



HONOURS PROGRAMS

GUIDELINES FOR STUDENTS & SUPERVISORS

Department of Ocean Sciences

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MEMORIAL
UNIVERSITY

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Introduction

The Honours programs offered by the Department of Ocean Sciences of Memorial University are designed to offer undergraduate students a taste of scientific research in marine biology, biological oceanography and marine biogeochemistry. They are primarily intended for students who feel that research experience will be a valuable asset in the pursuit of their career goals, such as studies at the graduate level (MSc and PhD), or technical and research positions in any marine field.

All Honours candidates in the Department of Ocean Sciences complete the Honours Dissertation course (OSCS 499A/B), which unfolds over two successive semesters. Unlike a typical undergraduate course, the Honours Dissertation course does not involve any classroom time, and consists only of self-directed and supervised research. With the mentorship of a supervisor, Honours candidates are involved at all stages of this independent research project, from researching the literature and developing the methodologies, to collecting, analyzing and presenting the data, all the way to interpreting the results and teasing out the significance of the findings. The process culminates in a written thesis and a public oral defence, both of which aim to familiarize candidates with key aspects of a researcher's toolkit. Publication of the results in a peer-reviewed scientific journal can even be achieved in the longer term, which is a rewarding (and career-boosting) experience for students.

The department's primary faculty and cross-appointees have a broad range of expertise, within which Honours candidates can find a diversity of research topics in Ocean Sciences, including but not limited to nutrient cycling, plankton dynamics, marine pollution, climate change, coastal and deep-sea processes, benthic biology, evolutionary ecology, marine biotechnology, fisheries, and aquaculture. Furthermore, research can be undertaken at any level of organization, from cellular and molecular studies to animal behaviour and physiology, right up to responses of communities and ecosystems.

The present guidelines have been developed to assist undergraduate students prepare for, undertake and successfully complete their Honours program in the Department of Ocean Sciences. Supervisors are also encouraged to consult this handbook in order to provide informed guidance.

What to do first

Inquiries about the Honours program are welcome at any time. Entry to required courses may be limited and determined by academic performance. Students are advised to consult with the Department at the earliest opportunity to ensure they complete the appropriate prerequisites, meet the admission requirements and stay on track for Honours standings.

Before formally applying to the Honours, students should be enrolled in one of the Major programs offered by the Department of Ocean Sciences. For admission to the Honours program, students shall, at a minimum, have completed all the admission requirements for their Major program and, normally, they should be in the third year of their program. The Honours program includes a prescribed number of courses at the 3000/4000 level as well as mandatory completion of Ocean Sciences 499A/B, which is a linked course consisting of supervised research leading to the submission and oral defence of a thesis.

Apart from reading the present guidelines, prospective candidates should familiarize themselves with the [requirements of the Science Honours degree](#), with the [Honours in Ocean Sciences](#) or the [Honours in Marine Biology \(listed under Joint Honours\)](#) as well as with the Department's [Undergraduate Handbook](#). The checklists of progress found at the end of the latter may be particularly useful.

Main steps

- ✓ Notify the Department (ocean@mun.ca) of your interest at the earliest opportunity, and schedule a meeting.
- ✓ Find a supervisor and identify the topic of your independent research project.
- ✓ Complete your application to the Honours program ([using the Registrar's form](#)).
- ✓ Have your supervisor sign the "provisional acceptance" form (see Annex 1).
- ✓ Once you receive official acceptance from the Department, register for OCSC 499A.
- ✓ Submit your project outline to the Head of the Department, normally within the first 4-5 weeks of the semester for which you are registered in 499A.
- ✓ Submit a preliminary report (draft thesis), with 499A form signed by your supervisor, to the Head of the Department before the last day of classes in the semester for which you are registered in 499A.
- ✓ If you pass OCSC 499A (based on report evaluation), register for OCSC 499B.
- ✓ Submit a final thesis, with 499B form signed by your supervisor, to the Head of the Department at least two weeks before the last day of classes in the semester for which you are registered in 499B.
- ✓ Publicly defend your thesis and, if a "Pass" is awarded, make the necessary corrections to the thesis, and get it approved by your supervisor.
- ✓ Submit the final revised copy of the thesis to the Head of the Department. This must be done before your final grade for OCSC 499B can be sent to the Registrar.

