



School of Marine and Atmospheric Sciences Graduate Student Handbook 2016-2017



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1. INTRODUCTION

Welcome! You are about to start the next phase of your career in marine, atmospheric, and conservation science or policy. All of these are dynamic, exciting fields that will present new and interesting challenges for you. Stony Brook University's School of Marine and Atmospheric Sciences (SoMAS) is glad you have chosen to pursue your advanced studies with us, and we look forward to interacting with you for years to come.

SoMAS has almost 70 faculty members and 130 graduate students, all with diverse interests and experience. You will meet people studying everything from bacterial genetic sequences to creating global climate models. We are all passionate about our work and you are encouraged to talk to students and faculty in fields other than your own – you would be surprised how often students discover an area of marine or atmospheric science they have never heard of before, yet that new area turns into their thesis, dissertation, capstone, or internship project.

Many of you will be making the initial transition from student to scientist during your SoMAS tenure. Unlike most undergraduate studies that focus on presenting you with new information, graduate studies actively involve applying your knowledge to problems and questions for which we do not already have answers. We are training you to be our scientific peers – former SoMAS students regularly collaborate with their advisors on new projects years after graduation.

Expectations of you and corresponding standards are high. Marine and atmospheric sciences are demanding fields, and dedication and effort are prerequisites for success. The magnitude of the difference in expectations between undergraduate studies and graduate studies is comparable to the expectation difference between high school and college. You will need to work hard, but we have every confidence that you will succeed!

This handbook provides information you will find useful in completing your career at SoMAS. The handbook's length might be initially daunting, but not every section applies to every student. In the following pages you will find information about various people and groups at SoMAS, degree requirements and recommended timelines, forms that must be submitted along the way, and general SoMAS policies. Please contact your counselor, the Educational Programs Office, or the Graduate Programs Director when you have questions.

Again, welcome, and let's get started!

2. People, Committees, Groups, and Organizations

There are a number of people and groups you will interact with during your career at SoMAS. You might not interact with all of these people and it is not an all-inclusive list, but below is a description of most of the key people and groups associated with your tenure at SoMAS.

2.1 The List (in Alphabetical Order)

Advisor: Your advisor is a member of the faculty chosen by each student in the SoMAS M. S. and Ph. D. programs. Advisors guide research, approve course selections, and oversee all efforts towards degree completion. Advisors are also concerned with you as a person, and are ready to help solve non-academic difficulties. You may choose to have co-advisors, where two faculty members jointly guide your academic career. The choice of advisor is a critical one, and is perhaps the most important choice you will make. You must choose an advisor by the end of your second semester – the arrangement is by the mutual consent of you and your potential advisor. You must complete the Advisor Declaration form (Appendix I) once an advisor has been found. If you choose to change your advisor at a later date, an Advisor Change form (Appendix I) must be submitted. You will not be allowed to register for your third semester without an official advisor except under exceptional circumstances.

Coordinating Committee for the Marine Conservation and Policy (MCP) Program: Students in the MCP program will be collectively advised by this committee. The committee consists of the MCP Faculty Director (currently Glen Lopez) and other faculty members with interest in marine conservation. In addition to Dr. Lopez, this year's members of the coordinating committee are Anthony Dvaskas, Janet Nye, Ellen Pikitch, Carl Safina, and Lesley Thorne. Additional members may be added soon. Students in the MCP program can go to any of the coordinating committee members for advice, but one faculty member will be assigned as their counselor in the first semester. Counselors help students design their curricula to best meet their interests, satisfy the requirements of the MCP program, and to help students find mentors for their capstone projects or internships.

Counselor: Your counselor is a faculty member assigned to each student upon admission to the SoMAS M. S. or Ph. D. program. The counselor's principal duties are to help you decide what courses to take your first year, to help interpret and clarify degree requirements, and to assist in identifying an advisor (who will assume the counselor's duties). Counselors are available for discussion and advice about any problems you might experience. Students are not obligated to choose their counselor as their advisor.

Educational Programs Office: This office maintains student records and provides support for almost all student activities. In addition to records, this office also coordinates graduate student payroll, tuition scholarships, registration, applications and admission, and course

scheduling. Questions regarding academic procedure can be directed to this office as well as the Graduate Program Director.

Faculty and Graduate Faculty: The faculty of SoMAS are the best resource available to you in your progress towards an advanced degree. You will likely interact with faculty through lectures, seminars, research, and informal discussions. All members of the faculty have a vested interest in the progress of our students; they differ only in personal style. There are several categories of faculty associated with SoMAS, including tenure-track faculty, adjunct faculty, and joint and affiliated faculty. Only faculty who have Graduate Faculty status may serve as advisors to M. S. and Ph. D. students, or serve as internal members of Ph. D. dissertation committees.

Graduate Coordinator of Atmospheric Sciences: The current Director of the Institute for Terrestrial and Planetary Atmospheres (ITPA) is Brian Colle who also serves as coordinator for students in the M. S. and Ph. D. Atmospheric Sciences tracks. He also serves as an academic advisor to all atmospheric science graduate students.

Graduate Programs Committee (GPC): The GPC recommends policy and provides guidance for development and review of current and proposed graduate programs within SoMAS. The committee consists of faculty representatives of the different research disciplines at SoMAS.

Graduate Programs Director (GPD): The GPD, currently David Black, has overall responsibility and authority for the SoMAS graduate program, including distribution of teaching assistantships (TAs), graduate assistantships (GAs), waivers of SoMAS requirements, changes in student status, and approvals for students to take courses outside SoMAS.

Graduate School, The: All SoMAS graduate programs operate with the Stony Brook University Graduate School. SoMAS has some latitude in the details of how our graduate program is run, but there are campus-wide rules set by the Graduate School that all students must follow. Information on Graduate School policies and procedures, and the Graduate Bulletin can be found on the Graduate School web page: www.grad.stonybrook.edu. The Graduate School offers access to a variety of resources ranging from student housing listings to the format required for theses and dissertations.

Graduate School International Services: The Graduate School provides extensive support for foreign students at Stony Brook dealing with immigration and other issues. Please visit www.grad.stonybrook.edu/International/ for more information. Students should consult with Ms. Gretchen Gosnell, the International Student Advisor assigned to SoMAS in the Graduate School, concerning issues regarding visa status.

Graduate Student Advocate: This individual is a graduate student working in the Graduate School and answers directly to the Dean of the Graduate School (not to be confused with

the Dean of SoMAS). The Advocate will aid students experiencing difficulties in academic or administrative matters. This person can act as a mediator, ombudsperson, bureaucratic trouble-shooter, and more. If you encounter a problem during your graduate studies that you can not resolve through SoMAS, please feel free to contact the Graduate Student Advocate at www.grad.stonybrook.edu/students/advocate.shtml.

Graduate Student Organization (GSO): The GSO serves to identify and protect the rights of graduate students, advance their interests, provide a forum for public debate, and promote graduate student participation in university affairs. You pay dues to the GSO through your activity fee. The GSO has elected members on most university committees, and it provides students interested in serving the university an opportunity to do so. SoMAS usually has a student representative in the GSO (www.sbgso.org).

International Student Advisor: Sultan Hameed serves as a resource for international students to help them adjust to the United States educational system.

Marine and Atmospheric Sciences M. S. and Ph. D. Advisory Committee (MASAC): This committee provides advice on policy issues directly related to the marine and atmospheric sciences graduate programs. The committee also approves Ph. D. dissertation committees, all student petitions, proposals for teaching practicums, and new and revised course offerings. The GPD appoints four faculty members and four students to serve on MASAC. All marine and atmospheric science students are encouraged to volunteer to serve, with positions generally lasting two years. Student members have a direct influence on SoMAS academic and student affairs through serving on MASAC.

SoMAS Graduate Student Club (GSC): The SoMAS GSC exists to improve the sense of community among graduate students, faculty, and staff. The club hosts the annual Okubo Visiting Scholar, and helps organize traditional SoMAS activities such as the annual Pot Luck dinner, Vax to Flax race, and Recruitment Weekend. All SoMAS graduate students are welcome to participate in the club and its activities. Students interested in taking an active role in the club should email somasgradclub@gmail.com for additional information, view the web site at sites.google.com/site/somasgradclub/, or speak to a club officer.

3. GENERAL UNIVERSITY DEGREE REQUIREMENTS

There are some general university requirements that all SoMAS graduate students must meet. Failure to meet these requirements may result in not being allowed to register for classes, losing financial support, and dismissal from the program. Information about these Stony Brook University degree requirements can be found in the Graduate Bulletin under Academic Regulations and Procedures and Degree Requirements.

3.1 Registration

All students must be registered continuously from the time they start the program until they complete the degree requirements and hand in their thesis, or withdraw from the program. The only exception to this registration requirement is a Leave of Absence (see Section 9). Part-time students must register for at least one credit each semester to maintain status in the program. You must also be registered for at least one credit in the semester you complete your degree requirements, unless you graduate in August when you can be registered for zero credits of summer research (MAR 800) to maintain eligibility. You must be registered full-time if you are going to receive a stipend or, if you are an international student, to maintain the proper status for your visa. All students are encouraged to register for zero credits of MAR 800 in the summer, as there are potential tax liabilities for not being registered for study in the summer if you are supported on a Research Assistantship. Also, unless you pre-register for Fall classes prior to the end of Spring semester, failure to register for summer session may lead to interruptions in health and library services. You must be registered for at least one credit by the beginning of the Fall and Spring semester or you will have to pay a late-fee; similar fees apply in the summer.

Full-time enrollment status for M. A. and M. S. students:

First year with less than 24 graduate credits completed (G1 status)	12 credits
Second year and beyond (G2 status)	9 credits

Ph. D. students:

First year with less than 24 graduate credits complete (G3 status)	12 credits
Second year and beyond, but before advancement to candidacy (G4 status)	9 credits
After advancement to candidacy (G5 status)	9 credits

3.2 Grading System and Academic Probation

The grading system is explained in detail in the Graduate Bulletin. The Graduate School requires that graduate students maintain a cumulative grade point average (GPA) greater than 3.0 for courses numbered 500 or greater. Students with a GPA below 3.0 will be placed on academic probation, and students who have not raised their GPA above 3.0 after two semesters on probation will not be permitted to re-enroll. No grade of less than "C" can be used to complete degree requirements.

3.3 Administrative Requirements for Graduation

Students expecting to graduate in a given semester must be registered, apply for graduation before the university deadline (online with the Graduate School, and the deadline is very early in the semester!), and complete all university and SoMAS requirements on time. Timeliness is important so the GPD can review your records and recommend to the Dean of the Graduate School that the degree be granted. Candidates who do not complete degree requirements must reapply for graduation during a subsequent semester.

3.4 Credit Requirements, Residency, and Time Limits

The Graduate School requires at least thirty graduate credits with an overall B average to obtain a degree. The M. A. and M. S. degree must be completed within three years. An extension may be requested from the Graduate School if they fail to do so, but approval is not automatic.

Ph. D. students should complete all requirements for their degrees within four years after advancing to candidacy. The Graduate School requires that all Ph. D. candidates satisfy all requirements for the Ph. D. degree within seven years after completing twenty-four graduate credit hours at SoMAS. A petition can be submitted to the Graduate School to extend the time limit if a student needs more time, but approval is not automatic. At least two semesters of full-time study must be spent at Stony Brook.

4. M. A. in MARINE CONSERVATION AND POLICY (MCP) REQUIREMENTS

In addition to the general university requirements (Section 3)...

4.1 General MCP Coursework Description

The MCP program consists of advanced coursework in six skill areas: 1) marine science, 2) marine conservation biology, 3) marine management, economics, policy and law, 4) communications, 5) quantitative data analysis, and 6) field biology. Each degree candidate will choose elective coursework under the supervision of the Coordinating Committee within all of these areas to best suit their specific postgraduate career objectives. Students must also conduct an in-depth Capstone Study or Internship involving analysis of available data, and produce an original synthesis paper based on a committee-approved, consequential topic in marine conservation and policy. Candidates will formally present their work in a program-wide symposium.

The MCP program is designed to be completed in twelve months of full-time study, and requires a minimum of 30 credits of coursework. Due to the elective nature of the curriculum, most students will complete additional credits for their degree. Although designed for one year of full time study, the program can also be completed over a longer period of time; some students elect to do a more comprehensive Internship or Capstone Project thus extending their duration of study. The MCP program is not designed for part-time students who may only be able to enroll in night classes. However, part-time students can complete this program through a careful choice of courses provided they have some ability to take classes taught during working hours.

4.2 MCP Skill Area Requirements

There are required and elective courses from groups A through F below, plus six credits from group G.

- A) Marine Sciences: two courses, one of which has to be in a basic biological field.
- B) Conservation: two courses; MAR 507 (Marine Conservation Biology) – required, plus one elective.
- C) Communications: two courses; MAR 557 (Case Study and Project Planning Seminar) – required, and either a Journalism course sequence (either JRN 500, or any three modules within JRN 501, 502, 503, 504, 505, 508, or 509), or MAR 550 (Policy 3Rs – Read, Write, Raise \$).
- D) Policy/Law/Economics/Management: one course.
- E) Quantitative Assessment: one course.
- F) Field Biology: one course.
- G) Capstone Project (MAR 589) *or* Internship in Marine Conservation and Policy (MAR 592); six credits required for either option. The capstone project or internship can be completed during the summer or during the academic year. A prospectus must be approved by MCP Coordinating Committee prior to registration for credits if the capstone project or internship is begun before completing MAR 557.

