Department of Earth & Environmental Sciences  
Graduate Student Regulations and Procedures Handbook  

This is a revision of the regulations for graduate students as well as a handbook of important information for enrolled and prospective graduate students in the Department of Earth and Environmental Sciences (E&ES) at Boston College (BC). The regulations concerning course requirements apply to students who entered the graduate program starting September 2012. All other regulations apply to all graduate students. These regulations and this handbook have been prepared by the E&ES Graduate Program Committee. Questions concerning the contents of this document should be addressed to the Graduate Program Committee.

Philosophy of the Graduate Program in the Department of Earth and Environmental Sciences

The philosophy of the E&ES graduate program is to offer students a research-oriented graduate degree that provides a solid foundation and broad background in the earth sciences. To do this we emphasize two primary components of graduate training: (1) depth and breadth of knowledge across the earth sciences and (2) research. The former is accomplished through a variety of courses within our department and the other sciences. Our research component is a thesis-based program that emphasizes problem solving, data gathering, quantitative analysis and data synthesis. The practical result of our graduate program is to prepare students for any one of many different career paths in the earth sciences, including study for the Ph.D. degree, work in industry, teaching, etc. Our graduate program is designed to ensure that students are qualified and competitive in whatever career path they choose.

Learning outcomes: Upon completion of the M.Sc. in Geology or Geophysics, graduates should be able to:

1. Conduct original, publishable research in the field.
2. Demonstrate a broad knowledge of earth processes.
3. Demonstrate in-depth knowledge of a sub-discipline in the earth sciences.
4. Demonstrate acquired skill in field or laboratory methods and application of appropriate quantitative methods.
5. Write and speak effectively to professional and lay audiences about issues in the field.
6. Teach effectively at the undergraduate level.
Graduate Admissions in the Department of Earth and Environmental Sciences

The graduate admissions process is designed to attract qualified students who wish to have flexibility in setting their graduate study curriculum. The following considerations are used by the Department during the graduate admissions process:

• Graduate applications are accepted and evaluated at any time of year. However, for maximum consideration for financial aid, graduate applications must be submitted by January 10 for September admission.

• Applications for the graduate program should include the application form, an abstract of the courses taken, official transcripts of all academic work to date, scores from the GRE general exam, three letters of recommendation, and a statement of purpose written by the applicant. Subject GRE scores are useful but not required. The Department does not have minimum required grades or test scores, but rather the entire graduate application package is evaluated and rated by the Graduate Program Committee.

• Students are encouraged to contact department faculty members during the application process to explore opportunities for thesis research projects. However, students are admitted to the graduate program without assignment to a thesis advisor. Entering graduate students pick their thesis topic and thesis advisor, with his or her approval, when they start the graduate program.

• The Department currently aims to enroll between 7 and 10 new M.S. students each academic year.

Some students who apply to the E&ES M.S. program do not have the proper undergraduate background to undertake graduate-level studies. These students can apply for “special student” status. If accepted as a special student, the student can then take courses in the Department to fill out his/her background. Special students usually do not receive any financial aid from the Department. A student who has special-student status must fill out a full application to and be accepted into the M.S. program before his/her status can be changed to that of a full-time regular graduate student. Special students who convert to regular graduate student status may count up to 12 credits of graduate-level courses (EESC or other science courses numbered 3000 or higher) that they took as a special student toward the 30 credits that are needed for the M.S. degree.

Graduate Financial Aid

The Department of Earth and Environmental Sciences normally has three different forms of financial aid available. Tuition Remission (TR) is a form of financial aid that defrays the tuition costs of taking graduate courses at Boston College. Most graduate courses are 3-credit courses, and so three TRs are needed for a graduate student to take most graduate courses at no cost to himself/herself. A Teaching Assistantship
(TA) is a form of financial aid where a student is paid a regular stipend to help a professor teach a course in the Department. Depending on the course, a TA may teach one or more lab sections, may assist a professor with course lectures, would help grade quizzes and exams, and/or may help lead field trips. The stipend paid for a TA is normally enough to pay routine living expenses. A Research Assistantship (RA) is a form of financial aid where a student is paid a regular stipend to help a professor conduct research. Like a TA, the stipend paid for an RA is enough to pay routine living expenses.

Each year the Department has available some financial aid in the form of TRs and TAs. Most semesters at least one or two students are supported on RAs. As a rule, students who receive TA or RA support also receive enough TR support to cover their course tuition fees for the semester or academic year for which they are supported. Some students may receive TR support without receiving either a TA or RA.