Finding a supervisor

Who can be your supervisor (and co-supervisor)

The supervisor will normally be a **primary faculty member in the Department of Ocean Sciences**, or a researcher who holds a **current cross-appointment** or has official **adjunct status** with the Department. Occasionally, faculty members from other units (e.g. Biology, Biochemistry, Chemistry, Earth Sciences, Marine Institute) and research scientists working with a government agency (e.g. Department of Fisheries and Oceans, Environment Canada), may also be supervisors or co-supervisors where the research topic warrants it. In cases where a supervisor is external to the Department (within the university or not) a co-supervisor from within the Department of Ocean Sciences must be chosen, or will be assigned.

Contacting prospective supervisors

Students must secure a supervisor and identify a research topic well in advance of registering to OCSC 499A. The earlier the better, but we recommend doing so around mid-term of the sixth semester. A signature from the supervisor is required for admission into the Honours.

Students are responsible for approaching potential supervisors. Ideally, they should have some general ideas for research topic areas. Students are encouraged to prepare an introductory package consisting of a cover letter that provides some background and identifies their areas of interest; a brief resume; and a copy of their transcripts. This introductory package may be left in the General Office for the benefit of faculty members looking for Honours students. Copies can also be presented to potential supervisors when contacting them directly.

The following resources are available to help students with this essential step:

- There is a list of possible supervisors and Honours projects available on the Department's website (under development).
- Students can look up the research interests and websites of faculty members (by clicking on their names from the **departmental list**), and approach prospective supervisors directly (with their prepared introductory package).
- The **Program Coordinator** can be consulted to help identify suitable supervisors.
- Instructors (faculty members, laboratory instructors, instructional assistants, graduate student demonstrators) are also a good contact point.
- Working with a prospective supervisor as a MUCEP trainee at the end of the first year may help students get a feel for their research topics and lab environment.

Provisional acceptance

Once you have found a supervisor and identified a research topic, you need to complete the provisional acceptance form, have it signed by your supervisor, and file it with the Main Office. This form is provided in [Annex 1](#).

Developing your research project

Overview

The Honours program is a good prelude to graduate school (MSc and PhD programs) since it provides a full introduction to research. Honours candidates are therefore expected to have a high degree of independence and autonomy with respect to their research projects. The relationship that the student develops with their supervisor is key to success. Under the guidance of the supervisor, the candidate is responsible for undertaking all steps of the project, as outlined below.

- A project normally starts with identifying a main goal and possibly several specific objectives, which involves formulating research questions, hypotheses and/or predictions.
- A thorough literature search on the topic of the project is undertaken.
- Methods to address the objectives are developed in order to collect data.
- Data are subsequently explored using comparative analyses, tables, figures and/or statistical tools.
- Finally, the results are interpreted by comparing them to published findings, and the significance the research is highlighted.
- All these elements should ultimately be presented in the thesis and in the oral presentation.

Research skills will be learned throughout the Honours program, most crucially during the thesis project under the mentorship of the supervisor. If a student has questions about a particular methodology needed to properly collect or analyze their data (e.g. sample processing or experimental protocol, statistical approach), the onus is on the student to talk with the supervisor and/or with labmates, staff and faculty members to find the answers. Similarly, the candidate is expected to be self-directed and seek information at the library or online, in books and in scientific journals. In essence, the student must take ownership of the research experience under the wing of a supervising professor.