Courses from other departments or sometimes other universities can potentially be used to fulfill MCP degree requirements with permission of the MCP Faculty Director. Some courses can fulfill more than one requirement, but students need to complete at least 30 credits to earn the degree. A complete program checklist for the MCP program can be found in Appendix I

4.3 For Those Doing a Capstone Project: Prospectus for Capstone Project Credits (MAR 589)

A capstone project provides an opportunity for students to explore a topic in detail, usually involving independent analysis of information collected by others to address a problem of consequence in your field. It is anticipated that most students will conduct their Capstone Project during the summer, taking three credits of internship during each of the two summer sessions and working on projects developed during the required Case Study and Project Planning Seminar (MAR 557). However, it is also possible to earn Capstone Project credits during the spring or fall semesters. Students wishing to start on their Capstone Project prior to completing MAR 557 must make the necessary arrangements and get approval from both their instructor of record for the credits and from the MCP Coordinating Committee before commencing their project. Retroactive requests are usually not approved except in unusual circumstances.

Discuss your project plans with members of the MCP Coordinating Committee. Once the plan has reached the point of approval, prepare a one-page prospectus providing the following information and submit it to the MCP Coordinating Committee:

1. Title of project
2. Your name and contact information
3. A description of the study you expect to undertake. The study should explore a problem or issue in-depth requiring independent analysis on your part.
4. The number of credits for which you plan to register. A total of six credits is needed to meet the M. A. requirements. Forty-five to sixty hours of effort per semester is equal to one credit.
5. The name of your SoMAS faculty instructor of record for the project. This person will usually be a member of the MCP Coordinating Committee unless another SoMAS faculty member is actively involved with your project. If another member of the SoMAS faculty is going to supervise your project, they must provide a letter or email endorsing your plan.
6. A description of how much of your project you anticipate completing during the semester in question, and how you will demonstrate completion of this aspect of your project. Normally you will keep a journal describing your activities. You are expected to write a ten- to fifteen-page, double-spaced report detailing what you learned and why it is important prior to completing your project. Further details of expectation for these papers will be discussed in MAR 557. All students will give an oral presentation on their capstone projects, usually during the annual MCP symposium in August.

Once the Coordinating Committee approves your prospectus, the faculty instructor of record should contact the SoMAS Educational Programs Office (Ginny Clancy) and give you permission to register for the project. This must be done before the end of the add/drop period. When you have permission you must go into SOLAR and register for MAR 589 under the section associated with the instructor of record.

You should provide a progress report to your faculty instructor of record mid-way through the semester. The MCP Faculty Director will send out deadlines for outlines, drafts, and your final paper. At the end of the semester, prepare and submit your journal and report. If you complete your six credits of capstone project at a time other than the summer, and cannot participate in the Symposium, you will also need to schedule a time to present your capstone project in an oral presentation.

4.4 For Those Doing an Internship: Prospectus for Internship Credits (MAR 592)

An internship is a valuable way for students to obtain real-world experience with a company, governmental organization, non-governmental organization (NGO), educational facility, etc. Although we will suggest possible internship opportunities, students often discover opportunities on their own and bring them to us for consideration. It is anticipated that most students will conduct their internship during the summer, taking three credits of internship during each of the two summer sessions and working on projects developed during the required Case Study and Project Planning Seminar (MAR 557). However, it is also possible to earn internship credits during the spring or fall semesters. Students wishing to start internship activities prior to completing MAR 557 must get approval from the MCP Coordinating Committee and their MCP mentor/ instructor of record before commencing their internship. Retroactive requests are usually not approved.

Discuss your internship plans with members of the MCP Coordinating Committee. Once the plan has reached the point of approval, prepare a one-page prospectus providing the following information and submit it to the MCP Coordinating Committee:

1. Title of project.
2. Your name and contact information.
3. The organization you will be interning with.
4. A description of the work you expect to do and the project you plan to focus on.
5. The number of credits for which you plan to register. A total of six credits is needed to meet the M. A. requirements. Forty-five to sixty hours of effort per semester is equal to one credit.
6. The name and contact information for your internship supervisor at the organization. Ask this person to send an email or letter to the SoMAS faculty instructor of record (see below) verifying their willingness to serve as your internship supervisor and their acceptance of your prospectus.
7. The name of your SoMAS faculty instructor of record for the project. This person will usually be a member of the MCP Coordinating Committee unless another SoMAS faculty member is actively involved with your internship project.
8. A description of how your work will be assessed during the semester. Normally you will keep a journal describing your activities. All internships must have intellectual content in addition to the practical experience you will receive. As part of your

internship you are expected to write a ten- to fifteen-page, double-spaced report detailing what you learned and why it is important prior to completing your project. Further details of expectation for these papers will be discussed in MAR 557. All students will give an oral presentation on their capstone projects, usually during the annual MCP symposium in August.

Once the Coordinating Committee approves your prospectus, the faculty instructor of record should contact the SoMAS Educational Programs Office (Ginny Clancy) and give you permission to register for the project. This must be done before the end of the add/drop period.

You should provide a progress report to your faculty instructor of record mid-way through the semester. The MCP Faculty Director will send out deadlines for outlines, drafts, and your final paper. Prepare and submit your journal and report at the end of the semester. If you complete your six credits of internship at a time other than the summer, and cannot participate in the Symposium, you will also need to schedule a time to present your internship project in an oral presentation.

4.5 Steps Towards Graduation and Timeline

The schedule below describes a typical student completing their program of study in one year beginning in the fall. It is very important to plan out the entire year at the beginning of the program due to intensive nature of the coursework and to ensure you meet all program requirements by the end of the year.

Fall Semester:

- Meet with the MCP Coordinating Committee mentor and plan our courses to best address individual career goals and ensure you can complete the curriculum within the desired time (submit MCP Curriculum Checklist form).
- Complete Marine Conservation (MAR 507), Case Study and Project Planning Seminar (MAR 577), and usually three additional courses if full-time.
- You will prepare your capstone project or internship proposal as part of the requirements for MAR 577. This proposal must be submitted to the MCP Coordinating Committee for approval (submit Prospectus for Internship or Capstone Study).

Winter Session:

- Take Tropical Marine Ecology (MAR 537) if desired.

Spring Semester:

- Complete required coursework and finalize plans for your capstone project or internship.

Summer Session:

- Register for Capstone Project in Marine Conservation and Policy (MAR 583) or Internship in Marine Conservation and Policy (MAR 592). You

should take three credits for each summer session if you have not already completed MAR 583 or MAR 592 credits already.

- Complete field course requirement by taking Long Island Marine Habitats (MAR 531) if you did not take MAR 537 during the winter, or other MCP Director-approved course if necessary.
- Apply online to graduate.
- Communicate with your mentor and incorporate their feedback into drafts of your capstone project or internship report.
- Submit your capstone project or internship report.
- Give your oral presentation as part of the annual MCP symposium.
- Graduate!

5. M. S. in MARINE SCIENCES REQUIREMENTS

In addition to the general university requirements (Section 3)...

5.1.0 Course Requirements

SoMAS requires that all M. S. students take and pass specific required courses with at least a B average, and with no grade falling below a C. The specific courses subject to the minimum grade average are listed in 1-3 below.

1. Foundations of Marine Sciences I: Biogeochemical Processes (MAR 508).
2. Foundations of Marine Sciences II: Physics of Oceans, Atmosphere, and Climate (MAR 509).
3. One of the following: Physical Oceanography* (MAR 501), Biological Oceanography (MAR 502), Chemical Oceanography (MAR 503), or Geological Oceanography* (MAR 506).

* - MAR 501 and 506 may not be offered every year. Physical oceanography students may substitute one of the required courses in the Atmospheric Sciences track (see Section 6) or Dynamical Oceanography I and II (MAR 547, 548) to fulfill this requirement. Geological oceanography students should consult with their advisor and the MASAC for an allowable substitution.

4. Practical Skills for Scientists (MAR 568).
5. Two semesters of Seminar (MAR 580), usually Oceans and Atmosphere Colloquium (MAR 580, section 01) .
6. One quantitative course. Examples of current offerings that meet this requirement include, but are not necessarily limited to: Modern Methods of Data Analysis in Atmospheric and Ocean Sciences Part I (MAR 538), Remote Sensing (MAR 558), Quantitative Fisheries Ecology (MAR 561), Diagenesis of Marine Sediments I and II (MAR 562, 563), Programming Statistics in R (MAR 569), Dynamical Oceanography I and II (MAR 547, 548), Introduction to Ecological Modeling (MAR 586), GIS: Display and Analysis of Environmental Data (MAR 587), and Dynamic Models with Matlab (MAR 601). Appropriate courses from other departments, such as Biometry (BEE 552) can also be used to fulfill the quantitative course requirement with advance approval from the MASAC.
7. Six credits of other courses appropriate to the student's specialty.

On an individual basis, core course requirements may be substituted by a combination of equivalent Marine and Atmospheric Sciences courses for a tailored interdisciplinary curriculum. Such substitutions must be recommended by a faculty member in writing and approved by the MASAC.

5.1.1 Consequences of Not Achieving at Least a B Average in the Specific Required Courses

Students who fail to meet the minimum grade for specific required courses must before the beginning of their third semester have a plan to remedy their academic standing in the program approved by the MASAC. A written description of the remedy and a completed petition form should be submitted immediately to the MASAC after your grades for the three required courses are available. The remedy should be developed with the help of your counselor or advisor and relevant foundation course instructors. The usual remedy will either be the retaking of whichever course(s) is(are) required to bring the student into compliance with the course grade requirement, or the completion of a specialized course (not a seminar-style course or directed study) in the same field as the core course(s) in which you did not do well.

5.1.2 Seminars

All first-year students are required to attend the weekly Oceans and Atmosphere Colloquium (OAC) or the Topics in Atmospheric and Oceanic Sciences (TAOS) seminar series during both the Fall and Spring semesters; Marine Science-track students usually enroll in the OAC seminar. You should register for MAR 580, section 01 (OAC) for zero credits and sign the attendance roster each week they attend. Part-time students who cannot attend the seminar regularly can arrange with the OAC coordinator to attend approved seminars at any academic institution or national meeting of a scientific society. No more than two seminars can be missed in any semester to fulfill the seminar requirement. Attendance at a TAOS seminar can substitute for attendance at the OAC with prior approval of the OAC coordinator. You are expected, but not required, to attend the weekly seminars after your first year as well.

5.1.3 Research Credits

All first-year students should register for at least one to three credits of Directed Study (MAR 552) or Research (MAR 590) as an exploration of possible research topics and potential advisors. This can be done in either the first or second semester, but must be done under the supervision of a faculty member. Sign up for the section number of these courses belonging to the appropriate faculty member.

5.2 Field Experience

All students in the Marine Sciences track must have seagoing or other appropriate field experience. An ideal field experience should include preparation for field work, one or more days of participation in field sampling and data collection, and involvement in post-trip sample/data processing. Students doing research that lacks a field component (*e.g.*, modelers) can participate through other lab's field work with permission from the overseeing faculty member. Submit the Field Experience form (Appendix I) to the Educational Programs Office for approval by the MASAC once your field experience is complete.

5.3.0 Research Proposal and Thesis Committee

The written proposal for your M. S. research must be completed before you begin your second year of study, and be signed by your advisor and two readers. The proposal should include at minimum a statement of the project's objectives, background to the research problem, a description of the approach that will be taken, and a list of references cited. The proposal need not be long – if written well, approximately five single-spaced pages (not including figures, tables, and references) could suffice. A copy of the proposal with a completed and attached M. S. Thesis Research Proposal form (see Appendix I) should be turned into the Educational Programs Office. Students who fail to complete their proposal by the end of the third semester may lose their tuition scholarships.

Your thesis committee consists of an advisor who must be a SoMAS Graduate Faculty member, and at least two additional readers (who do not have to be SoMAS Graduate Faculty). Readers who are external to SoMAS must be approved by the MASAC before the proposal is submitted (see Appendix I for relevant form). Your thesis committee will supervise and evaluate your research, and must approve your thesis before you can graduate. Any changes to your M. S. committee after submitting your signed Research Proposal must be approved by the MASAC.

5.3.1 Committee Meetings

You should ideally meet with your thesis committee every six months to update them on your progress. At the very least you should provide the committee with a written report describing your progress, problems, any changes in research direction, and requests for advice about specific issues.

5.4.0 Oral Presentation of the Thesis

Your thesis must be presented orally to the general public, and the presentation has to be made before the approved thesis is submitted to the Graduate School. Your advisor and thesis readers should attend the oral presentation and meet with the student afterwards to discuss questions raised during the presentation and any other issues with the thesis. You must provide the Educational Programs Office with the day and time of the presentation at least one week in advance or the presentation date. Similarly, a copy of the written thesis should be provided to all members of your thesis committee at least one week in advance of the presentation date.

Any formal public presentation of your thesis may be acceptable in fulfillment of the thesis presentation requirement as long as the presentation is properly advertised at least one week in advance and that it is being presented to satisfy the M. S. presentation requirement. The presentation could be given during a specially-scheduled time, during a class or seminar course, or conference subject to the approval of the course instructor(s), thesis committee, and the above constraints.

5.4.1 Thesis Approval

Your thesis committee will approve your thesis by signing the thesis title page. A signed title page may be held by your advisor until any necessary revisions are completed to the satisfaction of your thesis committee. The approved thesis is then submitted to the

Graduate School. The thesis must be prepared according to the Graduate School's guidelines as described in the Guide to Preparation of Theses and Dissertations (www.grad.stonybrook.edu/academics/t&d.shtml). The deadline for submission of theses each semester is set by the Graduate School.

