Physical Oceanography (5120) and two other Introductory Classes.
B. Advanced Classes: Fluid Dynamics (5311), Time Series Analysis (5210), Ocean Dynamics (5221), Estuary, Coast and Shelf Dynamics (5222).
C. Other Classes, as required by the Advisory Committee e.g. Numerical Modelling (5220), Ocean Waves (5223), Introduction to Acoustical Oceanography (5250), Advanced Marine Particles (5293).

C2 PhD COMMITTEE STRUCTURE

The Thesis Advisory Committee must be formed by October 1st of the first year of study.

The PhD Advisory Committee consists of at least four members. There must be two full-time faculty members from the Oceanography Department (not Adjunct Professors) on the advisory committee. If a regular faculty member serving on the committee leaves the department, a replacement with another faculty member must be made.

One member will be from another sub-discipline, and it is desirable that at least one member of the committee be from outside the Department.

C3 PhD QUALIFYING EXAMINATION

The qualifying exam should be completed between months 9 and 12 of the program. Students transferring from the MSc program should take the qualifying examinations within 12 months of their transfer.

This examination is designed to assess the student's background knowledge, with the primary aim of identifying weaknesses that need to be addressed in order for a student to undertake research at the Ph.D. level in the chosen field. The format varies with sub-discipline. In each case there is an oral component, but in some cases there can also be a written assignment before or after the oral examination.

The Curriculum Committee may grant extensions up to month 15 if the student and supervisor document a compelling conflict, e.g. fieldwork.

(1) If we have a goal of making things more uniform then either a lot more classes in non PO or a lot less in PO... the latter is the death of PO.
(2) or else what?
(3) All QE will be rewritten. It's a mess.

material that was provided to the student and by the student's presentation.

7) After the exam, the committee meets in camera to agree on comments and recommendations to the student and to the students committee, as appropriate.

8) The possible outcomes of the oral examination are:
- The candidate passes without extra conditions.
- The candidate passes, but is informed of weaknesses that should be addressed during the PhD work, e.g. in courses or in directed studies.
- The candidate is required to take a written examination, at a date determined during the oral examination meeting. This examination will be based on the topics that arose during the oral examination and will not exceed three hours. The committee can then pass the student with no extra conditions, or be informed of weaknesses that should be addressed during the PhD work, e.g. in courses or in directed studies.

9) The Chair is to report in writing to the Chair of the Curriculum Committee on the outcome of the exam, with copies to candidate and examining committee.

C3.2.2 CHEMICAL OCEANOGRAPHY QE GUIDELINES

No discipline-specific guidelines – follow general Departmental guidelines

C3.2.3 GEOLOGICAL OCEANOGRAPHY QE GUIDELINES

No discipline-specific guidelines – follow general Departmental guidelines

C3.2.4 PHYSICAL OCEANOGRAPHY QE GUIDELINES

The core of the qualification process is an oral examination based on a reading list tailored to the student's research area. In some cases this may be followed by a written examination. The details and the timing are as follows.

The PhD candidate prepares a brief (1 page) description of the intended area of research and sends it to the physical oceanography faculty members 5 weeks prior to the oral examination.

Based on this document, each available faculty member in the sub-discipline contributes a paper to a reading list. This process is organized by the research supervisor, who then communicates the list to the student and the Physical Oceanography faculty members within 1 week of receipt of the student's research summary.

Within 4 to 6 weeks, an oral examination is held, to test the student's comprehension of the reading list and its relevance to the intended research. The examination committee comprises all available faculty in the sub-discipline, a faculty member from another sub-discipline, and a Departmental representative.

The possible outcomes of the oral examination are:
- The candidate passes without extra conditions
- The candidate passes, but is informed of weaknesses that should be addressed during the PhD work,

supervisor or others prior to its submission. Approval from the advisory committee is required to proceed with the oral defence.