Types of projects

Several types of project that are original and generate new knowledge may be suitable for an Honours, for example:

- 1) Laboratory or field research in which the student collects their own data.
- 2) Analysis of published data collected by other investigators. The new knowledge consists of the creative analysis and novel conclusions drawn from the data. In the jargon, this is often called a meta-analysis.
- 3) Original and critical review of present knowledge that proposes significant advances or leads to deeper understanding (going beyond a simple review of the literature). This type of project might be associated with a meta-analysis as in (2). Review papers written in connection with previous courses will NOT meet the Honours requirement for generation of new knowledge.

Preparing the project outline/proposal

Expectations may vary a little across supervisors and project types, but the project outline, which essentially takes the form of a research proposal, should normally be about 5 pages long. It should ideally include the following elements:

- 1) A cover page with the prospective title of the project.
- 2) A draft introduction, with an overview of the relevant background literature, which provides a broader context for the study. This should emphasize why the study is important.
- 3) A brief statement of the objective(s) or scientific question(s) that will be addressed. This should be specific enough that it can be answered within the time constraints of the Honours project. It may take the form of a hypothesis or hypotheses, with testable predictions.
- 4) A concise description of the methods that will be used to address the questions, hypotheses, and/or predictions. For instance, this may refer to the experimental design, the protocol for data collection, the analytical techniques and/or the statistical tools to be used. These should be fairly general, but must provide enough information to determine the feasibility of the project.
- 5) A list of references. Normally, no fewer than 5 references.
- 6) An expected timeline with major milestones.

Expectations and timeline

The independent research project should be considered the pivotal component of the Honours program. The amount of work involved in OCSC 499A/B is intended to be similar to other courses at the senior level (12 hours per week, or about 160 hours per

semester). In total, a student will normally dedicate about 320 hours to complete the Honours project and fulfill the requirements of OCSC 499A/B.

Students and supervisors should strive to select, define or refine research topics so that they will require no more and no less work than indicated above. While Honours candidates should not be expected to carry out graduate-level work, their project should be more complete than any work conducted as part of single-semester research-oriented courses. It should normally be designed to satisfy the full requirements, or constitute a significant portion, of a scientific journal publication.

If it is anticipated that the work may be suitable for publication, either by itself or as part of a larger paper in a peer-reviewed journal, then the student and supervisor should discuss intellectual property issues at the earliest possible stage of their project, including any potential joint authorship that might arise from the research and any joint ownership of data or patents. Supervisors should also make sure they adequately acknowledge any contributions made by Honours students to material they publish. Information on the general **responsibilities of students and supervisors** can be found on the pages of the School of Graduate Studies; these can be used as broad guidelines for Honours as well.

First semester of Honours (449A)

Candidates must define their project in collaboration with the supervisor and submit the resulting project outline/proposal to the Head of the Department before undertaking the research, normally within the first 4-5 weeks of the semester in which they are registered to OCSC 499A. If a student wants to begin research *before* the start of OCSC 499A in September (or January), they should submit their approved project outline to the Head as soon as possible. Guidelines for preparing the thesis outline/proposal are included above.

Ideally, the bulk of the data collection should be conducted in the first semester, in order to leave enough time for data analysis, writing the thesis and preparing for the oral defence. At the completion of 499A, the student must submit a preliminary report to the Head of the Department. Instructions on how to prepare this report are outlined in the next section. Importantly, the candidate must have completed enough work of sufficient quality in the first semester for the supervisor and Head to be satisfied, before being allowed to register for 499B.

Second semester of Honours (499B)

Supervisors will have specific expectations and recommendations, but under ideal conditions, data collection should be completed no later than within the first few weeks of the second semester. Time required for the subsequent steps of the project is often underestimated; these usually include:

- Completing data analysis

- Preparing tables, figures and other illustrations of the results
- Comparing the results with published findings
- Writing and formatting the thesis
- Exchanging thesis versions with the supervisor to polish it
- Submitting the final thesis to the Head for examination
- Preparing visual aids for the oral defence
- Completing the oral defence
- Revising the thesis
- Submitting the final revised and approved thesis to the Head

Writing your thesis

General layout

The following guidelines for the preparation of the Honours thesis are adapted from the regulations for preparing **MSc and PhD theses at Memorial**. The thesis should roughly follow the standard format of a scientific report or journal publication.