**Graduate Student Academic Advising**

Upon entering the E&ES graduate program, each graduate student will be assigned a two-member faculty advisory committee. The purpose of this committee is to advise the graduate student regarding course selection, academic regulation, and other questions regarding academics at Boston College. During April of the student’s first academic year, this committee is dissolved, and the student is required to select a new faculty advisory committee (form can be found in the Appendix). This committee shall consist of three faculty members, at least two of whom must be full-time tenured or tenure-track faculty members. An adjunct faculty member can act as one of the members of the new faculty advisory committee. The chair of this new faculty advisory committee must be a full-time tenured or tenure-track faculty member and shall act as the primary thesis advisor for the student. The new three-person faculty advisory committee shall act as voting members for the student’s oral comprehensive exam. Two committee signatures are required for the M.S. thesis. Should a graduate student wish to make a later change to this graduate advisory committee, a request for the change should be submitted to the E&ES Graduate Program Committee. Questions about membership on a student’s faculty advisory committee should be addressed to the E&ES Graduate Program Committee.

**Graduate Student Course Requirements**

*Number of Credits/Courses:* Each graduate student is required to pass at least 30 credits of course work at the graduate level. Graduate-level course work is defined as any Boston College science or mathematics course numbered 3000 or above. Courses taken at BU, Tufts or Brandeis may be counted toward graduate credit with approval from the E&ES Graduate Program Committee.

*Undergraduate Science Requirement:* Each graduate student is expected to have a two-semester, college-level physics or chemistry course before beginning the M.S.
program. If deficient in this requirement, a student may still be admitted to the program, but must work with his/her advisory committee to plan how the deficiency will be made up by then end of the student’s first academic year in the graduate program. Tuition Remission credits (TRs) generally cannot be used for courses numbered 3000 or below, but will occasionally be considered on a case-by-case basis. To use TRs for these courses, students must obtain approval from the Graduate School of Arts & Sciences well in advance of the end of the drop/add period. Requests must be submitted to the E&ES Graduate Program Committee.

**Undergraduate Mathematics Requirement:** Each graduate student is required to have a two-semester, college-level calculus course before completing their graduate degree. If deficient in this requirement, a student may still be admitted to the program, but must work with his/her advisory committee to plan how the deficiency will be made up by then end of the student’s first academic year in the graduate program. Tuition Remission credits (TRs) generally cannot be used for courses numbered 3000 or below, but will occasionally be considered on a case-by-case basis. To use TRs for these courses, students must obtain approval from the Graduate School of Arts & Sciences well in advance of the end of the drop/add period. Requests must be submitted to the E&ES Graduate Program Committee.

**Pass/Fail Courses:** The Boston College Graduate School of Arts and Sciences does not allow graduate students to count courses taken pass/fail toward their graduate degree. The E&ES Department also prohibits graduate students from taking courses numbered less than 3000 on a pass/fail basis if those courses are being taken to make up undergraduate deficiencies. All courses taken by graduate students in the E&ES Department must be taken for a grade.

**Readings & Research (R&R) Courses:** Each graduate student may take no more than one R&R course as part of their graduate curriculum. During the second semester of a graduate student’s first year, the student may take a three credit R&R with their primary advisor. The course will require two 10-page papers, including a literature review of the student’s thesis topic, and the student will be required to make a presentation at the student colloquium in the spring. All other R&R courses shall be either one or two credits.

**Thesis Seminar (EESC8801):** Each graduate student may take up to 6 credits of Thesis Seminar (EESC8801) as part of their graduate curriculum. All six credits of Thesis Seminar may be taken in one semester, if approved by the student’s thesis advisor and graduate advisory committee.

**Interim Study (EESC8888):** Once a graduate student has completed the required course work, they must register for EESC8888, Interim Study, to officially remain enrolled in the program. Registration is routinely done by the department office, but students should verify their status with the department administrator. Failure to register for Interim Study may result in ineligibility for department fellowships and full-time student status.
**GPA Requirement:** All graduate students are required to maintain a cumulative GPA of 3.0 or better to remain in good academic standing in the graduate program. R&R courses and thesis seminars are not counted in this GPA requirement, but courses numbered less than 3000 taken to make up undergraduate deficiencies are counted in computing the student’s GPA. If a student does not achieve a 3.0 GPA at any point during their graduate career, the E&ES Graduate Program Committee shall meet to consider the appropriate course of action, including placing the student on academic probation or dropping the student from the program. The final decision about academic probation or termination in the graduate program shall be made by the full department faculty.

**Earth Systems Seminar (EESC669X):** Each graduate student is required to take the graduate Earth Systems Seminar (GE669X) during their first fall semester in the graduate program. This is the only specific course required of all graduate students.

**Graduate Course Distribution Requirement:** The philosophy of the graduate program in E&ES is to emphasize depth and breadth of knowledge across the earth sciences and to train students in research. To reinforce this philosophy, the graduate course offerings in the Department have been classified into the broad themes of (1) Disciplinary Breadth and (2) Scientific Methods (see Appendix A). These help students build their skills in observation, critical thinking, quantification, and presentation, while at the same time creating a deep understanding of a sub-discipline and promoting a broad understanding of basic issues in the geosciences.