In lieu of a thesis, the Graduate School will accept a manuscript that has been officially accepted for publication in a refereed journal as long as the manuscript is in the thesis format required by the Graduate School and approved by the M. S. thesis committee. The manuscript may have multiple authors as long as your work is clearly distinguished from other elements of the paper either by a separate letter from the other authors, or within the paper itself.

5.4.2 M. S. Completion Form

Once you have completed the oral presentation of your thesis, and your committee members have approved your thesis, they must sign the M.S. Thesis Completion Form (see Appendix I), and you should submit it to the Educational Programs Office.

5.5 Steps Towards Graduation and Timeline

The schedule below describes a typical student completing their program of study in one year beginning in the fall.

First (fall) Semester:

- Foundation courses MAR 508 and 509 (six credits).
- One specialty course (two or three credits).
- OAC Seminar MAR 580.01 (zero credits).
- Remainder of twelve credits made up of thesis research (MAR 590) or directed study (MAR 552) with potential advisor.

Second (spring) Semester:

- At least one of the core courses MAR 501, 502, 503, or 506 (three or more credits).
- MAR 568 (Practical Skills for Scientists; three credits).
- OAC Seminar MAR 580.01 (zero credits).
- Remainder of twelve credits made up of thesis research (MAR 590) or directed study (MAR 552) with potential advisor.
- Apply for New York state residency (U. S. citizens only).
- Submit "Advisor Selection" form.

Summer:

- Submit M. S. thesis proposal with "M. S. Thesis Research Proposal" form before the fall semester starts.

Third (fall) Semester:

- Specialty courses and thesis research (nine credits total).
- Field experience (submit "Completion of Field Experience" form once completed).

Fourth (spring) Semester:

- Field experience if not already completed.

- Specialty courses and thesis research (nine credits total).
- Submit the marine science-track “Completion of Specialty (Advanced), Quantitative, and Seminar Courses” forms if you have not already done so.

Fifth and Sixth Semesters as Needed:

- Specialty courses and thesis research (nine credits total).
- Apply to graduate.
- Present M. S. thesis seminar and submit “M. S. Completion” form.
- Submit signed M. S. thesis to the Graduate School and SoMAS Educational Programs Office.
- Graduate!

6. M. S. in ATMOSPHERIC SCIENCES REQUIREMENTS

In addition to the general university requirements (Section 3)...

6.1.0 Course Requirements

SoMAS requires that all M. S. students take and pass specific required courses with at least a B average, and with no grade falling below a C. The specific courses subject to the minimum grade average are listed in items 1 and 2 below.

1. Foundations of Atmospheric Sciences I (MAR 541)
2. Foundations of Atmospheric Sciences II (MAR 542)
3. One oceanography course chosen from amongst the following: Physical Oceanography* (MAR 501), Chemical Oceanography (MAR 503), Geological Oceanography* (MAR 506), Foundations of Marine Sciences I: Biogeochemical Processes (MAR 508), Paleoceanography and Paleoclimatology* (MAR 545), or Dynamical Oceanography I* (MAR 547).
 - * - MAR 501, 506, and 547 may not be offered every year, and MAR 545 is offered every other year.
4. Four** of the following advanced courses: General Circulation of the Atmosphere (MAR 505), Modern Methods of Data Analysis in Atmospheric and Marine Sciences (MAR 538), Atmospheric Radiation (MAR 544), Dynamical Oceanography II*** (MAR 548), Tropical Meteorology (MAR 565), Geophysical Simulation (MAR 572), Doppler Weather Radar (MAR 583), Atmospheric Physics (MAR 593), Atmospheric Dynamics (MAR 594), Atmospheric Chemistry (MAR 596), and Synoptic Mesoscale Meteorology (MAR 598).
 - ** - this is a small change from the previously required number of advanced courses and is awaiting final approval from the Graduate School. All incoming M. S. students should take four of the listed advanced courses as described.
 - *** - MAR 548 may not be offered every year.
5. Two semesters of Atmospheric Sciences Graduate Student Seminar (MAR 595)
6. Two semesters of Topics in Atmospheric and Oceanic Sciences (MAR 580, section 02).

On an individual basis, core course requirements may be substituted by a combination of equivalent Marine and Atmospheric Sciences courses for a tailored interdisciplinary curriculum. Such substitutions must be recommended by a faculty member in writing and approved by the MASAC.

6.1.1 Consequences of Not Achieving at Least a B Average in the Specific Required Courses

M. S. students who fail to obtain a B average in the two foundation courses (MAR 541 and 542) are required to take one or both of the courses again and achieve a combined average of B or higher.

6.1.2 Seminars

All first-year students are required to attend the weekly Topics in Atmospheric and Oceanic Sciences (TAOS) or the Oceans and Atmosphere Colloquium (OAC) seminar series during both the Fall and Spring semesters; Atmospheric Science-track students usually enroll in the TAOS seminar. You should register for MAR 580, section 02 (TAOS) for zero credits and sign the attendance roster each week they attend. Part-time students who cannot attend the seminar regularly can arrange with the TAOS coordinator to attend approved seminars at any academic institution or national meeting of a scientific society. No more than two seminars can be missed in any semester to fulfill the seminar requirement. You are expected, but not required, to attend the weekly seminars after your first year as well.

6.1.3 Research Credits

All first-year students should register for at least one to three credits of Directed Study (MAR 552) or Research (MAR 590) as an exploration of possible research topics and potential advisors. This can be done in either the first or second semester, but must be done under the supervision of a faculty member. Sign up for the section number of these courses belonging to the appropriate faculty member.

6.2.0 Research Proposal and Thesis Committee

The written proposal for your M. S. research must be completed before you begin your second year of study, and be signed by your advisor and two readers. The proposal should include at minimum a statement of the project's objectives, background to the research problem, a description of the approach that will be taken, and a list of references cited. The proposal need not be long – if written well, approximately five single-spaced pages (not including figures, tables, and references) could suffice. A copy of the proposal with a completed and attached M. S. Thesis Research Proposal form (see Appendix I) should be turned into the Educational Programs Office. Students who fail to complete their proposal by the end of the third semester may lose their tuition scholarships.

Your thesis committee consists of an advisor who must be a SoMAS Graduate Faculty member, and at least two additional readers (who do not have to be SoMAS Graduate Faculty). Readers who are external to SoMAS must be approved by the MASAC before the proposal is submitted (see Appendix I for relevant form). Your thesis committee will supervise and evaluate your research, and must approve your thesis before you can graduate. Any changes to your M. S. committee after submitting your signed Research Proposal must be approved by the MASAC.

6.2.1 Committee Meetings

You should ideally meet with your thesis committee every six months to update them on your progress. At the very least you should provide the committee with a written report describing your progress, problems, any changes in research direction, and requests for advice about specific issues.

6.2.2 Oral Presentation of the Thesis

Your thesis must be presented orally to the general public, and the presentation has to be made before the approved thesis is submitted to the Graduate School. Your advisor and thesis readers should attend the oral presentation and meet with the student afterwards to discuss questions raised during the presentation and any other issues with the thesis. You must provide the Educational Programs Office with the day and time of the presentation at least one week in advance of the presentation date. Similarly, a copy of the written thesis should be provided to all members of your thesis committee at least one week in advance of the presentation date. Any formal presentation of your thesis at SoMAS may be acceptable in fulfillment of the thesis presentation requirement as long as the presentation is properly advertised at least one week in advance and that it is being presented to satisfy the M. S. presentation requirement. The presentation could be given during a specially-scheduled time, or during a class or seminar course subject to the approval of the course instructor(s), thesis committee, and the above constraints.

6.2.3 Thesis Approval

Your thesis committee will approve your thesis by signing the thesis title page. A signed title page may be held by your advisor until any necessary revisions are completed to the satisfaction of your thesis committee. The approved thesis is then submitted to the Graduate School. The thesis must be prepared according to the Graduate School's guidelines as described in the Guide to Preparation of Theses and Dissertations (www.grad.stonybrook.edu/academics/t&d.shtml). The deadline for submission of theses each semester is set by the Graduate School.

In lieu of a thesis, the Graduate School will accept a manuscript that has been officially accepted for publication in a refereed journal as long as the manuscript is in the thesis format required by the Graduate School and approved by the M. S. thesis committee. The manuscript may have multiple authors as long as your work is clearly distinguished from other elements of the paper either by a separate letter from the other authors, or within the paper itself.

6.2.4 M. S. Completion Form

Once you have completed the oral presentation of your thesis, and your committee members have approved your thesis, they must sign the M.S. Thesis Completion Form (see Appendix I), and you should submit it to the Educational Programs Office.

6.3 Steps Towards Graduation and Timeline

The schedule below describes a typical student completing their program of study in one year beginning in the fall.

First (fall) Semester:

- Foundation courses MAR 541 and 542 (six credits).
- TAOS Seminar MAR 580.02 (zero credits).
- One specialty course and/or one oceanography course (two or three credits each)

- Remainder of twelve credits made up of thesis research (MAR 590) or directed study (MAR 552) with potential advisor.

Second (spring) Semester:

- Two required specialty core courses (six credits).
- Graduate Seminar MAR 595 (one credit).
- TAOS Seminar MAR 580.02 (zero credits).
- Remainder of twelve credits made up of thesis research (MAR 590) or directed study (MAR 552) with potential advisor, or one specialty course.
- Apply for New York state residency (U. S. citizens only).
- Submit “Advisor Selection” form.

Summer:

- Submit M. S. thesis proposal with “M. S. Thesis Research Proposal” form before the fall semester starts.

Third (fall) Semester:

- One required specialty course or one oceanography course (three credits).
- One elective course (three credits).
- Graduate Seminar MAR 595 (one credit)
- Specialty courses and thesis research (nine credits total).
- Submit atmospheric-track “Completion of Additional Specialty (Advanced) and Seminar Courses” form.

Fourth (spring) Semester:

- Thesis research (MAR 590).

Fifth and Sixth Semesters as Needed:

- Thesis research (MAR 590).
- Apply to graduate.
- Present M. S. thesis seminar and submit “M. S. Completion” form.
- Submit signed M. S. thesis to the Graduate School and SoMAS Educational Programs Office.
- Graduate!

7. PH. D. in MARINE SCIENCES REQUIRMENTS

In addition to the general university requirements (Section 3)...

7.1.0 Course Requirements

SoMAS requires that all Ph. D. students take and pass specific required courses with at least a B average, and with no grade falling below a C. The specific courses subject to the minimum grade average are listed in 1-3 below.

1. Foundations of Marine Sciences I: Biogeochemical Processes (MAR 508).
2. Foundations of Marine Sciences II: Physics of Oceans, Atmosphere, and Climate (MAR 509).
3. One of the following: Physical Oceanography* (MAR 501), Biological Oceanography (MAR 502), Chemical Oceanography (MAR 503), or Geological Oceanography* (MAR 506).

* - MAR 501 and 506 may not be offered every year. Physical oceanography students may substitute one of the required courses in the Atmospheric Sciences track (see Section 8.1.0) or Dynamical Oceanography I and II (MAR 547, 548) to fulfill this requirement. Geological oceanography students should consult with their advisor and the MASAC for an allowable substitution.

4. Practical Skills for Scientists (MAR 568).
5. Two semesters of Seminar (MAR 580), usually Oceans and Atmosphere Colloquium (MAR 580.01) .
6. One quantitative course. Examples of current offerings that meet this requirement include, but are not necessarily limited to: Modern Methods of Data Analysis in Atmospheric and Ocean Sciences Part I (MAR 538), Remote Sensing (MAR 558), Quantitative Fisheries Ecology (MAR 561), Diagenesis of Marine Sediments I and II (MAR 562, 563), Programming Statistics in R (MAR 569), Dynamical Oceanography I and II (MAR 547, 548), Introduction to Ecological Modeling (MAR 586), GIS: Display and Analysis of Environmental Data (MAR 587), and Dynamic Models with Matlab (MAR 601). Appropriate courses from other departments, such as Biometry (BEE 552) can also be used to fulfill the quantitative course requirement with advance approval from the MASAC.
7. Six credits of other courses appropriate to the student's specialty.
8. Four credits of seminar courses. Seminar courses are those taught primarily by discussion, usually requiring student presentations.
9. At least one credit of Teaching Practicum (MAR 670) – see Section 7.1.4 below for more information.

On an individual basis, core course requirements may be substituted by a combination of equivalent Marine and Atmospheric Sciences courses for a tailored

interdisciplinary curriculum. Such substitutions must be recommended by a faculty member in writing and approved by the Masters and Ph. D. Programs Committee (MASAC).

7.1.1 Consequences of Not Achieving at Least a B Average in the Specific Required Courses

Students who fail to meet the minimum grade for specific required courses must before the beginning of their third semester have a plan to remedy their academic standing in the program approved by the MASAC. A written description of the remedy and a completed petition form should be submitted immediately to the MASAC after your grades for the three required courses are available. The remedy should be developed with the help of your counselor or advisor and relevant foundation course instructors. The usual remedy will either be the retaking of whichever course(s) is(are) required to bring the student into compliance with the course grade requirement, or the completion of a specialized course (not a seminar-style course or directed study) in the same field as the core course(s) in which you did not do well.

Please note that students who fail to achieve the B average in the courses listed in 1-3 above will be required to either delay taking the Comprehensive Exam (Section 7.2.0) to allow time to remedy the course grade average, or switch to the M. S. program.