Supervisors can provide specific details about thesis structure. The thesis must be written in the first person singular and, if applicable, it should be made clear if any aspect of the study was conducted by other investigators (e.g. labmates, collaborators). Overall, a typical thesis should not normally be less than 30 pages or more than 60 pages of text, including references, but excluding figures, tables and appendices.

The following elements should be included in the thesis:

- 1) Cover page
- 2) Abstract
- 3) Acknowledgements
- 4) List of Tables
- 5) List of Figures
- 6) List of Abbreviations and Symbols (if applicable)
- 7) List of Appendices (if applicable)
- 8) Main text
- 9) References
- 10) Appendices (if applicable)

Cover page

The cover page contains the information used to identify the thesis, including the project title, student's name, type of document (i.e. "a thesis submitted to the Department of Ocean Sciences in partial fulfilment of the requirements for a Bachelor of Science degree with Honours in XXX"), and date. In choosing a title, students should keep in mind that it is a valuable scholarly reference and will often be the only information that a prospective user of the thesis will have available. Care should be taken, therefore, to ensure that the title describes the contents of the thesis as accurately as possible and contains electronically searchable keywords.

Abstract

The purpose of the abstract, which should not exceed 300-350 words, is to provide sufficient information to allow potential readers to evaluate the relevance of the thesis. Ideally, it should provide concise background information, the main research question(s) or objective(s), a brief outline of the methods used, the key results, and an outline of the findings' significance.

Acknowledgments

Intellectual contribution, technical/practical assistance, advice, encouragement and sources of monetary support should be acknowledged. Students should strive not to omit any major contributors to the success of their project and the writing of their thesis.

Table of Contents

Each heading and subheading listed in the table of contents must appear in the text of the thesis, and vice versa. The initial page number for each section and subdivision should be shown. Word processors have useful tools for inserting and updating TOCs.

Lists of Tables, Figures, Plates, Abbreviations/Symbols, and Appendices

Lists of tables, figures, plates, abbreviations and appendices must follow the table of contents if such elements are incorporated in the thesis. Each list should appear on a separate page with the appropriate page numbers. Word processors have useful tools for inserting and updating lists of tables and figures.

Main text

The general text of the thesis should be double-spaced in portrait format (with single spacing used for footnotes or lengthy quotations). Larger spacing may be used where necessary to set off headings, subheadings, or illustrations. Font, font size, style of footnotes and references should be consistent. Times New Roman or similar font of at

least size 12 is recommended. Smaller fonts may be used for footnotes but must be sufficiently clear. The following elements are normally included in the main text:

Introduction

The Introduction provides a comprehensive review of the literature related to the topic of the study; places the research into the larger context of the discipline; and sets out the objectives of the thesis (including research questions, hypotheses and predictions).

Material and methods

This section describes the steps involved in the investigation, as well as the specific protocols and the materials used. It should be sufficiently detailed that anyone could read this section and duplicate the procedures or experiments. It may sometimes be helpful to provide a diagram to illustrate an experimental setup or a table to list the different experimental conditions.

Results

This section outlines the data obtained during the study or experiments, typically using Tables and/or Figures to support the descriptions in the text. It should keep to the facts, and should not include any interpretation of what the results might mean. Formal analyses or statistical support should be used whenever possible.

Discussion

This section is used to explain and interpret the data, and determine whether or not a hypothesis was verified or a question was answered. It should emphasize the significance of the results in a broader context and compare them to previous accounts of a similar nature. This is also where any mistakes and limitations may be acknowledged. Typically, the Discussion ends with a conclusion, which is a concise paragraph that sums up the key findings and what they mean.