The following graduate course distribution requirement shall apply to all graduate students starting the program in September 2012 or later. A graduate student is required to take at least two (2) courses from each Disciplinary Breadth area and at least one (1) course from each Scientific Methods area. If listed in both areas, a single course can fulfill both a Disciplinary Breadth requirement and a Scientific Methods requirement. If a graduate course offering is not listed under either thematic classification, an inquiry should be made of the Department Graduate Program Committee about the thematic classification for the course.

**Oral Comprehensive Examination and Thesis Proposal Requirements**

**Thesis Proposal:** Each graduate student is required to submit a written thesis proposal during his/her third academic semester in the M.S. program. The thesis proposal shall be prepared under the supervision of the student’s primary thesis advisor, with input from the other two members of the student’s faculty advisory committee, and it shall contain a summary of the student’s thesis project.

The format of the thesis proposal should follow standard practices for scientific writing. A good guide for writing scientific journal articles can be found at: http://abacus.bates.edu/~ganderso/biology/resources/writing/HTWtoc.html ). Clearly
sections would be altered for a proposal format (rather than a journal article) and should include the following sections:

(1) A cover sheet that gives the title of the thesis, the name of the M.S. student who is submitting the thesis proposal, the date of submission of the thesis proposal, and the names of the three thesis advisory committee members. The chair of the thesis committee should be indicated. The thesis proposal must be signed by the three members of the thesis advisory committee before it is submitted to the Graduate Program Committee.

(2) A technical section that describes the thesis project. This section should explain the scientific question or questions that are being addressed by the researcher, give some background about the thesis project, explain the analysis methods and data to be used in the research, give an indication of what kinds of results are expected, and proposed an expected timeline for completion of the project. The technical section should be about 8-10 double-spaced pages, not including figures, tables or references. All figures should have figure captions that explain the figures, similar in style and content to captions for papers in scientific journals (see writing guidelines above). References to published scientific work or to web pages should be included in the technical section of the thesis proposal.

(3) A section at the end of the proposal giving the full citations for all references in the thesis proposal text and figure captions. The references section should be formatted in a style similar to that of scientific earth science publications (see writing guidelines above).

The thesis proposal is to be completed by the student’s third semester in the graduate program. For students who started the graduate program in September, their thesis proposal will be due by October 31 of their third academic semester. For students who schedule the oral exam in the spring semester, their thesis proposal will be due by March 31. The thesis proposal is to be submitted to the chair of the Graduate Program Committee of the Department. The proposal must be signed off by the primary advisor 30 days in advance of the student’s oral comprehensive exam. If a student has not completed and submitted a signed thesis proposal by the appropriate due date, that student will be considered to be making unsatisfactory progress toward his/her graduate degree.

**Oral Comprehensive Examination**: Each graduate student is expected to take an oral comprehensive examination by his/her third semester in the M.S. program. If a student is unprepared to take the oral comprehensive examination during his/her third semester, the faculty advisory committee for that student may petition the E&ES Graduate Program Committee for permission to allow the student to take the oral comprehensive examination during his/her fourth semester in the M.S. program. If the student has not taken the oral comprehensive examination by the end of his/her fourth academic semester in the M.S. program, that student will be considered as making unsatisfactory progress and can be dismissed from the M.S. degree program.

Students have two options for completing oral examinations as follows:
a. Option 1: A general exam, where a student chooses three topics from a list of subject areas. A graduate-level knowledge is expected in one area, and a good working undergraduate-level knowledge in the other two areas. The exam topics for Option 1 are listed in Appendix B.

b. Option 2: The student may be examined largely in the area of his/her thesis proposal. The student is also expected to have a general knowledge of basic earth science, geology and/or geophysics. The student may make a presentation regarding his/her thesis work at the beginning of the oral examination. This presentation may be up to fifteen minutes in length and can contain visual aids.

An examination committee will consist of a student’s principal thesis advisor, a secondary advisor, and a third member chosen by the student with approval by the E&ES Graduate Program Committee. Eligible oral comprehensive exam committee members are regular, adjunct and emeritus faculty in the E&ES Department. If a graduate student wishes to have an examination committee member who is not from the group of eligible committee members, a special request must be made to the E&ES Graduate Program Committee. The Graduate Program Committee will decide whether or not to approve this special request.

The following grades may be earned on the oral comprehensive examination: Pass with distinction, pass, or fail. If a student earns a failing grade, the student is allowed one chance to retake the oral comprehensive exam at a later date. The faculty examination committee will issue a recommendation to the student in writing about what conditions apply to the reexamination when a student fails the first taking of the oral comprehensive exam. A copy of these recommendations should be provided to the department graduate program director and placed in the student’s academic file.