C4.2 PROPOSAL TIMELINE

It is the student's responsibility to initiate the proposal process and develop the proposal in coordination with the supervisor and committee. Two terms are more than adequate to complete this requirement. The scheduling of the proposal defence should be planned well in advance so that it can be carried out prior to the **20th month of the program.**

There is no restriction on early completion of the proposal and oral exam (e.g. in the summer between first and second years or fall term of second year).

Because the proposal is a formal requirement of the Department, it carries the same weight as courses, thesis defence, etc. Failure to complete the proposal within the required time frame reflects poorly on the student and can endanger standing in the program.

C4.3 PROPOSAL OUTCOME

Based on both the written proposal and oral defence, the supervisor will notify the Graduate Secretary, Graduate Coordinator, student, and examining committee in writing of one of the four possible outcomes:

- Continuation in the PhD program
- Permission to re-defend
- Transfer to the MSc program
- Withdrawal from the program

Revisions, and/or a re-defence must be completed prior to the end of the exam period in the winter term. Following the defence, a copy of the approved proposal must be placed on file in the Oceanography office.

C5 PhD THESIS

The PhD thesis should report original research of high caliber carried out by the student. It should be of such value as to merit publication and be in satisfactory literary form, with clearly presented figures and other supporting material. The thesis should be presented first, in draft form, to the supervisor who will provide initial comments and approve distribution to the rest of the committee. Typically, the writing phase is very intensive, and involves working closely with the supervisor and committee members. In many cases, the student writes journal articles that link closely with the thesis chapters, and the Faculty of Graduate Studies has conventions on how this is to be handled. As the thesis reaches completion, the advisory committee will meet to discuss any final changes to the thesis and sign the PhD Thesis Submission Form; this is just one of a series of steps that the student must keep in mind (see section C5.2).

C5.1 PhD EXAMINING COMMITTEE

- Submit a printed copy of the thesis to the Graduate Secretary

Following Defence:
- Have Examining Committee Members sign the signature page
- Submit required changes to the thesis within the specified timeframe
- Have a final format check done by FGS
- Electronically submit the final version of the thesis via DalSpace[15]
- Submit original completed forms to FGS (National Library of Canada Form, Title Page of Thesis, Signature page with original signatures, Copyright Page, Ethics Pages (if applicable), Student Contribution to Manuscripts (if applicable)
- Submit final copies of thesis to the Graduate Secretary for binding (include copies of the signed signature page, and the Copyright Page with original signatures)
- Complete Exit Survey

Some of the above deadlines are set by the Oceanography Office. Important dates from the FGS PhD Thesis And Defence Timeline and Checklist[16] are provided above.

C5.3 PhD THESIS DEFENCE OUTCOME

The student opens the examination with a 20-minute presentation of the thesis. Other faculty, students and public may be present, and ask questions, but the critical decisions are made in private and are the responsibility of the examining committee.

Following the defence, the candidate will receive a letter from the Faculty of Graduate Studies indicating the nature of any corrections to be made and the time frame within which they are to be completed. In the event of an unsuccessful defence, an explanation of the negative outcome is provided.

C5.4 PhD SEMINAR PRESENTATION

A departmental seminar on the thesis should be presented after successful completion of the thesis examination.

D. FINANCIAL SUPPORT

Dalhousie Graduate Fellowships will normally be provided for two years for an MSc student and four years for a PhD student.

Scholarship support is provided directly to some students by the Natural Sciences and Engineering Research Council (NSERC), the Killam Foundation through Dalhousie, by companies, and by other agencies, both national and international. Students are encouraged to apply for external support whenever possible.

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[15] DalSpace (http://dalspace.library.dal.ca/).
[16] PhD Candidate Thesis And Defence: Timeline & Checklist (http://dalgrad.dal.ca/currentstudents/thesesanddefences/checklists/).

been derived. Prior to submitting any paper in a course, or material for a thesis, students should read the Policy on Intellectual Honesty[19].

[19] Policy on Intellectual Honesty (http://www.dal.ca/dept/university_secretariat/academic-integrity.html).

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Update (or delete)