References

Bibliographical format should be appropriate to the discipline and should use a consistent style. Bibliographic data must be complete, clear and exact, and must give sufficient information to enable readers to locate the references. The MUN Library has an extensive collection of [online guides](#).

Appendices

Appendices are normally included to provide information that would detract from the readability of the main body of the text or to present data or information used in the thesis but not directly obtained by the thesis author. For example: lengthy tables (e.g.

large data sets), tabulated statistical results, detailed explanation of methods or procedures, links to videos or websites, mathematical or technical descriptions (e.g. codes, formulas).

Margins and pagination

The left margin of all pages should be approximately 40 mm (about 1.5"); all other margins should be approximately 25 mm (about 1"). Each page in a thesis must be identified by a distinct number for ease of reference. Material preceding the first page of the text (i.e., Acknowledgments, Table of Contents, etc.) is to be numbered using lowercase Roman numerals (ii, iii, iv, ...) at the bottom of each page. The title page is considered to be page (i) but is not so indicated. The main thesis text, starting with the Introduction, must be numbered consecutively in Arabic numerals (1, 2, 3, ...) at the bottom of each page. All figures, plates, tables, appendices, and similar material are numbered as pages of the text through to the end of the thesis.

Illustrations

Tables, figures, photographic plates, images and other non-text material whether in black/white or colour should be legible (high resolution), arranged neatly and effectively. Figures and tables should be numbered with Arabic (not Roman) numerals, have a brief title, and be referred to consecutively in the text. The title of a table should be placed above the table, and the title of a figure or plate should be positioned below the figure.

Each figure and table should be comprehensible in its own right; i.e. the caption must provide sufficient information to capture the significance of the results without reference to the text. Scale, orientation and legend should be provided as appropriate.

Tables or figures may be grouped together and placed at the end of the thesis before the list of references (one figure/table per page). Alternatively, tables and figures may be inserted throughout the body of the text. In this case, it should appear where appropriate on the page immediately following the first reference to it in the text.

Copyright and plagiarism

Candidates must clearly distinguish between their own work and ideas, and those of others. Scientific plagiarism is a serious offense and will result in immediate rejection of the thesis, as well as other penalties as per University Regulations on **Academic Misconduct**. Memorial's Writing Centre provides important information on [plagiarism](#).

Plagiarism is using someone else's work or ideas without giving them proper credit. You should always avoid copying material directly from another source. If you use a phrase or sentence or paragraph from another source and simply insert it in your thesis without citing the original source, that's plagiarism. Even if you take an idea from another source

and include it in your own work without citing the original source, that's plagiarism. The original source could be a book, a journal article, a website, or another student's thesis.

Even when you rephrase a sentence, paragraph, or idea, you must give credit to the original source; otherwise you are plagiarizing. If you are unsure about whether something you have included in your own work is possibly plagiarized, ask yourself the following: Is this phrase/sentence/paragraph/idea original to me or did it originate in another source? If it came from another source – even if you've rephrased it – you need to cite the original source to avoid committing plagiarism.

Preliminary report (499A)

The preliminary report submitted in electronic format at the end of the first semester should be about 10-15 pages and should at minimum include the Cover page, and draft versions of the Introduction, Materials and methods, and References. Preliminary Results should be included, when available. The last page of the report should contain an outline of progress made to date and list the anticipated milestones toward project/thesis completion. The supervisor must approve the preliminary report (using the 499A signatory form provided in [Annex 2](#)) before submission to the Head, which must be **no later than the last day of classes** for the semester in which you are registered to OCSC 499A.

The spirit of this report is to ensure that the student has been active while registered for 499A and that this activity can reasonably be expected to result in the timely completion of the project and submission of the final thesis at the end of 499B. Only when the supervisor and Head of Department are satisfied that this is the case will a "PASS" be awarded for OCSC 499A.