7.1.2 Seminars

All first-year students are required to attend the weekly Oceans and Atmosphere Colloquium (OAC) or the Topics in Atmospheric and Oceanic Sciences (TAOS) seminar series during both the Fall and Spring semesters; Marine Science-track students usually enroll in the OAC seminar. You should register for MAR 580, section 01 (OAC) for zero credits and sign the attendance roster each week they attend. Part-time students who cannot attend the seminar regularly can arrange with the OAC coordinator to attend approved seminars at any academic institution or national meeting of a scientific society. No more than two seminars can be missed in any semester to fulfill the seminar requirement. Attendance at a TAOS seminar can substitute for attendance at the OAC with prior approval of the OAC coordinator. You are expected, but not required, to attend the weekly seminars after your first year as well.

7.1.3 Research Credits

All first-year students should register for at least one to three credits of Directed Study (MAR 655) or Research (MAR 650 for Ph. D. students prior to advancing to candidacy) as an exploration of possible research topics and potential advisors. This can be done in either the first or second semester, but must be done under the supervision of a faculty member. Sign up for the section number of these courses belonging to the appropriate faculty member. Doctoral students register for MAR 699 after advancing to candidacy (G5 status).

7.1.4 Teaching Practicum

The goal of the teaching practicum is to help Ph. D. students develop the skills necessary to be effective instructors at the university-level. There are three components to this training:

1. *Observation* of teaching strategies employed by experienced instructors.
2. *Experience* preparing lesson plans, lecturing and leading discussions, and preparing/grading of exams and assignments.
3. *Communication* with the supervising faculty member to help the student prepare their lectures or discussion sections, and provide the student with feedback.

The teaching practicum must be completed in a university-level (usually undergraduate) course under the supervision of the faculty member instructing that course. Any faculty member can accept students in MAR 670. There are many opportunities among our present courses to fulfill the practicum requirement. Routine TA assignments such as photocopying, helping to set up for class, or grading tests are not sufficient to satisfy the practicum requirement. It may be possible for students with TA assignments to complete the practicum at the same time – these arrangements must be made in advance.

The teaching practicum can be completed any time after the Comprehensive Exam (Section 7.2.0), but no later than the end of your third year at SoMAS.

The following is a list of the requirements you must fulfill to complete the teaching practicum:

1. Register for at least one credit of MAR 670 in the section corresponding to the supervising faculty member.
2. Submit the Teaching Practicum form (see Appendix I) to the MASAC at least one month in advance of your student teaching. The form must describe how and when the teaching practicum requirements will be met, and signed by the supervising faculty member.
3. Attend six to nine hours of the course observe the teaching strategies employed by the instructor(s) and gain a sense of the level of material appropriate to the course.
4. Meet with the supervising faculty member(s) to discuss the lesson plan, provide a written copy of the lesson plan, notes, or slides before delivering any lectures or leading discussion.
5. Lecture or lead a discussion for a total duration of at least 160 minutes (*i.e.*, two one hour and twenty minute classes, three one hour classes, *etc.*).
6. Prepare exam questions or a homework assignment on the material covered during the lectures or discussion you gave/lead.
7. Grade all students' responses to the exam questions or homework assignment.
8. Meet with the supervising faculty member(s) after delivering the lectures or leading discussions to obtain feedback. It is advantageous to meet after the first lecture but before the second lecture if several lectures are given.

The supervising faculty member may ask you (or you may want) to perform extra duties (*e.g.*, attend more classes, give extra lectures) in addition to those mentioned above. If so, you should register for additional credits (two to three) of MAR 670 in accordance with the workload. The extra duties should be decided in advance and described in the Teaching Practicum form along with an estimation of associated time commitments.

Faculty members should not take advantage of the teaching practicum by asking students to perform routine TA duties such as grading all class assignments, making photocopies, *etc.*

The supervising faculty member should award a pass/fail grade to the student for MAR 670 at the completion of the teaching practicum.

7.2.0 Comprehensive Exam

The exam will be given in late-August or early-September. Students who start at SoMAS in the Fall will take the exam near the beginning of their third semester. Students entering SoMAS in the Spring will take the exam near the beginning of their fourth semester. Students who complete their M. S. at SoMAS in May and enter the Ph. D. program in the Fall will take the exam during their first semester. Students who complete their M. S. at SoMAS in August and enter the Ph. D. program in the Fall will consult with their advisor and have the choice of taking the exam either their first semester or the next time the exam is given. If you have special needs that would require testing accommodations, these must be communicated to the chair of the Comprehensive Examination Committee as soon as the exams are scheduled, but no later than two months before administration of the exam.

The goals of the marine track comprehensive exam are to determine if you can: 1) write clearly and succinctly, 2) develop/formulate a scientific question (hypothesis) and approaches to successfully test it, 3) synthesize information learned from their courses and the primary literature, 4) orally-present and explain scientific concepts, and 5) respond to questions in an educated and thoughtful manner. These are skills essential to those conducting or leading original research.

The foundation courses are expected to provide enough general knowledge of oceanography and atmospheric sciences for you to participate in the Exam, but the goal of the exam is not simply to retest the knowledge that was already tested in the foundation courses. Instead, success in the Comprehensive Exam requires using this information to demonstrate the ability to address questions of a multidisciplinary nature. The exam is as much about your ability to think and to express yourself clearly, both in writing and in speaking, as it is about knowledge of specific facts.

7.2.1 Comprehensive Exam Format

The comprehensive exam will have two parts – a take-home open book written exam, and an oral exam.

The written exam consists of two parts:

Written Part I - All students will be given a made-up scenario or real event and will be asked to respond to the scenario/event with a plan that contains 1) background information including citations/references that examines the large-scale (*e.g.*, global or ocean basin-specific) biological, chemical, geological, physical, and atmospheric processes that are important to consider in studying the event, and 2) identifies and describes an important scientific question/study/hypothesis relevant to

the student's own discipline (*e.g.*, biology, chemistry, geology, physics, or others), including more detailed background information on the relevant literature in this area.

Written Part II – Students will be given a discipline-specific paper and asked to write a critical evaluation of the paper including a brief summary, strengths and weaknesses, its importance to the field, and appropriately-cited background material. Students must then propose a plan for an appropriate follow-up study including a statement of a clear and testable hypothesis, and the approach they would take to test the hypothesis.

Each section of the written exam will be limited to no more than five pages before figures and references, single-spaced, and a 12-point font. You are free to consult any published material but are expected to work alone without consulting anyone else on the topics, papers, or their plans. You will have one week to complete both portions of the written exam.

The oral portion of the exam will take place beginning one week after the conclusion of the written portion of the exam. You will be examined by a committee consisting of two faculty members from your discipline, and one faculty member each from the other three main disciplines at SoMAS (biology, chemistry, geology, and physics), for a total of five faculty members sitting in on each oral exam. You will prepare a ten to fifteen minute presentation on each component of their written exam, and will then answer questions from the committee for approximately one hour on each part of their presentation. Your advisor will be invited to attend the exam if possible depending upon everyone's schedule; your advisor may listen to the exam but may not participate in any way.

7.2.2 Grading of the Comprehensive Exam

The written portion of the exam will be graded/judged by all faculty on the larger exam committee on how well you demonstrate the ability to:

- synthesize information from classes and primary literature
- conduct a thorough literature search on a topic
- formulate a meaningful scientific question with a testable hypothesis
- write clearly and succinctly to a general scientific audience (not necessarily experts in your field, but experts in other aspects of marine science)

The oral portion of the exam will be graded/judged on how well you demonstrate the ability to:

- clearly communicate your ideas and thoughts
- display your knowledge of the background material in their proposed studies
- defend your choice of appropriate follow-up work and their proposed approach(es)

The complete exam committee will discuss your performance on both the written and oral portions of the exam, and will then vote to either pass or fail your exam.

Students who fail the exam will have the option of retaking the exam a second, final time the next time the exam is offered (usually the following Spring). However, students

who fail to pass the exam on their first attempt should consult with their advisor as to whether it is best to take the exam a second time or to instead devote their energy into completing a M. S. degree.

7.3 Field Experience

All students in the Marine Sciences track must have seagoing or other appropriate field experience. An ideal field experience should include preparation for field work, one or more days of participation in field sampling and data collection, and involvement in post-trip sample/data processing. Students doing research that lacks a field component (*e.g.*, modelers) can participate through other lab's field work with permission from the overseeing faculty member. Submit the Field Experience form (Appendix I) to the Educational Programs Office for approval by the MASAC once your field experience is complete.

7.4.0 Dissertation Committee

The dissertation committee advises you on your research and career, serves as examiners for your oral Qualifying (Preliminary) Exam and oral Dissertation Defense, and must approve the final written dissertation. You and your advisor will select the members of your dissertation committee; the MASAC must approve your committee (Appendix I for the form) before you schedule your oral Qualifying Exam, and you should seek MASAC approval as soon as your committee members are identified. Any changes to your dissertation committee must be approved by the MASAC, and the Graduate School generally prohibits changes to your committee within six months of your Dissertation Defense.

SoMAS requires that the dissertation committee be composed of five specialists in your field of research, or in closely-related fields. The committee composition specifically includes:

1. Your advisor, who will act as your advocate and is prepared to supply any information that the committee may reasonably require.
2. At least two other members of the SoMAS Graduate Faculty. If you have co-advisors, only one additional SoMAS Graduate Faculty member is required. One of these other Graduate Faculty members (not your advisor or co-advisor) will be designated as Chair of the committee. The Chair is responsible for ensuring the Qualifying Exam and Dissertation Defense are conducted appropriately.
3. An outside scholar who has not been recently-affiliated with SoMAS (this excludes SoMAS Adjunct Faculty). Your committee approval form should include the C. V. of the outside person to verify their status and qualifications. Generally, the outside scholar should hold the rank of tenured faculty or equivalent at their institution, be sufficiently well-established to provide an independent assessment of the quality of your research, and be actively involved in research relevant to your research.
4. The fifth member of your committee can be either SoMAS Graduate Faculty or from outside of SoMAS. If desired, dissertation committees can have more than five members, but only five are required.

7.4.1 Dissertation Committee Meetings

You are expected to meet with your committee at least once a year to provide the committee with an update on your research progress, problems, any changes in research direction, and requests for advice about specific issues. At the very least, you are required to annually update your dissertation committee in writing of progress made during the preceding year. You may be in for some very unpleasant surprises at your Dissertation Defense if you have not updated your entire dissertation committee on at least an annual basis. One of the committee's main roles is to provide advice about your research, and you can not get that advice without meeting with your committee.

7.5.0 Dissertation Proposal

The written proposal for your Ph. D. research is due before your Qualifying Exam (Section 7.5.1), which must be completed before the end of your third year at SoMAS. The proposal should include at a minimum a statement of your project's objectives, background to the research problem, clear and testable hypotheses, a description of the approach to be taken, expected results, a time-line for accomplishments, and appropriate figures and references. Your dissertation proposal should be submitted to your committee members at least one week (two weeks would be better) before your Qualifying Exam.

7.5.1 Oral Qualifying (Preliminary) Exam (Proposal Defense)

You must formally present and defend your dissertation proposal to your dissertation committee in order to pass the Qualifying Exam. This exam focuses specifically on your research proposal and your ability to initiate independent research. You should expect questions directly related to your research as well as more general questions designed to determine if you have acquired sufficient knowledge in fields specifically relevant to your thesis area.

Successful completion of the Qualifying Exam and Advancement to Candidacy (Section 7.6.0) must occur before the end of your third year of study. Failure to meet this requirement may result in the loss of your tuition scholarship.

Your dissertation committee may proceed in any way it sees fit to determine if you are qualified to perform your proposed research. All five committee members should be present for the exam; electronic means (*e.g.*, teleconferencing) of attendance are allowed. In exceptional circumstances, one of your committee members may participate in absentia, but this option must be discussed with the Graduate Program Director in advance. Your committee will submit its conclusions about your exam in writing to the Educational Programs Office (see Appendix I for form).

When funds are available SoMAS will help pay the travel costs of outside committee members to attend both the Proposal and Dissertation Defenses in person. The cost per committee that SoMAS can cover is less than \$600 per event. These costs must be approved in advance by the GPD, and the visiting committee member must give a public seminar or at least be available to meet with other interested students or faculty during their visit to SoMAS. This seminar/meeting time must be publicized to all of SoMAS by email at least a day or two prior to the event. SoMAS will only reimburse direct billable travel costs (airline tickets, hotel rooms) for the committee member. Costs incurred by

their faculty hosts cannot be covered. Students should consider suggesting that their outside committee members be invited as speakers in our regular seminar series. Students are responsible for obtaining all necessary forms from the Education Programs Office, and for submitting them back to her with all necessary information needed to process reimbursements.

7.6 Advancement to Candidacy

Stony Brook University stipulates that a student may be advanced to candidacy when all requirements for the degree except writing and defending the dissertation itself (Section 7.7) have been met. You may advance to candidacy before completing SoMAS' seminar course requirement (Section 7.1.0, Item 8), but all other coursework and degree requirements must have been met. You must advance to candidacy before the end of your third year or risk losing your tuition scholarship. As such, you should try to advance to candidacy as soon as reasonably possible. Furthermore, you can not defend your dissertation within one year of advancing to candidacy.

You may request to be awarded the degree of Master of Philosophy one year after advancing to candidacy. Please note that you should not refer to yourself in any correspondence as a Ph. D. candidate until you have formally advanced to candidacy – doing so implies you have fulfilled all requirements for your degree except defending your dissertation (frequently referred to as “all but dissertation,” or ABD).