Students may schedule their oral exam no less than 30 days after a thesis proposal signed by the primary advisor has been submitted to the Graduate Program Director. Students must provide their committee members with the final copy of the thesis proposal and are strongly encouraged to meet individually with their committee members during the 30 day period prior to the exam. Oral comprehensive exams are commonly scheduled during the months of November in the fall semester and April in the spring semester. It is the responsibility of the graduate student who will take the exam to arrange a date and time of the exam (a two-hour time slot is required) that is acceptable to all three examination committee members. An oral comprehensive examination request form (see Appendix C) must be filled out and submitted to the department Graduate Program Director at least two weeks prior to the date when the oral comprehensive examination is to take place.

Thesis Requirements

Each graduate student is required to submit a written thesis in order to complete
the M.S. program. The M.S. thesis shall consist of a written document that describes a substantial body of scientific investigation, roughly the equivalent of one published paper in the geoscience literature. Students will be required to write their thesis in one of two formats based on the preference of their advisor and their graduate committee; these formats are the traditional format or the manuscript format.

The traditional format organizes chapters around a central problem and is normally used when no part of the thesis has been published or submitted for publication. The thesis should explain the scientific problem that was addressed, give appropriate background information about the problem, explain the analysis methods, laboratory or field measurements, and data that were used in the scientific investigations, describe the results of the scientific investigations, and explain the significance of the research results. The thesis shall contain appropriate references, figures, tables, and other material that helps explain the investigation and its results. Helpful guidelines for scientific writing can be found at: http://abacus.bates.edu/~ganderso/biology/resources/writing/HTWtoc.html.

Many, if not all, of the elements that comprise a traditional thesis should also be present in the manuscript format thesis, with the distinction that the research findings are explicitly written in the form of a paper/manuscript that has been, or will be, submitted for publication in a peer-reviewed scientific journal. In order to demonstrate the breadth and depth of the students graduate student research efforts and depending on the scope of the manuscript to be written (e.g., short form vs. long form papers), the final thesis submitted to the Graduate School may require more than the manuscript text alone, as additional materials such as introductory chapters, acknowledgments, figures and tables, or additional details on specific methodologies may be appropriate as analytical appendices.

The specific format of the thesis (i.e. traditional versus manuscript format) will be decided by the full committee at the time of a graduate student’s oral examination to formalize expectations. Changes to this thesis format at a later date will require approval of the graduate student’s committee.

A graduate student must have successfully passed the oral comprehensive exam before the M.S. thesis is accepted by the Department. A M.S. thesis is considered completed only after it has been reviewed by the student’s faculty advisory committee and two faculty members have signed the thesis cover sheet. Specifications for the final formatting (i.e. page margins, font size, figure requirements) of the thesis are given by the Boston College Graduate School of Arts and Sciences. No thesis will be considered completed until it has been formatted according to university standards and has been submitted to the university. Information on format specifications and submission can be found at the Boston College Graduate School of Arts and Sciences web page (https://www.bc.edu/bc-web/schools/mcas/graduate/current-students/thesis-checklist.html). The thesis is the final requirement that is completed by a graduate student before the M.S. degree is granted. In addition to the thesis copy required by the university, the E&ES Department also requires that the student must submit one hard-
copy of the completed thesis printed on acid-free paper for inclusion in the Department thesis archive.

M.S. Program Time Limit

The M.S. graduate program in the E&ES Department is designed so that all course requirements and the oral comprehensive exam can be completed in four academic semesters. The time for completing the M.S. thesis can vary widely from student-to-student depending on the capabilities of the student, the complexity of the research project, the logistics of the research, and other unpredictable factors that can crop up when scientific research is carried out. The Boston College Graduate School of Arts and Sciences (GSAS) dictates that graduate students have five years from the start of their graduate program to complete their M.S. degree. Should a graduate student require a sixth year to complete his/her degree requirements, a one-year extension beyond the five-year limit is normally granted after a petition has been filed with GSAS. Extensions beyond the sixth year are only granted for exceptional circumstances.