If the supervisor and Head are not satisfied with the progress made in 499A, based on performance and on the preliminary report, there are two options. First, a "FAIL" grade may be awarded (this effectively terminates the Honours program). Second, a "PASS" may be awarded despite the lack of progress in 499A on the understanding that registration for 499B will be denied until the candidate has completed further work (on their own, while not registered for either 499A or 499B). The candidate must thereafter resubmit a report of activities to the satisfaction of the supervisor and Head.

The regulations for awarding an "INCOMPLETE" grade also apply to 499A, on the basis of proper written documentation detailing the extenuating circumstances. In such cases students must complete and submit their reports such that a grade can be awarded before the end of the first week of classes of the semester immediately following the one in which they were registered for 499A. Adequately documented extenuating circumstances may make students eligible for an extension of the "INCOMPLETE" until the end of the semester immediately following the one in which they were registered for 499A.

Final thesis (499B)

The final thesis submitted at the end of the second semester must include all the relevant elements and follow the **General layout** outlined above. Students should strive to complete a first draft of the thesis (substantially complete) 4-5 weeks in advance of the submission deadline to enable the supervisor to comment and suggest revisions.

An electronic version of the final thesis, accompanied by the 499B signatory form (**Annex 3**), must be submitted to the Head **at least two weeks before the last day of classes** for the semester in which the student is registered for OCSC 499B. Past this deadline, the Department cannot ensure that the student will be able to graduate at the convocation immediately following the semester in which the student was registered for 499B.

If the thesis is submitted past the above-mentioned deadline, but before the last day for examinations in the semester concerned, the thesis will be processed but timely graduation cannot be guaranteed. The Department (as represented by the Chair of the oral defence and the examiner) has the right to insist on having at least five working days between the day of receiving a copy of the thesis and the day of the oral defence.

If the thesis is submitted after the last day for examinations in the semester concerned, an "INCOMPLETE" may be awarded by the supervisor if the circumstances are sufficiently extenuating. In such cases students must submit their thesis at a time such that the final grade can be submitted to the Registrar's Office on or before the end of the first week of classes in the immediately following semester. *Note that "INCOMPLETE" may be granted only under exceptional circumstances documented in writing and subject to the same conditions as the deferral of final examinations.*

After proper submission of the final thesis, formal examination takes the form of a public oral defence, as outlined in the section below. If the defence results in a "PASS", a revised version of the thesis must be prepared that includes the corrections suggested by the examiners, if applicable. An electronic version of the final revised thesis, approved by the supervisor, must be submitted to the Head before a grade can be forwarded to the Registrar.

As per **University regulations for the BSc Honours degree**, students must also submit a copy of their thesis accompanied by a release form (duly signed by the author and the Head of the Department), to the University Library before the Honours Degree is conferred. The deadline for the submission of an Honours thesis shall be no later than three weeks before the end of the final semester of the student's program. It is the responsibility of the student to consult with the University Library on the required thesis format and resolution.

Presenting your results

About the defence

An oral defence of the thesis is mandatory for successful completion of OCSC 499B. The defence will normally be scheduled **before the end of the examination period** in the semester in which the student is registered for 499B. In the case of late submission of the thesis (see previous section), the defence will be arranged as soon as reasonably possible, bearing in mind the constraints imposed by the availability of all involved, which may not be convenient for the student.

The minimum number of people at the defence shall be the candidate, the supervisor, the examiner and the Chair, although the defence is also open to the public. The Chair of the oral defence will usually be the Head, Deputy Head, Undergraduate Officer, or another delegate of the Department approved by the Head. The external examiner will be appointed by the Head or delegate based on the recommendation of the supervisor. Normally, the examiner will be a primary faculty member, cross-appointee or adjunct of the Department, or an approved faculty member from another academic unit of Memorial. Exceptions to this general guideline may be permitted in individual cases by the Head of Department after consultation with the supervisor.