7.7 Oral Dissertation Defense

The university sets some very specific rules about your dissertation defense:

- 1) Your oral dissertation defense must take place at least one year after advancing to candidacy.
- 2) The composition of your dissertation committee (which should already have been approved by the MASAC prior to your Qualifying Exam) must be submitted to the Graduate School for approval through the SoMAS Education Programs Office before the beginning of the semester in which the defense will occur and at least four weeks prior to the defense date, which ever is earlier. Any changes to your committee since your Qualifying Exam must be approved by the MASAC before the dissertation committee composition is submitted to the Graduate School. The Graduate School generally prohibits changes to your committee with six months of your defense.
- 3) The defense will be open to the public and should be properly advertised at least one week in advance. The Dissertation Abstract/Announcement form must be prepared by the student and submitted to the Graduate Program Director, who then forwards it to the Graduate School at least one month in advance of the defense for final approval. You should notify the SoMAS Educational Programs Office of your scheduled date, time, and location of the defense at least two weeks in advance to allow for proper advertisement. The defense begins with a presentation by you followed by

questions from the audience. Your dissertation committee will usually hold their questions until a closed session after the public presentation.

- 4) The signature page of your thesis should be prepared and brought to the defense. If you pass, the signature page should be signed immediately by your committee. If you pass with conditions, your advisor should hold the signature page until the conditions have been met. If you fail, the outcome should be noted on the sheet and submitted to the Educational Programs Office. You should also print and bring the Ph. D. Dissertation Defense Outcome form (Appendix I) to the defense. Please note this form is for SoMAS use only, and as such, a signed PDF is acceptable in lieu of original signatures of committee members who may be remotely participating.
- 5) You must submit the final signed copy of your dissertation to the Graduate School within three months of your defense date, or the Graduate School may require you to repeat your defense.

7.8 Steps Towards Graduation and Timeline

The schedule below describes a typical student completing their program of study in one year beginning in the fall.

First (fall) Semester:

- Foundation courses MAR 508 and 509 (six credits).
- One specialty course (two or three credits).
- OAC Seminar MAR 580.01 (zero credits).
- Remainder of nine or twelve credits (depending upon G status) made up of thesis research (MAR 655) or directed study (MAR 650) with potential advisor.

Second (spring) Semester:

- At least one of the core courses MAR 501, 502, 503, or 506 (three or more credits).
- MAR 568 (Practical Skills for Scientists; three credits).
- OAC Seminar MAR 580.01 (zero credits).
- Remainder of nine or twelve credits (depending upon G status) made up of thesis research (MAR 655) or directed study (MAR 650) with potential advisor.
- Apply for New York state residency (U. S. citizens only).
- Submit "Advisor Selection" form.

Third (fall) Semester:

- Comprehensive Exam
- Specialty courses and thesis research (nine credits total).
- Field experience (submit "Completion of Field Experience" form once completed).
- Start working on dissertation proposal.

Fourth (spring) Semester:

- Teaching Practicum MAR 670 (credits vary with teaching amount; submit “Teaching Practicum” form to the Masters and Ph. D. Programs Committee at least one month in advance of actual teaching). Submit “Teaching Practicum Evaluation” form after the practicum has been completed.
- Field experience if not already completed.
- Specialty and/or Seminar courses, and dissertation research (nine credits total).
- Continue working on dissertation proposal; ideally complete dissertation proposal this semester.

Fifth and Sixth Semesters:

- Complete Teaching Practicum MAR 670 if you have not already done so.
- Complete dissertation proposal if you have not already done so.
- Form dissertation committee (submit “Approval of Ph. D. Dissertation Committee” form to the Masters and Ph. D. Programs Committee; please make sure all requested information on the form is included with the submission).
- Take Qualifying Exam and submit “Ph. D. Qualifying (Preliminary) Exam (Proposal Defense) Outcome” form.
- Advance to Candidacy.
- Specialty and/or seminar courses as appropriate, and Dissertation Research MAR 699 (nine credits total).
- Submit the marine science-track “Completion of Specialty (Advanced), Quantitative, and Seminar Courses” forms if you have not already done so.

Seventh Semester and Beyond:

- Dissertation research and specialty/seminar courses as appropriate (nine credits total if full-time in residence, at least one credit if not unless a Leave of Absence is requested). Additional coursework post-advancement to candidacy must be approved by the GPD.

Final Semester:

- Apply to graduate
- Must be registered for at least one credit (zero credits of MAR 800 if defending in the summer).
- Submit “Doctoral Defense Announcement” form (this form can be gotten through the Graduate School’s web page).
- Defend dissertation (submit “Ph. D. Dissertation Defense Outcome” form).
- Get dissertation approved by your dissertation committee.
- Graduate!

8. Ph. D. in ATMOSPHERIC SCIENCES REQUIREMENTS

In addition to the general university requirements (Section 3)...

8.1.0 Course Requirements

SoMAS requires that all Ph. D. students take and pass specific required courses with at least a B average, and with no grade falling below a C. The specific courses subject to the minimum grade average are listed in items 1 and 2 below.

1. Foundations of Atmospheric Sciences I (MAR 541)
2. Foundations of Atmospheric Sciences II (MAR 542)
3. One oceanography course chosen from amongst the following: Physical Oceanography* (MAR 501), Chemical Oceanography (MAR 503), Geological Oceanography* (MAR 506), Foundations of Marine Sciences I: Biogeochemical Processes (MAR 508), Paleoceanography and Paleoclimatology* (MAR 545), or Dynamical Oceanography I* (MAR 547).

* - MAR 501, 506, and 547 may not be offered every year, and MAR 545 is offered every other year.

4. Six** of the following advanced courses: General Circulation of the Atmosphere (MAR 505), Modern Methods of Data Analysis in Atmospheric and Marine Sciences (MAR 538), Atmospheric Radiation (MAR 544), Dynamical Oceanography II*** (MAR 548), Tropical Meteorology (MAR 565), Geophysical Simulation (MAR 572), Doppler Weather Radar (MAR 583), Atmospheric Physics (MAR 593), Atmospheric Dynamics (MAR 594), Atmospheric Chemistry (MAR 596), and Synoptic Mesoscale Meteorology (MAR 598).

** - this is a small change from the previously required number of advanced courses and is awaiting final approval from the Graduate School. All incoming Ph. D. students should take six of the listed advanced courses as described.

*** - MAR 548 may not be offered every year.

5. Two semesters of Atmospheric Sciences Graduate Student Seminar (MAR 595)
6. Two semesters of Topics in Atmospheric and Oceanic Sciences (MAR 580, section 02).
7. At least one credit of Teaching Practicum (MAR 670) – see Section 8.1.4 below for more information.
8. A minimum of twenty-four course credits.

On an individual basis, core course requirements may be substituted by a combination of equivalent Marine and Atmospheric Sciences courses for a tailored interdisciplinary curriculum. Such substitutions must be recommended by a faculty member in writing and approved by the MASAC.

8.1.1 Consequences of Not Achieving at Least a B Average in the Specific Required Courses

Ph. D. students who fail to obtain a B average in the two foundation courses (MAR 541 and 542) must petition the Atmospheric Sciences Comprehensive Exam Committee before being allowed to take the Comprehensive Exam (see Section 8.2 below). The petition must be filed before the start of the next semester after completion of both foundation courses. The Comprehensive Exam Committee will decide on a recommendation that can include: 1) permission to take the Comprehensive Exam with conditions (*i.e.*, additional requirements to fill knowledge gaps), or 2) pursuing a M. S. degree, which after successful completion and re-evaluation by the student's advisor may result in continuation in the Ph. D. program.

8.1.2 Seminars

All first-year students are required to attend the weekly Topics in Atmospheric and Oceanic Sciences (TAOS) or the Oceans and Atmosphere Colloquium (OAC) seminar series during both the Fall and Spring semesters; Atmospheric Science-track students usually enroll in the TAOS seminar. You should register for MAR 580, section 02 (TAOS) for zero credits and sign the attendance roster each week they attend. Part-time students who cannot attend the seminar regularly can arrange with the TAOS coordinator to attend approved seminars at any academic institution or national meeting of a scientific society. No more than two seminars can be missed in any semester to fulfill the seminar requirement. You are expected, but not required, to attend the weekly seminars after your first year as well.

8.1.3 Research Credits

All first-year students should register for at least one to three credits of Directed Study (MAR 655) or Research (MAR 650 for Ph. D. students prior to advancing to candidacy) as an exploration of possible research topics and potential advisors. This can be done in either the first or second semester, but must be done under the supervision of a faculty member. Sign up for the section number of these courses belonging to the appropriate faculty member. Doctoral students register for MAR 699 after advancing to candidacy (G5 status).

8.1.4 Teaching Practicum

The goal of the teaching practicum is to help Ph. D. students develop the skills necessary to be effective instructors at the university-level. There are three components to this training:

1. *Observation* of teaching strategies employed by experienced instructors.
2. *Experience* preparing lesson plans, lecturing and leading discussions, and preparing/grading of exams and assignments.
3. *Communication* with the supervising faculty member to help the student prepare their lectures or discussion sections, and provide the student with feedback.

The teaching practicum must be completed in a university-level (usually undergraduate) course under the supervision of the faculty member instructing that course.

Any faculty member can accept students in MAR 670. There are many opportunities among our present courses to fulfill the practicum requirement. Routine TA assignments such as photocopying, helping to set up for class, or grading tests are not sufficient to satisfy the practicum requirement. It may be possible for students with TA assignments to complete the practicum at the same time – these arrangements must be made in advance.

The teaching practicum can be completed any time after the Comprehensive Exam (Section 8.2), but no later than the end of your third year at SoMAS.

The following is a list of the requirements you must fulfill to complete the teaching practicum:

1. Register for at least one credit of MAR 670 in the section corresponding to the supervising faculty member.
2. Submit the Teaching Practicum form (see Appendix I) to the MASAC at least one month in advance of your student teaching. The form must describe how and when the teaching practicum requirements will be met, and signed by the supervising faculty member.
3. Attend six to nine hours of the course observe the teaching strategies employed by the instructor(s) and gain a sense of the level of material appropriate to the course.
4. Meet with the supervising faculty member(s) to discuss the lesson plan, provide a written copy of the lesson plan, notes, or slides before delivering any lectures or leading discussion.
5. Lecture or lead a discussion for a total duration of at least 160 minutes (*i.e.*, two one hour and twenty minute classes, three one hour classes, *etc.*).
6. Prepare exam questions or a homework assignment on the material covered during the lectures or discussion you gave/lead.
7. Grade all students' responses to the exam questions or homework assignment.
8. Meet with the supervising faculty member(s) after delivering the lectures or leading discussions to obtain feedback. It is advantageous to meet after the first lecture but before the second lecture if several lectures are given.

The supervising faculty member may ask you (or you may want) to perform extra duties (*e.g.*, attend more classes, give extra lectures) in addition to those mentioned above. If so, you should register for additional credits (two to three) of MAR 670 in accordance with the workload. The extra duties should be decided in advance and described in the Teaching Practicum form along with an estimation of associated time commitments.

Faculty members should not take advantage of the teaching practicum by asking students to perform routine TA duties such as grading all class assignments, making photocopies, *etc.*

The supervising faculty member should award a pass/fail grade to the student for MAR 670 at the completion of the teaching practicum.

8.2.0 Comprehensive Exam

The atmospheric sciences comprehensive exam is given in November of your second year at SoMAS. The timing of the exam for students who completed their M. S. at SoMAS of who are part-time will follow that described for the marine science-track exam (Section 7.2.0)

8.2.1 Comprehensive Exam Format

The comprehensive exam will have two parts – a written exam, and an oral exam. The written exam is given first, and the questions for the exam are based on material covered in the foundation courses (MAR 541 and 542). However, the goal of the exam is not to simply retest information that was already tested in the courses. Instead, success in the comprehensive exam requires using the foundation course information to demonstrate an ability to think independently and solve problems.

Students will be given a journal article to read one week before the oral exam. Each student separately makes a presentation based on the article to the examination committee and answers questions which will not be limited to the contents of the paper, but will also include a whole range of basic concepts in atmospheric science that a doctoral student is expected to have mastered. The examination committee consists of three or more faculty members.

8.2.2 Grading of the Comprehensive Exam

The outcome of the exam can be 1) passing both sections, 2) failing both sections, or 3) pass one part only. Passing both parts of the exam is required for the student to continue in the Ph. D. program. If one or both parts are failed, the relevant part of the exam may be retaken once at the next scheduled opportunity upon the recommendation of your advisor and concurrence of the comprehensive exam committee. The results of the exam and evaluation of the student's performance will be given to you in writing and included in your file.

8.3.0 Dissertation Committee

The dissertation committee advises you on your research and career, serves as examiners for your oral Qualifying (Preliminary) Exam and oral Dissertation Defense, and must approve the final written dissertation. You and your advisor will select the members of your dissertation committee; the MASAC must approve your committee (Appendix I for the form) before you schedule your oral Qualifying Exam, and you should seek MASAC approval as soon as your committee members are identified. Any changes to your dissertation committee must be approved by the MASAC, and the Graduate School generally prohibits changes to your committee within six months of your Dissertation Defense.

SoMAS requires that the dissertation committee be composed of five specialists in your field of research, or in closely-related fields. The committee composition specifically includes:

1. Your advisor, who will act as your advocate and is prepared to supply any information that the committee may reasonably require.

2. At least two other members of the SoMAS Graduate Faculty. If you have co-advisors, only one additional SoMAS Graduate Faculty member is required. One of these other Graduate Faculty members (not your advisor or co-advisor) will be designated as Chair of the committee. The Chair is responsible for ensuring the Qualifying Exam and Dissertation Defense are conducted appropriately.
3. An outside scholar who has not been recently-affiliated with SoMAS (this excludes SoMAS Adjunct Faculty). Your committee approval form should include the C. V. of the outside person to verify their status and qualifications. Generally, the outside scholar should hold the rank of tenured faculty or equivalent at their institution, be sufficiently well-established to provide an independent assessment of the quality of your research, and be actively involved in research relevant to your research.
4. The fifth member of your committee can be either SoMAS Graduate Faculty or from outside of SoMAS. If desired, dissertation committees can have more than five members, but only five are required.