Review of Graduate Student Academic Progress

As soon as possible after the end of each semester, the E&ES Graduate Program Committee shall review the academic progress of each graduate student in the program. For each graduate student the Graduate Program Committee shall review how many and what courses the student has taken, what cumulative GPA the student has achieved, whether or not a completed thesis proposal has been submitted, whether or not the oral comprehensive examination has been taken and passed, and if the student is making progress toward completion of an acceptable M.S. thesis. If a student is found to have a GPA that is below 3.0, has not taken the required courses or course load, or has not met one of the other deadlines specified in this document for the thesis proposal, oral comprehensive exam, or completion of the M.S. thesis, the Graduate Program Committee will inform the full department faculty of the academic deficiencies of the student. The full department faculty will then consider whether the student should be allowed to remain in the graduate program or should be dismissed immediately from the graduate program. If the student is allowed to remain in the program, the full department faculty may recommend that the graduate student be placed on academic probation along with conditions that the student must fulfill in order to regain satisfactory academic standing. If the student does not fulfill those conditions, the student is subject to being dismissed from the graduate program by vote of the department faculty. If the faculty vote to place a student on academic probation, the Graduate Program Committee shall inform the student in writing of this decision as soon as possible after the decision has been made. At the same time, the Graduate Program Committee shall inform the student in writing of the conditions that must be fulfilled to achieve satisfactory academic standing and be removed from academic probation. Graduate students who are placed on academic probation may lose financial aid (tuition remission credits and/or teaching assistantship or research assistantship) that had been previously offered to them. Changes in financial aid offered to the student will be specified in writing in the academic probation letter.
For graduate students who are on academic probation during a given semester, the E&ES Graduate Program Committee shall specifically review the progress of those students toward fulfilling the academic probation condition during the review of that student as soon as possible at the end of the semester. If a student on academic probation has fulfilled the conditions set by the department faculty when the student was placed on academic probation, the E&ES Graduate Program Committee shall remove the graduate student from academic probation, and the Committee shall inform the student in writing of this action. If the Graduate Program Committee finds that a student has made progress toward fulfilling the conditions of academic probation but has not completed fulfilling those conditions, the Committee may decide to keep the student on academic probation for another semester. In this case, the student will be informed in writing of the continuation of academic probation along with the conditions that need to be fulfilled to achieve satisfactory academic standing. If the Committee finds that the student has not made satisfactory progress toward achieving the academic probation conditions, it will inform the full department faculty of the performance of this student. The full department faculty shall then vote on whether to allow the student to remain on academic probation in the program or to dismiss the student from the graduate program.

**Boston College and Graduate School of Arts and Sciences Rules and Regulations**

All graduate students in the graduate program in the Department of Earth and Environmental Sciences at Boston College are expected to follow all of the rules and regulations of Boston College and of the Graduate School of Arts and Sciences. Graduate students are urged to pay particular attention to the following policies of the Graduate School of Arts and Sciences.

*Academic Integrity*: Graduate students in the graduate program of the Department of Earth and Environmental Sciences are expected to carry out all of their graduate work following the highest standards of academic integrity. Acts of plagiarism, cheating on assignments or exams, knowingly falsifying data, or not properly crediting the work of others violate the accepted standards of academic scholarship and will not be tolerated. Violations of academic integrity standards shall be reported to the Graduate School of Arts and Sciences, whose procedures for dealing with such violations are given at [http://www.bc.edu/content/bc/schools/gsas/policies.html#integrity](http://www.bc.edu/content/bc/schools/gsas/policies.html#integrity).

*Academic Standing and Grading*: The Graduate School of Arts and Sciences requires each graduate student to maintain a GPA of 3.0 or better. This policy is given at [http://www.bc.edu/content/bc/schools/gsas/policies.html#academic%20standing](http://www.bc.edu/content/bc/schools/gsas/policies.html#academic%20standing). The policy for grading graduate students in the Graduate School of Arts and Sciences is specified at [http://www.bc.edu/publications/gcatalog/policy.shtml#grading](http://www.bc.edu/publications/gcatalog/policy.shtml#grading). The policy of the Graduate School of Arts and Sciences regarding grades in courses that are not completed by the end of the academic semester is given at [http://www.bc.edu/content/bc/schools/gsas/policies.html#Incomplete](http://www.bc.edu/content/bc/schools/gsas/policies.html#Incomplete). The policy of the
Graduate School of Arts and Sciences regarding pass/fail grades is specified at http://www.bc.edu/content/bc/schools/gsas/policies.html#Pass/Fail%20Options.

**Academic Grievances:** Graduate students who have a grievance against a faculty member are urged to consult the Graduate School of Arts and Sciences grievance procedures for the recommended course of action that they should follow. These procedures can be found at http://www.bc.edu/content/bc/schools/gsas/policies.html#academic%20grievances.