During and after the defence

Normally, the oral defence will consist of the following: a brief summary of the work given by the candidate (15-20 minutes is an appropriate duration; candidates should practise before the formal defence); questions from the examiner and supervisor will immediately follow the presentation (typically each will be given about 15 minutes); then questions from the Chair (if any) will complete the formal first round. Further questions from any or all of these may then follow. Overall, defences will normally take about one hour.

At the conclusion of the defence, everyone will leave the room except the Chair, examiner and supervisor(s), who will discuss the quality of the written thesis (scientific content, organization, writing style, grammar and spelling), the quality of the oral presentation and the manner in which the candidate answered questions. On the basis of these, a decision will be made to give the candidate a pass or fail. The nature and extent of corrections and revisions to the thesis that would be required are also discussed.

Sequence for scheduling defence in OCSC 499B

1. Supervisor must identify an examiner and a defence date around mid-semester.
2. Supervisor submits the name of suggested examiner to Chair of undergraduate

- committee / OSCUP (examiner's identity does not have to be kept from the student).
3. Chair of OSCUP informs Office when examiner is approved.
 4. Office and supervisor confer to schedule the defence date. Defences should typically be scheduled during the two weeks corresponding to final exams.
 5. Any request for extension needs to be communicated to Office quickly to make sure the deadline for final submission of grades is not jeopardized. Notify OSCUP if needed.
 6. Office lets Chair of OSCUP know the date of the defence so a defence Chair can be appointed.
 7. Office schedules the defence. Duration of defence: 1.5 h.
 8. The 499B report is submitted by student to Academic Program Officer / APO (forwarded to Office and Chair of OSCUP).
 9. Office makes sure the examiner (and Chair) receives a copy of the 499B report and of the rubric (**Annex 4**) ahead of defence.
 10. Student prepares a poster and defence is advertised to DOS and broader community (by Office and APO).
 11. Defence occurs and defence Chair notifies Office of examination outcome (signing **Annex 3**).
 12. Student submits copy of final/revised 499B thesis (approved by Supervisor) to Office, along with Resubmission Form.
 13. Office submits grade to Registrar.

Evaluation

The rubric used to evaluate the Honours thesis and the oral defence is provided in **Annex 4**. Based on the outcome of the evaluation, a grade of pass or fail for OCSC 499B is attributed by unanimous decision of the examiner and the supervisor. In the case of co-supervision, the primary research supervisor will normally have the vote. If the examiner and supervisor disagree, the Chair will decide whether a pass or fail should be awarded; however, if the Chair wishes, a decision may be deferred pending a reading of the thesis by a second examiner chosen by the Head. In cases where a second examiner is consulted, the final decision will be made by the Head in consultation with both examiners, the supervisor and the Chair of the original defence (where that was not the Head).

If called for, revisions to the thesis must be made by the candidate as soon as possible (usually within two days) after the oral defence. This should be done in consultation with the supervisor. The final, corrected, approved copies of the thesis are submitted to the Head of Department. Once the final thesis has been submitted (see requirements under **Final Thesis** above) and approved by the supervisor and Head of Department, the final grade for 499B will be awarded. The length of time that corrections take is the

responsibility of the student. The Department takes no responsibility for any consequences to the student (such as inability to graduate immediately after the semester in question) that may accrue from this correction time. Note that no alterations can be made to the thesis after the Department has submitted the grade.

ABOUT THE EXAMINATION PROCESS

The rubric in Annex 4 is provided as a resource to help examiners assess various elements of the thesis and defence and prepare questions. They do not need to provide a formal review, or a written report, and they are not required to submit the rubric either. However, they are welcome to provide an annotated version of the thesis, or a list of suggested corrections, to help the student prepare a revised thesis.

The examining committee will deliberate in camera (if required) after the defence to allocate a grade of pass or fail. Before a PAS grade can be registered, the student must submit the final approved version of the 499B report with the Resubmission form, which must be signed by the supervisor, to Office (for approval by DOS Head before the grade can be released).