8.3.1 Dissertation Committee Meetings

You are expected to meet with your committee at least once a year to provide the committee with an update on your research progress, problems, any changes in research direction, and requests for advice about specific issues. At the very least, you are required to annually update your dissertation committee in writing of progress made during the preceding year. You may be in for some very unpleasant surprises at your Dissertation Defense if you have not updated your entire dissertation committee on at least an annual basis. One of the committee's main roles is to provide advice about your research, and you can not get that advice without meeting with your committee.

8.4.0 Dissertation Proposal

The written proposal for your Ph. D. research is due before your Qualifying Exam (Section 8.4.1), which must be completed before the end of your third year at SoMAS. The proposal should include at a minimum a statement of your project's objectives, background to the research problem, clear and testable hypotheses, a description of the approach to be taken, expected results, a time-line for accomplishments, and appropriate figures and references. Your dissertation proposal should be submitted to your committee members at least one week (two weeks would be better) before your Qualifying Exam.

8.4.1 Oral Qualifying (Preliminary) Exam (Proposal Defense)

You must formally present and defend your dissertation proposal to your dissertation committee in order to pass the Qualifying Exam. This exam focuses specifically on your research proposal and your ability to initiate independent research. You should expect questions directly related to your research as well as more general questions designed to determine if you have acquired sufficient knowledge in fields specifically relevant to your thesis area.

Successful completion of the Qualifying Exam and Advancement to Candidacy (Section 8.5) must occur before the end of your third year of study. Failure to meet this requirement may result in the loss of your tuition scholarship.

Your dissertation committee may proceed in any way it sees fit to determine if you are qualified to perform your proposed research. All five committee members should be present for the exam; electronic means (*e.g.*, teleconferencing) of attendance are allowed. In exceptional circumstances one of your committee members may participate in absentia, but this option must be discussed with the Graduate Program Director in advance. Your committee will submit its conclusions about your exam in writing to the Educational Programs Office (see Appendix I for form).

When funds are available SoMAS will help pay the travel costs of outside committee members to attend both the Proposal and Dissertation Defenses in person. The cost per committee that SoMAS can cover is less than \$600 per event. These costs must be approved in advance by the GPD, and the visiting committee member must give a public seminar or at least be available to meet with other interested students or faculty during their visit to SoMAS. This seminar/meeting time must be publicized to all of SoMAS by email at least a day or two prior to the event. SoMAS will only reimburse direct billable travel costs (airline tickets, hotel rooms) for the committee member. Costs incurred by their faculty hosts cannot be covered. Students should consider suggesting that their outside committee members be invited as speakers in our regular seminar series. Students are responsible for obtaining all necessary forms from the Education Programs Office, and for submitting them back to her with all necessary information needed to process reimbursements.

8.5 Advancement to Candidacy

Stony Brook University stipulates that a student may be advanced to candidacy when all requirements for the degree except writing and defending the dissertation itself have been met. You may advance to candidacy before completing SoMAS' seminar course requirement, but all other coursework and degree requirements must have been met. You must advance to candidacy before the end of your third year or risk losing your tuition scholarship. As such, you should try to advance to candidacy as soon as reasonably possible. Furthermore, you can not defend your dissertation within one year of advancing to candidacy.

You may request to be awarded the degree of Master of Philosophy one year after advancing to candidacy. Please note that you should not refer to yourself in any correspondence as a Ph. D. candidate until you have formally advanced to candidacy – doing so implies you have fulfilled all requirements for your degree except defending your dissertation (frequently referred to as “all but dissertation,” or ABD).

8.6 Oral Dissertation Defense

The university sets some very specific rules about your dissertation defense:

- 1) Your oral dissertation defense must take place at least two semesters after advancing to candidacy.

- 2) The composition of your dissertation committee (which should already have been approved by the MASAC prior to your Qualifying Exam) must be submitted to the Graduate School for approval through the SoMAS Education Programs Office before the beginning of the semester in which the defense will occur and at least four weeks prior to the defense date, which ever is earlier. Any changes to your committee since your Qualifying Exam must be approved by the MASAC before the dissertation committee composition is submitted to the Graduate School. The Graduate School generally prohibits changes to your committee with six months of your defense.
- 3) The defense will be open to the public and should be properly advertised at least one week in advance. The Dissertation Abstract/Announcement form must be prepared by the student and submitted to the Graduate Program Director, who then forwards it to the Graduate School at least one month in advance of the defense for final approval. You should notify the SoMAS Educational Programs Office of your scheduled date, time, and location of the defense at least two weeks in advance to allow for proper advertisement. The defense begins with a presentation by you followed by questions from the audience. Your dissertation committee will usually hold their questions until a closed session after the public presentation.
- 4) The signature page of your thesis should be prepared and brought to the defense. If you pass, the signature page should be signed immediately by your committee. If you pass with conditions, your advisor should hold the signature page until the conditions have been met. If you fail, the outcome should be noted on the sheet and submitted to the Educational Programs Office. You should also print and bring the Ph. D. Dissertation Defense Outcome form (Appendix I) to the defense. Please note this form is for SoMAS use only, and as such, a signed PDF is acceptable in lieu of original signatures of committee members who may be remotely participating.
- 5) You must submit the final signed copy of your dissertation to the Graduate School within three months of your defense date, or the Graduate School may require you to repeat your defense.

8.7 Steps Towards Graduation and Timeline

The schedule below describes a typical student completing their program of study in one year beginning in the fall.

First (fall) Semester:

- Foundation courses MAR 541 and 542 (six credits).
- TAOS Seminar MAR 580.02 (zero credits).
- One specialty course and/or one oceanography course (two or three credits each)
- Remainder of nine or twelve credits (depending upon G status) made up of thesis research (MAR 590) or directed study (MAR 552) with potential advisor.

Second (spring) Semester:

- Two required specialty core courses (six credits).
- Graduate Seminar MAR 595 (one credit).
- TAOS Seminar MAR 580.02 (zero credits).
- Remainder of nine or twelve credits (depending upon G status) made up of thesis research (MAR 590) or directed study (MAR 552) with potential advisor, or one specialty course.
- Apply for New York state residency (U. S. citizens only).
- Submit “Advisor Selection” form.

Third (fall) Semester:

- One required specialty course or one oceanography course (three credits).
- One elective course (three credits).
- Graduate Seminar MAR 595 (one credit).
- Specialty courses and thesis research (nine credits total).
- Comprehensive Exam.
- Start working on dissertation proposal if you have not already begun.

Fourth (spring) Semester:

- One or two specialty courses, and dissertation research (nine credits total).
- Teaching Practicum MAR 670 (credits vary with teaching amount; submit “Teaching Practicum” form to the Masters and Ph. D. Programs Committee at least one month in advance of actual teaching). Submit “Teaching Practicum Evaluation” form after the practicum has been completed.
- Continue working on dissertation proposal; ideally complete dissertation proposal this semester.

Fifth and Sixth Semesters:

- Complete Teaching Practicum MAR 670 if you have not already done so.
- Complete dissertation proposal if you have not already done so.
- Form dissertation committee (submit “Approval of Ph. D. Dissertation Committee” form to the Masters and Ph. D. Programs Committee; please make sure all requested information on the form is included with the submission).
- Take Qualifying Exam and submit “Ph. D. Qualifying (Preliminary) Exam (Proposal Defense) Outcome” form.
- Advance to Candidacy.
- Specialty and/or seminar courses as appropriate, and Dissertation Research MAR 699 (nine credits total).
- Submit the atmospheric science-track “Completion of Additional Specialty (Advanced) and Seminar Courses” form if you have not already done so.

Seventh Semester and Beyond:

- Dissertation research and specialty/seminar courses as appropriate (nine credits total if full-time in residence, at least one credit if not unless a Leave of Absence is requested). Additional coursework post-advancement to candidacy must be approved by the GPD.

Final Semester:

- Apply to graduate
- Must be registered for at least one credit (zero credits of MAR 800 if defending in the summer).
- Submit "Doctoral Defense Announcement" form (this form can be gotten through the Graduate School's web page).
- Defend dissertation (submit "Ph. D. Dissertation Defense Outcome" form).
- Get dissertation approved by your dissertation committee.
- Graduate!

9. OTHER POLICIES

There are a variety of university and SoMAS-specific policies that may apply to you during your graduate studies at SoMAS. Many policies exist in other specific sections of this handbook. This section includes policies that do not necessarily clearly fit into other handbook sections but are still very important. Please read through the following policies so that you are familiar with all of them. Contact the Graduate Programs Director or the Education Programs Office if you can not determine the appropriate person to contact with concerns after reading this handbook.

9.1 Sexual Harassment Policy

If you think that you have observed or been the victim of sexual harassment or other type of discrimination, you should feel free to contact any faculty member, and there are several SoMAS faculty members who have specifically volunteered to be available discuss these types of concerns: Bob Cerrato, Jackie Collier, Glen Lopez, Anne McElroy, Mary Scranton, and the Graduate Program Director, David Black. These individuals know the university regulations about harassment and can discuss them with you. Other resources available include the Wo/Men's Center (studentaffairs.stonybrook.edu/wom), the Ombudsman Office (www.stonybrook.edu/ombuds/) and the Office of Diversity and Affirmative Action (www.stonybrook.edu/diversity/index.html).

9.2 Responsible Conduct of Research and Scholarship (RCRS)

SoMAS students are responsible for learning about, and adhering to, standards of professional conduct that are consistent with the responsible conduct of research and scholarship, and that will reflect favorably on themselves and on SoMAS. All students are required by Stony Brook University to participate in training focused on RCRS that will begin during orientation, and M.S. and Ph.D. students will receive further training in special sessions of MAR 568 (Practical Skills for Scientists). Additional training opportunities will also be offered. Students should be aware that dismissal from the program is a possible consequence for violation of the standards of responsible conduct in any component of their work toward the M.A., M.S., or Ph.D. degree (including coursework, teaching duties, and all aspects of research). SoMAS students should bring any questions or concerns about how to comply with any of these standards to any member of the faculty.

Plagiarism is the most common form of academic dishonesty and scientific misconduct that the program must respond to. A useful definition of plagiarism and guidelines on how to use and cite sources without plagiarizing them can be found at the University of California, Davis web site sja.ucdavis.edu/files/plagiarism.pdf. Students who have any uncertainties about what constitutes plagiarism, and how to avoid it, are responsible to ask questions of the faculty until the answers are clear.

Stony Brook University's definitions of academic dishonesty can be found at www.stonybrook.edu/commcms/academic_integrity/index.html. Stony Brook's policy on RCRS can be found at www.stonybrook.edu/policy/policies.shtml?ID=211. Additional campus-specific resources about academic dishonesty can be found at

sb.cc.stonybrook.edu/gradbulletin/current/regulations/academic_probation/appeals.php. Other web sites exploring responsible conduct in science include ethics.agu.org and www.aslo.org/ethics, and www.aslo.org/information/code.html.

9.3 Grievance Policies

If you are having problems of any kind, first approach your advisor or counselor, the Graduate Program Director, or if you are student in the MCP program, the MCP Program Director or a member of the MCP Coordinating Committee, as they can usually help you resolve problems. The Graduate School's Graduate Student Advocate (Section 2.0) is also available to assist you. A formal grievance procedure is available to you through the SoMAS Grievance Committee if your problem can not be resolved informally. The SoMAS Grievance Committee is formed when necessary and is composed of two faculty and two student members or the M. S. and Ph. D. Programs Committee (Section 2.0). The Grievance Committee will hear and attempt to resolve grievances between SoMAS parties according to university procedures (www.grad.stonybrook.edu/pdf/about/policy/Grievances_Appeals.pdf). Contact the chair of the M. S. and Ph. D. Programs Committee about filing a formal grievance.

9.4 Leave of Absence and Withdrawal

If circumstances require a student to leave the Graduate Program for any length of time, they must either request a leave of absence or formally withdraw from the university. Unauthorized withdrawal may prevent a student from being able to return. If you expect to return the next semester or the next year, request a leave. Leaves can be extended for a second year with permission. If you do not know when (or whether) you will return, you should formally withdraw from the university.

A Leave of Absence request form may be obtained from the Graduate School web page. Endorsement of the GPD is required. Upon completion, the form will be sent to the Graduate School for approval by the Dean. The conditions governing leaves of absence and reinstatement are described in the Graduate Bulletin. When you intend to return to the University, you must inform the GPD in writing before the expiration of the leave period granted to you. This notification should give a detailed account of any academic or professional activity you pursued during your leave. The GPD will endorse your request for reinstatement and forward it to the Graduate School. Upon receipt of your request and the GPD's endorsement, the Graduate School will reinstate you. If you do not request reinstatement before the expiration of your leave, the Graduate School will withdraw you from the university.

Formal withdrawal is initiated by submitting a letter explaining your intention to withdraw to the GPD and the Graduate School.

9.5 Childbirth Accommodation

The Graduate School provides a variety of support programs for students. The Childbirth Accommodation policy provides relief from regular teaching or research assignments by providing support directly from Graduate School funds. One semester of relief for students on a Teaching Assistantship, or up to twelve weeks of relief for students

on a Research Assistantship is available. Leaves are requested through the GPD, and students interested in requesting leave should initiate discussions with their advisor and the GPD as early as possible, and no later than the twenty-fourth week of pregnancy.