**Time to Degree and Leaves of Absence:** The Graduate School of Arts and Sciences specifies that graduate students are normally expected to complete their M.S. degree within five years. This policy is specified at http://www.bc.edu/content/bc/schools/gsas/policies.html#Time%20to%20Degree. The Graduate School of Arts and Sciences policy regarding leaves of absence is given at http://www.bc.edu/offices/stserv/academic/univcat/grad_catalog/grad_policies_procedures.html#leaveofabsence

**Transfer of Credits:** Graduate students who have completed some graduate-level coursework at another university may wish to have graduate credits transferred to Boston College from their previous institution and counted toward their M.S. degree requirements in the E&ES Department at Boston College. Requests for the transfer of such credits must be approved by the E&ES Graduate Program Committee. The E&ES Department follows the Graduate School of Arts and Sciences rules regarding the transfer of graduate credits from another university, as given at https://www.bc.edu/bc-web/schools/mcas/graduate/current-students/policies-and-procedures.html

**Non-Academic Graduate Student Issues**

Each graduate student who is in his/her first or second academic year shall be assigned a desk in one of the graduate student offices on the third floor of Devlin Hall. These desks can be used for studying, thesis research, and TA duties. Graduate students with TA assignments shall be available in their offices during their office hours for their courses, and the office hours shall be clearly posted outside their office door. Graduate students in their third year and beyond who require office space should arrange that office space in the lab of their primary faculty advisor, or if necessary, in the lab of some other faculty member.

Teaching and Research Assistantships for graduate students are half-time professional appointments. Faculty generally use much of the break period covering Christmas, Spring Break, and summer to make progress on their research and scholarship. As a professional, you should take advantage of these periods to work on similar goals. Whether you are a TA or an RA, the course instructor or your primary research advisor should be consulted before planning vacations. Students and faculty generally observe official holidays when BC is closed.
Graduate students who remain in good academic standing will normally receive no more than four semesters of TA support during their graduate program. However, graduate students who have already received four semesters of TA support may be eligible for one or two semesters of additional TA support if such support becomes available and the student remains in residence in the department. In addition, some faculty members with research grants may offer graduate students RA support beyond their fourth semester of support in the M.S. program. That decision is made by the faculty member with the research grant.

The Department maintains a fund, the Linehan Fund, to partially support graduate student research and meeting attendance. The fund is named after Fr. Daniel Linehan, S.J., the founder of the Department of Geophysics at Weston Observatory and a former director of Weston Observatory. During his/her time in the M.S. program, each graduate student is allowed to make one request from the Linehan Fund for funding in support of thesis research. In addition, each graduate student is allowed to make one request from the Linehan Fund for funding to support travel to make an oral or poster presentation at a scientific conference. Requests for research support from the Linehan Fund must be made before any money has been spent on the research expense for which support has been requested. Similarly, requests to the Linehan Fund for travel support to make a presentation at a scientific meeting must be submitted at least two weeks before the meeting takes place. Appendix D contains a full description of the rules for applying to the Linehan Fund. *Please note that a completed and fully signed thesis proposal must be on file with the Department before any Linehan Fund requests for research support will be approved.*

The Graduate School of Arts and Sciences has a number of non-academic policies and procedures that affect graduate students. These include partial reimbursement of travel expenses to conferences, health insurance availability and premiums, harassment policies, and information about FERPA (Family Educational Rights and Privacy Act). More information on these topics can be found through links at [http://www.bc.edu/content/bc/schools/gsas/policies.html](http://www.bc.edu/content/bc/schools/gsas/policies.html).
Appendix A. Course Categorization.

### 1. Disciplinary Breadth (2 courses from each)

<table>
<thead>
<tr>
<th>Surficial Processes</th>
<th>Lithospheric Evolution and Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EESC4400: Geomorphology and Landscape Change</td>
<td>EESC3330: Paleobiology</td>
</tr>
<tr>
<td>EESC4430: Environmental Isotope Geochemistry</td>
<td>EESC5536: Topics in Geobiology</td>
</tr>
<tr>
<td>EESC4440: Global Biogeochemical Cycles</td>
<td>EESC3391: Intro to Geophysics</td>
</tr>
<tr>
<td>EESC4462: Paleoclimate</td>
<td>EESC4424: Exploration Geophysics</td>
</tr>
<tr>
<td>EESC4490: Remote Sensing and Image Interpretation</td>
<td>EESC4485: Advanced Structural Geology</td>
</tr>
<tr>
<td>EESC5518: Estuarine Studies</td>
<td>EESC5140 Isotope Geochemistry and Geochronology</td>
</tr>
<tr>
<td>EESC5535: Coastal Processes</td>
<td>EESC5530: Marine Geology</td>
</tr>
<tr>
<td>EESC5549: Climate Change Seminar</td>
<td>EESC5543: Tectonics</td>
</tr>
<tr>
<td>EESC5586: Adv Environmental Oceanography</td>
<td>EESC5578: Petrology</td>
</tr>
<tr>
<td>EESC6657: Watershed Science</td>
<td>EESC6655: Exploration Seismology</td>
</tr>
<tr>
<td>EESC6684: Water and Aqueous Systems</td>
<td>EESC6660: Intro to Seismology</td>
</tr>
<tr>
<td></td>
<td>EESC6695: Microstructure Seminar</td>
</tr>
<tr>
<td></td>
<td>EESC66XX: Geodesy and Crustal Deformation</td>
</tr>
</tbody>
</table>