Annex 1

Provisional acceptance form

Honours Program - Department of Ocean Sciences

Program: _____

Name of Student (print): _____

Name of Supervisor (print): _____

Anticipated Research Topic:

I agree to supervise this student's Honours project:

Signature of Supervisor

Date

Annex 2

Submission form for 499A

A fillable form is available from the Main Office

SUBMISSION FORM		
HONOURS REPORT – OCEAN SCIENCES 499A		
STUDENT NAME:	STUDENT NUMBER:	
TITLE OF PROJECT		
DATE SUBMITTED TO SUPERVISOR:		
SUPERVISOR (PLEASE PRINT):		
I HAVE READ THIS REPORT AND FIND IT (SELECT ONE):	ACCEPTABLE	UNACCEPTABLE
SIGNATURE:	DATE:	
CP-SUPERVISOR: (PLEASE PRINT)		
I HAVE READ THIS REPORT AND FIND IT	ACCEPTABLE	UNACCEPTABLE
SIGNATURE:	DATE:	
HEAD OF DEPARTMENT (PLEASE PRINT):		
I HAVE READ THIS REPORT AND FIND IT (SELECT ONE):	ACCEPTABLE	UNACCEPTABLE
SIGNATURE:	DATE:	

Annex 3

Submission form for 499B

A fillable form is available from the Main Office

SUBMISSION FORM		
HONOURS THESIS – OCEAN SCIENCES 499B		
STUDENT NAME:	STUDENT NUMBER:	
TITLE OF THESIS		
DATE SUBMITTED TO SUPERVISOR:		
SUPERVISOR (PLEASE PRINT):		
I HAVE READ THIS REPORT AND FIND IT (SELECT ONE):	READY FOR EXAMINATION	UNACCEPTABLE
SIGNATURE:	DATE:	
CO-SUPERVISOR (PLEASE PRINT):		
I HAVE READ THIS REPORT AND FIND IT (SELECT ONE):	READY FOR EXAMINATION	UNACCEPTABLE
SIGNATURE:	DATE:	
DATE OF ORAL DEFENCE:		
DEFENCE CHAIR:	PASS	FAIL
SIGNATURE:	DATE:	

Annex 4

Rubric for evaluation of Honours thesis and oral defence

1. **THESIS** (weight 60%)

- *Introduction* Topic is clearly presented; background information explains topic's scope and importance; key concepts and theories are well explained; objectives are clear and questions/assumptions/hypotheses well defined.
- *Body* Methods are sufficiently detailed and clear; research results and trends are accurately reported; research results and trends are well interpreted; future directions are identified; text is well structured.
- *Presentation* Figures, tables, and statistics (if necessary) suitably complement text; figures, tables, and statistical summaries are clear and well designed.
- *Literature* Key publications are cited; citations are current; citations and list of references match and are formatted uniformly.

Score: ____/60

2. **ORAL PRESENTATION** (weight 30%)

- *Content* Clear introduction, explanation of approach, and outline of objectives are presented; content is accurate and suitably detailed; mastery of project is demonstrated; comfort with material presented is shown.
- *Organization and Delivery* Presentation is clear, logical, organized, and well-paced; tone and body language engages audience; eye contact is maintained.
- *Use of Visual Aids* Visual aids are appropriate, necessary, effective and well designed; slides are clear and visually appealing; interaction with visual aids is appropriate (e.g. use of pointer, description of contents).

Score: ____/30

3. **QUESTIONS & ANSWERS** (weight 10%)

- *Content* Shows understanding of theories/concepts underlying topic; understands questions and their contexts; acknowledges limits of knowledge.
- *Organization and Delivery* Answers questions clearly and fully; engages in discussion.

Score: ____/10

Total: _____/100

A minimum of 60% is required to obtain a grade of Pass.