9.6 Required Course Waiver

The requirement to take any or all of the foundation courses, or the advanced course in their specialty area, may be waived if proficiency in the course material can be demonstrated to the satisfaction of the instructor(s) as follows:

1. The Counselor may determine on the basis of discussions with a new student and review of the student's record, that a reasonable case can be made for waiving one or more of the courses. For example, an obvious case would be if the student has completed a similar course elsewhere. The counselor must ensure that the student attained a grade of B or better in any course proposed as a substitute for a core course.
2. The student should meet with the appropriate course instructor(s), bringing copies of the prior course syllabus and any course notes, including the student's own handwritten notes, and which the student feels is the equivalent of SoMAS course offerings. The instructor will decide whether or not the course should be waived based on the supplied material and a discussion with the student.
3. If the decision is that the course(s) already taken adequately covers a significant part of the material in a SoMAS course, then the student and instructor(s) should provide a written statement (see Appendix I for the appropriate form) to the MASAC, with a copy to the student's Counselor recommending that the requirement that the student take the course be waived. Such a statement should include any relevant condition the instructor wants imposed, such as requiring that the student audit a part or the entire course.
4. The MASAC considers the recommendation of the course instructor(s). The MASAC's decision, together with the written statement from the instructor(s), will be recorded in the student's file.

9.7 Annual Student Review

SoMAS faculty will review the progress of all graduate students, usually during early-summer. Advisors who cannot attend are expected to submit written comments on each of their advisees. Students will be informed of their status in the program prior to the review and we request that advisors provide written comments to their students on annual progress either before or after the review. Each student is responsible for checking the accuracy of the information contained in their progress report and for correcting any errors they find (the bureaucracy is far from perfect, and it can be a problem getting things fixed at the last minute pre-graduation; be proactive!).

9.8 Changing One's Advisor

While generally discouraged, circumstances occasionally arise that lead to a student changing advisors. Those circumstances include but are not limited to a project not working, lack of funding, or personality conflicts. Separating from your initial advisor should

be done by mutual agreement between you and your advisor, and should not be done until a new advisor has agreed to accept you into their lab. If all parties are in agreement, submit the “Advisor Change” form (Appendix I). The GPD should be notified of the change as well.

9.9 Admission to the Ph. D. Program from the SoMAS M. S. Program

Students who have completed or will complete the M. S. degree and wish to continue for a Ph.D. may apply to the Graduate Admissions Committee for admission to the Ph. D. program. Normally students admitted to the M. S. program will complete the M. S. degree before entering the Ph. D. program. Occasionally students admitted to the M. S. program demonstrate such exceptional capability in scholarship, motivation, and diligence in the discharge of their duties and a clear sense of direction during their first year that they may be encouraged to consider switching to the Ph. D. program. Such students may apply to the Graduate Admissions Committee for admission to the Ph. D. program. If accepted, these students would bypass the earning of the M. S. degree and instead continue directly for the Ph. D. degree. It is extremely unlikely for a bypass to be permitted if a student has less than a B average in the foundation courses or difficulty with other requirements. SoMAS M. S. students who wish to either apply to the Ph. D. program at the completion of their degree or bypass the M. S. degree and switch to the Ph. D. program must apply by submitting a statement indicating their intent, identify their prospective Ph. D. thesis advisor, and briefly describe their proposed Ph. D. thesis topic. They must also submit two letters of support from SoMAS faculty, one of whom must be willing to serve as Advisor. The ability of the advisor to provide financial support to the student will be taken into consideration.

9.10 Other, Other Policies

There are many other SoMAS-related policies, but they tend to apply to a relatively narrow range of students. Such policies address things like the SoMAS Research Diving, SoMAS Ship Safety and Use, etc. Please search the SoMAS web page or consult with appropriate faculty for more information.

10. FINANCIAL MATTERS

Financial support for students comes primarily from three sources: 1) teaching and graduate assistantships (TAs and GAs) from the university, 2) research assistantships (RAs) from grants and contracts held by faculty members, and 3) fellowships and scholarships. Students must be registered full-time or obtain an approved under-load to receive support; some fellowships are exceptions to this rule.

A Social Security number is required to receive a stipend and to maintain a savings or checking account that pays interest. Foreign Student Services in the Graduate School will offer Social Security interviews to international students that apply for them. Ask the Foreign Student Service office at least one week in advance and they will set up an appointment for you.

10.1 Teaching Assistantships (TAs) and Graduate Assistantships (GAs)

Students who perform teaching-related duties are assigned TAs, and students who provide other services are assigned GAs. Teaching Assistantships are generally only available for fall and spring semesters when university classes are in session. Most TA support for SoMAS is dedicated to first-year students in the M. S. and Ph. D. programs. There are some additional TAs available for continuing M. S. and Ph. D. students in need of financial support, but these are highly-limited and awarded at the discretion of SoMAS based on the availability of funds and generally only available to previously funded students in good standing.

10.2 Research Assistantships (RAs)

Support for M. S. and Ph. D. students after their first year (usually the end of the spring semester) is expected to come from research grants of SoMAS faculty. Grants support the work of a particular faculty member where money has been budgeted to hire students to carry out parts of the proposed research. Research Assistantships can be awarded during the academic year and over the summer. All such awards are at the discretion of the principal investigator (faculty member running the project). A student may be required to do work that is not directly related to the student's own research when supported by an RA. Requests for RA support should be made directly to the principal investigator responsible for the grant or contract. Students should consider the ability of a faculty member to provide support when choosing an advisor.

There are minor differences in the health insurance available to TA/GAs versus RAs. We try to minimize inconveniences associated with switching from one type of support to the other, but some problems are unavoidable. If you anticipate needing any medical assistance when you are about to switch from one type of support to another, you should make sure you understand the differences, by contacting the benefits specialist Mr. Edmond Anderson at 632-6144.

10.3 Fellowships and Scholarships

Some students are supported by university or external fellowships, and all students are encouraged to practice their writing and fund-raising skills by applying to whatever fellowship opportunities they can. Fellowships are usually competitive and awarded based on a student's research or academic performance - winning one is a source of prestige and a good addition to your academic resume or curriculum vitae. Information about some available fellowships and scholarships can be found on the internal (Intranet) portion of the SoMAS web site and at the Graduate School web site. You should look into the following programs for fellowship examples and opportunities: the National Science Foundation Graduate Research Fellowship, the Environmental Protection Agency STAR Fellowship through the National Center for Environmental Research, the Office of Naval Research, and the Long Island Sound Fellowship.

There are SoMAS-specific fellowship and scholarship opportunities as well, and requests for applications are sent out annually via email to students:

- *J. R. Schubel Fellowship* – this fellowship provides an annual stipend supplement for SoMAS graduate students committed to translating science into forms accessible to the public and/or inform public policy. Schubel Fellows will serve as “ambassadors” for SoMAS in its mission to employ scientific research to address environmental problems that confront society.
- *Liblit Scholarship* – this scholarship supports M. S. and Ph. D. students working the field of waste management and/or marine, terrestrial, or atmospheric pollution.
- *Pikitch Family Endowed Student Award* – this award is open to M. S. and Ph. D. students who have demonstrated outstanding research proposals and a commitment to environmental conservation.
- *Sigma Xi Awards* – Stony Brook's chapter of Sigma Xi, a scientific honor society, sponsors several awards. The Excellence in Research Award provides students with a one-year membership in Sigma Xi. The Grants in Aid of Research Award provides up to \$1000 to exceptional students. Email announcements about these awards are usually sent to students each year.

10.4 Working Hours

Your graduate education is your responsibility. Most people find graduate school to be notably more demanding than a full-time (forty hours per week) job. You will find that breaks between semesters are often your best opportunity to focus on lab work. Absences of more than a week, even between semesters or during the summer, should be discussed and agreed upon with your counselor or advisor as far in advance as possible.

All assistantships (TAs, RAs, and GAs) require performance of services. The Graduate School has stated that no assistantship may require more than twenty hours per week, but the assistantship can require you to work up to the full twenty hours per week. The work you do for your own courses and thesis research is in addition to your TA, RA, or GA commitment.

10.5 Summer Work at SoMAS

All students are expected to continue their independent study and research during the summer. Summer support is almost entirely derived from research grants – ask your counselor or advisor about what sort of summer support is likely to be available. Some jobs may also be available that pay hourly wages.

10.6 Graduate Tuition Scholarships

Students receiving stipend support from the university may be eligible for Graduate Tuition Scholarships (GTS). Students in the MCP program are not eligible for a GTS. United States citizens receiving a GTS are required to apply to become New York State residents during their first year of study to minimize tuition costs, and GTS beyond the first year will only cover tuition at the in-state tuition rate - please see the Educational Programs Office for the necessary forms. Students not making appropriate degree progress may lose their GTS. Students are ultimately responsible for paying their own tuition in cases where departmental funds are insufficient to provide full tuition scholarships for all students. Tuition scholarships may not be used for tuition for winter or summer session courses.

10.7 Outside Employment

Graduate School policies govern on-campus employment. Only full-time students may have TA, RA, or GA support, and no can have more than one full Assistantship at a time. Fellowships and scholarships may carry special restrictions on other employment. All international students are governed by immigration regulations that limit total employment of F-1 students to no more than twenty hours per week when classes are in session.

You should discuss in advance with your counselor or advisor if you wish to seek employment whether on- or off-campus, and you must consult with the Assistant Dean to make sure your paperwork is properly adjusted so that you are not in violation of any rules. Any outside employment must not interfere with your TA, RA, or GA responsibilities or as a full-time student. The time you spend at another job will have a significant negative impact on your degree progress.

10.8 Sunshine Fund

On extremely rare occasions SoMAS has been able to provide small amounts of support or loans for students in emergency situations. Students who find themselves in sudden financial difficulty can request limited funding from the Okubo Fund for assistance. Inquiries about the Sunshine Fund should be directed to the Dean of SoMAS.

10.9 Travel Awards

There are a number of awards available to support student travel for which you can apply:

- *Marine Conservation and Policy Foreign Travel Award* – students in the MCP program taking a SoMAS international field course or embarking on an approved international internship may apply for travel awards of \$1000 to help reduce costs. Students may only receive one foreign travel award during their tenure at SoMAS.

- *SoMAS Conference Travel Award* – SoMAS graduate can apply for support to reduce the costs of attending scientific meetings. Applications are solicited twice a year. Students requesting aid will need to provide the name of the meeting, location, dates, and the abstract being presented. The award will be up to \$350, and is subject to funding availability. Students can re-apply if not successful the first time, but are only eligible to receive the award once during their degree program.
- *Graduate Student Organization Travel Fund (Research Access Program)* – Graduate students can apply for travel funds from the Research Access Program supported by the GSO. Up to \$350 may be awarded to students presenting a paper, poster, or talk at a conference or meeting. You must be a registered graduate student and have paid your activity fee to be eligible. Currently, students are can receive this award every semester.
- *Sigma Xi Award Travel Award* – this award provides up to \$250 in travel expenses for students to attend meetings and conferences.

10.10 Additional General Financial Information

Additional information about tuition and Stony Brook's financial aid system can be found in the Graduate Bulletin and on Stony Brook University web pages. Students wishing to apply for financial aid must submit the Free Application for Federal Student Aid (FAFSA) form as soon as possible each calendar year. Students should follow-up with the Financial Aid Office on main campus once eligibility for grants, work study, or student loans is determined.

11. PRACTICAL STUFF

This section covers miscellaneous information that you will still hopefully find useful. Like some of the other sections, this is not an all-inclusive list, but tries to address the more important and common issues.

11.1 Student Offices

All new students are assigned an office. M. S. and Ph. D. students are assigned office with two to four people each, and students in the MCP program are assigned a larger group office. Please remember that SoMAS student offices are shared space and are intended for academic purposes only; they should not be used as temporary living quarters, left dirty with food/drink around that will attract insects, or anything else that might disturb your office mates. Students abusing these privileges risk losing their office. If you are having problems with your office mates that you can not resolve amongst yourselves, or wish to change offices for other reasons, please talk to Christina Fink in the Educational Programs Office. Office assignments can be changed when necessary, but do not change offices on your own – it is important that SoMAS knows where you are located.

11.2 Building and Room Keys

Requests of building and room keys (including your office) must be endorsed by the Educational Programs Office (Christina Fink) for office keys, or your advisor for lab keys. The university requires a \$10 deposit per key when you pick up your keys. Your deposit may be paid by cash or check, and will be returned to you when you return your keys.

11.3 Smoking (the Lack Thereof)

Stony Brook University prohibits smoking in any campus building, including SoMAS buildings and offices, and a process has begun to prohibit smoking on the entire Stony Brook campus.

11.4 Parking

Any student can park in the South P lot on the south-end of campus. Campus bus service from the South P lot (and elsewhere on campus) is included in your transportation fee. Student parking in the lots adjacent to Endeavour, Challenger, Discovery, and Dana Halls is illegal unless your vehicle has a valid Faculty/Staff parking permit or a special one-day permit. Students supported on a TA, RA, or GA can get Red Staff parking permits. Students in the MCP program are eligible to buy Brown parking permits which allow one to park in a dedicated area behind Suffolk Hall. All vehicles without appropriate parking permits are subject to ticketing and/or towing at your expense between the hours of 7 a.m. and 4 p.m., Monday through Friday. Please be aware that campus tickets are official New York State tickets and not a “fake” university ticket that you can ignore.

11.5 Campus Mail

Student mailboxes are located in the Endeavour Hall mailroom. Please check your mailbox at least once per weekday – sometimes it is the only way we can get in touch with you.