### 2. Scientific Methods (1 course from each)

<table>
<thead>
<tr>
<th>Data Gathering &amp; Interpretation</th>
<th>Quantitative Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>EESC4400: Geomorphology and Landscape Change</td>
<td>EESC3398: Statistical Analysis of Scientific Data</td>
</tr>
<tr>
<td>EESC4480: Applications of GIS</td>
<td>EESC4424: Environmental Geophysics</td>
</tr>
<tr>
<td>EESC4485: Advanced Structural Geology</td>
<td>EESC4462: Paleoclimate</td>
</tr>
<tr>
<td>EESC4490: Remote Sensing &amp; Image Interpretation</td>
<td>EESC5586: Adv Environmental Oceanography</td>
</tr>
<tr>
<td>EESC5140 Isotope Geochemistry and Geochronology</td>
<td>EESC6664: Environmental Data Exploration and Analysis (grad)</td>
</tr>
<tr>
<td>EESC5518: Estuarine Processes</td>
<td>EESC5572: Geophysical Data Processing</td>
</tr>
<tr>
<td>EESC5535: Coastal Processes</td>
<td>EESC5578: Petrology</td>
</tr>
<tr>
<td>EESC6684: Water and Aqueous Systems</td>
<td>EESC6660: Intro to Seismology</td>
</tr>
<tr>
<td></td>
<td>EESC6655: Exploration Seismology</td>
</tr>
</tbody>
</table>

### 3. Fundamental Methods

EESC6691: Earth Systems Seminar

---

13
Appendix A. Course Categorization (continued).
Guidelines for meeting these criteria:

1. A given course can fulfill a maximum of two categories. For example, if a student takes EESC4485 Adv Structural Geology, they will fulfill 1 of 2 requirements in Lithospheric Evolution and Processes and 1 of 1 in Data Gathering and Interpretation.

2. Substitutions of courses will be considered on a course-by-course basis by the E&ES Graduate Program Committee. Common substitutions may include upper level science and math courses at BC, or upper level geosciences courses at other universities in the area.

Course offerings will vary year to year, check the course schedule on Agora each semester. Graduate courses not listed above may be considered for satisfying distribution requirements. Direct questions about specific courses to the Graduate Program Director.
### Disciplinary Breadth (2 courses for each)

<table>
<thead>
<tr>
<th>Surficial Processes</th>
<th>Lithospheric Evolution and Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Name:</td>
<td>Course Name:</td>
</tr>
<tr>
<td>Semester/Year</td>
<td>Semester/Year</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Name:</td>
<td>Course Name:</td>
</tr>
<tr>
<td>Semester/Year</td>
<td>Semester/Year</td>
</tr>
</tbody>
</table>

### Scientific Methods (1 course for each)

<table>
<thead>
<tr>
<th>Data Gathering &amp; Interpretation</th>
<th>Quantitative Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Name:</td>
<td>Course Name:</td>
</tr>
<tr>
<td>Semester/Year</td>
<td>Semester/Year</td>
</tr>
</tbody>
</table>

### 3. Fundamental Methods

<table>
<thead>
<tr>
<th>EESC669X: Earth Systems Seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester/Year</td>
</tr>
</tbody>
</table>
Appendix B. Oral Comprehensive Examination Option 1 Topics

Group I

1. Geology
2. Geophysics

Group II

1. Physical Stratigraphy and Sedimentation
2. Paleontology and Biostratigraphy
3. Marine/ Costal Geology/ Oceanography
4. Regional Geology: of North Appalachians or another region of comparable size and complexity
5. Structural Geology
6. Rock Mechanics or Soil Mechanics/Engineering Geology
7. Petrology: Igneous, Metamorphic, or Sedimentary rocks.
8. Geochemistry
9. Geochronology
10. Mineralogy
11. Geomorphology
12. Hydrology or Environmental Geology
13. Seismology
14. Exploration Geophysics
15. “Geophysics for Geologists”
16. “Geology for Geophysics”

Students must choose either Geology or Geophysics from group I and three areas from Group II.

* Topics not listed in Group II may be added after petition and approval of the Department Graduate Program Committee and approval by the student’s faculty examination committee.
Appendix C.

M.S. Degree Preliminary Examination Date Request Form
Department of Earth and Environmental Sciences

Name: ________________________________________________________
Date: ______________________________
BC ID#:____________________________
I request preliminary exam on: _____________________________________
(Please specify a date and time. The exam should last about 2 hours)

The following days I am not available (because of teaching, classes, etc.)

<table>
<thead>
<tr>
<th>DAY/TIME</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

My Committee for the exam is:

Principal Advisor: ______________________________________________________
Second Advisor: ________________________________________________________
Committee member for the exam: __________________________________________

(circle one) I choose: Option 1 or Option 2 for the exam.

My Thesis will be entitled:

____________________________________________________________________
____________________________________________________________________

My thesis proposal is signed and on file in the office as of this date: YES_____ No_____  

NOTE: The preliminary exam committee should normally be made of three full-time faculty members. Thesis committee members from outside of the Department do not usually serve on the examination committee. Adjunct professors, part-time faculty in the Department should only be asked to serve on examination committees if they are the primary thesis advisor. All exam committee are subject to the approval by the Department Graduate Program Committee.
Appendix D.  Linehan Fund Information

LINEHAN FUND INFORMATION

The Linehan Fund, named after the late Fr. Daniel Linehan, S.J., former director of Weston Observatory and founder of our graduate program in geophysics, supports graduate student research in the Department of Earth and Environmental Sciences. Linehan funds may be used to pay for expenses associated with M.S. research and with attendance at a professional meeting to present a paper. All M.S. degree candidates in geology and geophysics may submit proposals for the Linehan fund.

Guidelines for proposals:

1. As a rule, support will be given for field and laboratory research expenses. Such expenses may include, but are not limited to, purchase of research supplies or small equipment, rental of special equipment, sample preparation, and field expenses. Expenses for thesis or other manuscript preparation, routine living expenses in the Boston area, or major equipment purchase will not be granted. No funds will be provided for supplies or services normally available through the department.

2. Funds may also be used for attendance at meetings where the results of your Boston College thesis (or other) research have been accepted for presentation by yourself as sole author or co-author. These funds should be separately requested after the paper has been accepted and while you are still a student with no other means of support to attend the meeting.

3. Your request for research support must consist of the following information:
   a.) A brief summary of your research objectives with special attention paid to aspects of the study that require funding. This summary is essentially an abstract of your thesis proposal but must include a listing of both the tasks and the materials required to meet the scientific objectives so that the reviewers can see the need for the money.

   b.) An itemized budget that indicates precisely how the money from the Linehan Fund will be used.

   c.) The signatures of the members of your graduate advisory committee on the cover of your application.

   d.) Note: A copy of your approved and signed thesis proposal must be in your file in the office before money from the Linehan Fund for thesis research will be granted. Appending a photocopy of your thesis proposal is not acceptable since it does not satisfy the need for a summary of your thesis work requested in part (a) above.
4. Applications for travel funds must contain a listing of expenses to be incurred (airfare, room, meals, etc.) together with a copy of the accepted abstract and the letter from the technical program chairman (or other official) informing you of the acceptance of the paper for presentation. The request should also show amounts requested from and approved by other sources, especially the BC Graduate Student Association, the BC Graduate School of Arts and Sciences, and the professional society hosting the meeting.

5. There is no limit on the amount an individual student may request, although awards are usually less than $1,000. Proposals with budgets judged to be inappropriately large will be reduced or rejected. Requests for the purchase of major equipment must be made to your faculty research advisor through regular department channels. Any funds granted are to be used as described in the application. If uses other than those initially proposed become necessary, approval to use the funds in some different manner may be granted by the Department Graduate Program Committee.

6. No grants will be made from the Linehan fund to reimburse for funds already expended for thesis research or meeting attendance. Also, each student during his or her graduate career is eligible to receive Linehan funds only once for thesis research and once for meeting attendance.

7. Proposals for Linehan funds for thesis research will only be accepted during academic semesters, excluding exam periods. Requests for funding for meeting attendance may be made at any time; however, requests made during vacation periods (especially summer) may take a long time for approval.

8. Linehan fund proposals are to be submitted to Graduate Program Director. Copies of these guidelines may be picked up in the Department Office.
Appendix E.
DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES

Graduate Student Advisory Committee Request Form
Fall 2018

NAME _____________________________   DATE _____________

B.C. ID# _____________________________________________________

YEARS IN PROGRAM _________________________________________

REQUESTED THESIS ADVISORY COMMITTEE MEMBERS:

1. Thesis Advisor___________________________________________

2. Committee Member _______________________________________

3. Thesis Reader-Committee Member____________________________

Approved by:

Graduate Program Director_______________Date _____________

*Per Graduate School of Arts and Sciences rules adopted in the fall 2009, thesis advisory
Committees must consist of three faculty members with the chair being a tenured or
tenure track faculty member in the department. Advisory committees need to be
approved by the department Graduate Program Committee. Requests for advisory
commitee members from outside the department need to be made formally by the
department Chair after approval by the Advisory Committee Chair and the Graduate
Program Committee.

Please also fill out this form if requesting a committee change if you are not in your first
year of the program. For changes please indicate the old and new committees.