11.6 Copiers and Fax Machines

You may use SoMAS copiers and fax machines when such use has been endorsed by your advisor or supervisor; an account code will be needed for use. You will also be given a personal account code but you will be charged for using your account. The current copy charge is seven cents per page. You may use SoMAS copiers if you are a TA for a SoMAS course; please do not use SoMAS copiers if you are a TA for another department (e.g., Biology or Chemistry). Most SoMAS copiers can also scan to a portable document format (PDF) that can be directly emailed to you. The copier in Endeavour Hall has all student emails activated. Students working Dana Hall can ask Steve Ortega (Main Office) to add their email addresses to the Dana copy machine.

11.7 SOLAR

The university's SOLAR system is used to access all sorts of information, including your university records, payroll and other university-related financial information, and is used to register for classes. Please keep your personal information (e.g., mailing address, phone numbers, emergency contacts, etc.) on SOLAR updated as necessary. You will need your Stony Brook Identification Number to login to SOLAR.

11.8 Email and Email Use

You should already have a functional Stony Brook University email address. Your email will likely take the form of *firstname.lastname@stonybrook.edu*, although variations on this might exist depending upon how common your name is. You will need your NetID and password to login to your Stony Brook email account. Your NetID and password can be found in SOLAR under the "Security and Personal Data" section. You have a 25 GB email quota.

Email is the primary way that we communicate with students, and it is your responsibility to make sure you get email sent to students. You should check your email at least once per day. If you decide to not use your Stony Brook email account as your primary email account, you must forward your Stony Brook email to whatever email address you regularly check.

Your Stony Brook email account should only be used for official Stony Brook business as use of the Stony Brook email address implies an official action or endorsement by the university. You should not use your Stony Brook email address for personal business, and never use it to advocate for any kind of position. You should maintain a personal email account (you likely already have at least one) for personal business. The university has also specifically instructed that Stony Brook email addresses (including the SoMAS_All_Hands address) may not be used for housing requests or offerings. If you have questions about appropriate use, please contact your advisor or the Dean.

11.9 SoMAS Logos, University Logos, and Self-Made Letterhead

The use of university logos, including SoMAS logos, is governed by rules similar to those for Stony Brook email. Letterhead even if self-made that incorporates university logos are for SoMAS business only. You should not include these logos for your personal use. SoMAS and university logos included as letterhead may be used for correspondence related to your thesis work such as submitting a manuscript, applying for a fellowship or job, or corresponding with a colleague about your work. Be sure to state that you are a graduate student when using official letterhead, and never use it for personal business or advocating any kind of position. Use of the Stony Brook University name or logo, or the SoMAS name or logo implies an official action or endorsement by the university. If you have questions about appropriate use, please contact your advisor or the Dean.

11.10 Libraries

There are multiple libraries on campus, but the two you are most likely to use are the Marine and Atmospheric Sciences Information Center (MASIC) located in Challenger Hall, and the Science and Engineering Library located in the Frank Melville Jr. Memorial Library on main campus. The latter houses most journals and texts of interest to SoMAS students that are not already housed in MASIC. The university maintains access to many scientific databases and electronic journals that can be accessed through the internet with your NetID. The university's inter-library loan (ILL) system can be used to obtain books, reports, and copies of articles not held or accessible through the university libraries.

MASIC contains a large collection of journals related to oceanography, environmental science, and biology, reference books and reports, world-wide nautical charts, doctoral dissertations and masters' theses, and other SoMAS-related materials. Computers within MASIC allow connect to all electronic resources available at Stony Brook University. MASIC also contains a very nice reading room with large tables that can be used as study space. Please see the MASIC librarians for information about borrowing rules, use of materials placed on-reserve, hours of operation, and other MASIC policies.

A few other campus libraries contain materials of potential interest to SoMAS students, including the Math, Astronomy, and Physics Library, and the Chemistry Library. A schedule of each library's hours of operation and maps showing their locations are available on the MASIC or Stony Brook University Libraries web pages.

11.11 Software

Microsoft Office and Symantec Antivirus are available to every registered student for free. The latest version of Microsoft Office for Windows or Mac can be downloaded using your Stonybrook.edu email address. Please contact Mark Lang at SoMAS for more information.

A variety of other software including EndNote, SPSS, Mathematica, and Matlab is accessible though the university's SoftWeb site (softweb.cc.stonybrook.edu). You will need NetID and password to login.

11.12 Machine Shop, Woodworking Shop, and Power Tools

SoMAS has machine and woodworking shops where custom research equipment can be made. Power tools are also available. Use of these facilities must be approved and supervised. See the SoMAS Building Manager, Mark Wiggins, for more information.

11.13 SoMAS Vehicles

SoMAS owns several vehicles that may be rented for research-related work. SoMAS also owns vans for transporting students to course-related field sites. Please contact Mark Wiggins for SoMAS vehicle driving requirements.

APPENDIX I

This appendix contains SoMAS-specific forms that you will need to submit as part of your graduate education. Not all forms will be needed by every student, and general university forms such as the “Doctoral Defense Announcement” form are available through the Graduate School web page.

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Advisor Selection

Name of student (print): _____

Student signature: _____

Name of advisor(s) (print): _____

Advisor signature(s): _____

Date: _____

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Advisor Change

Name of student (print): _____

Student signature: _____

Name of former advisor(s) (print): _____

Former advisor signature(s): _____

Name of new advisor(s) (print): _____

New advisor(s) signature(s): _____

Date: _____

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Completion of Additional Specialty (Advanced), Quantitative, and Seminar Courses: Marine Track

Name of student (print): _____

1. Advanced courses (six credits required)

Course number, semester, year	Course name and instructor	No. of credits, grade

Course number, semester, year	Course name and instructor	No. of credits, grade

Course number, semester, year	Course name and instructor	No. of credits, grade

2. Quantitative course (one course required)

Course number, semester, year	Course name and instructor	No. of credits, grade

3. Seminar courses (Ph. D. students only, four credits required)

Course number, semester, year	Course name and instructor	No. of credits, grade

Course number, semester, year	Course name and instructor	No. of credits, grade

Course number, semester, year	Course name and instructor	No. of credits, grade

Student signature and date: _____

Advisor signature and date: _____

Graduate Programs Director approval: _____

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Completion of Additional Specialty (Advanced) and Seminar Courses: Atmospheric Track

Name of student (print): _____

1. Advanced courses

- M. S. students should take four of the courses below:

- Ph. D. students should take six of the courses below:

MAR 505, 544, 565, 570, 572, 583, 593, 594, 596, 598.

When appropriate, if specialty courses for your discipline are not offered, substitutions can be made with prior approval by the ITPA Director. Please list substitution in the "other" field below.

Course number, semester, year	Course name and instructor	No. of credits, grade
-------------------------------	----------------------------	-----------------------

Course number, semester, year	Course name and instructor	No. of credits, grade
-------------------------------	----------------------------	-----------------------

Course number, semester, year	Course name and instructor	No. of credits, grade
-------------------------------	----------------------------	-----------------------

Course number, semester, year	Course name and instructor	No. of credits, grade
-------------------------------	----------------------------	-----------------------

Course number, semester, year	Course name and instructor	No. of credits, grade
-------------------------------	----------------------------	-----------------------

Course number, semester, year	Course name and instructor	No. of credits, grade
-------------------------------	----------------------------	-----------------------

Other course no., semester, year	Course name and instructor	No. of credits, grade
----------------------------------	----------------------------	-----------------------

Student signature and date: _____

ITPA Director approval: _____

Graduate Programs Director approval: _____

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Request to Waive Core Course Requirement

Name of student (print): _____ is petitioning for a waiver of the following course(s):

Course no.	Course name	No. of credits
_____	_____	_____
_____	_____	_____
_____	_____	_____

The student completed similar coursework at _____ during the _____ semester of the year _____.

The student's advisor and core course instructor(s) have reviewed the course material (syllabus, homework, examinations, and any other relevant material) presented by the student and recommend a waiver be granted with the following conditions, if any:

Student signature and date: _____

Advisor signature and date: _____

Course instructor signature and date: _____

Course instructor signature and date: _____

Course instructor signature and date: _____

Graduate Programs Director approval: _____

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Request to Remedy Foundation Course Requirement

Name of student (print): _____ is petitioning to remedy the Foundation Course grade requirement. Grades for the following courses were received (list grades for all of the courses below that you have taken, even the ones you are not petitioning for):

Foundations in Marine Sciences I: Biogeochemical Cycles (MAR 508)	
Foundations in Marine Sciences II: Physics of the Oceans, Atmosphere, and Climate (MAR 509)	
Physical Oceanography (MAR 501)	
Biological Oceanography (MAR 502)	
Chemical Oceanography (MAR 503)	
Geological Oceanography (MAR 506)	

After consultation, the student, advisor, and relevant core course instructors recommend the following remedy:

Student signature and date: _____

Advisor signature and date: _____

Instructor signature, _____
course no., and date _____

Instructor signature, _____
course no., and date _____

Instructor signature, _____
course no., and date _____

Graduate Prog. Comm. approval and date: _____

Graduate Programs Director approval: _____

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Completion of Field Experience

Student name: _____ completed the field experience described below.

List date(s), location(s), and describe your field activities. Activities should include pre-trip preparation, work done in the field, and post-trip processing of data and/or samples:

Describe how this experience is related to your thesis project:

Student signature and date: _____

Supervising faculty member signature and date: _____

Graduate Programs Director approval: _____

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M. S. Thesis Research Proposal

Title of proposed research: _____

Student: _____

Date submitted: _____

Approvals:

Student's name (print)

Student's signature

Advisor's name (print)

Advisor's signature

First reader's name (print)

First reader's signature

Second reader's name (print)

Second reader's signature

Readers who are not SoMAS faculty must be approved in advance by the MASAC. Provide the MASAC a justification for the non-SoMAS member and their C.V.

Attach a complete copy of your thesis proposal to this form.

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M. S. Completion

Student name (print): _____

Student signature: _____

Today's date: _____

Date of oral thesis presentation: _____

Location of oral thesis presentation: _____

Approvals:

Advisor's name (print)_____
Advisor's signature_____
First reader's name (print)_____
First reader's signature_____
Second reader's name (print)_____
Second reader's signature

Graduate Programs Director approval and date: _____

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Teaching Practicum

Student name: _____

University-level class name and number : _____
 _____ in which practicum will occur.

Class meets _____ times per week for _____ minutes each meeting.

The student and supervising faculty member agree that the student will:

1. Register for _____ credit(s) of MAR 670 (must be at least one credit).
2. Observe _____ lectures/classes given by the course instructor(s) (must be at least six hours of class).
3. Perform the following teaching duties (lecture, lead discussion section, etc.): _____
 _____ for _____ class periods (must be at least three hours of class).
4. Prepare and grade the following type of assignment (exam questions, homework, etc.) on the material covered during the duties described in no. 3 above: _____

5. If additional duties are to be performed (which would require enrolling in extra credits of MAR 670), they should be specified here, along with an estimation of associated time commitments:

If a student will not perform one or more of the above requirements, please indicate which one(s) and provide justification:

If a student is applying for a waiver of the teaching practicum, please attach a letter describing the student's previous teaching experience in detail indicating how the above requirements have already been met. Also, attach at least one letter of evaluation from someone who supervised the student in his or her duties.

Student signature and date: _____

Supervising faculty signature and date: _____

Graduate Programs Committee approval: _____

Graduate Programs Director approval: _____

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Teaching Practicum Evaluation

Supervising faculty member (print name): _____

Teaching practicum student (print name): _____

Student completed teaching practicum in the following university-level class (print class name and number): _____

Duties included:

Observing _____ lectures/classes given by the course instructor(s).

Performing the following duties (e.g., lecture, lead discussion section, etc.): _____
 _____ for _____ class periods.

Preparing the following type(s) of assignment(s) (e.g., exam questions, homework, etc.) on the material covered during these duties: _____

Performed the following additional, if any: _____

Please evaluate the student's performance with specific regards to 1) thoroughness of preparation, 2) work ethic, 3) teaching ability, 4) quality of lectures, 5) ability to interact with students, and 6) anything else you feel appropriate for evaluation. Attach additional sheets to this form as necessary:

Supervising faculty signature and date: _____

Student signature and date: _____

Graduate Programs Director approval: _____

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Approval of Ph. D. Dissertation Committee

Student name (print): _____

Advisor name (print): _____

Proposed title of dissertation: _____

Proposed date of Qualifying (Preliminary) Exam (Proposal Defense): _____

Note – the exam should not be formally scheduled until after the MASAC approves the committee.

Print the name and affiliation of each proposed committee member. Committees must contain at least five members, three of which should be members of the SoMAS Graduate Faculty, and one must be an outside scholar who does not hold an adjunct appointment at SoMAS.

1. _____

2. _____

3. _____

4. _____

5. _____

- Attach a letter with a one-paragraph description of your dissertation topic. Also, describe the role each committee member will play on your committee.

- Attach the C. V. of the outside committee member(s)

Student signature and date: _____

Advisor signature and date: _____

Grad. Prog. Comm. Chair signature/date: _____

Graduate Programs Director approval: _____

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Ph. D. Qualifying (Preliminary) Exam (Proposal Defense) Outcome

Student name (print): _____

Dissertation committee chair name (print): _____

Exam date: _____

The student PASSED / FAILED (circle one) the exam with the following conditions, if any:

Names and signatures of the dissertation committee:

Print name_____
Signature_____
Print name_____
Signature_____
Print name_____
Signature_____
Print name_____
Signature_____
Print name_____
Signature_____
Print name_____
Signature

Student signature and date: _____

Graduate Programs Director approval: _____

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Ph. D. Dissertation Defense Outcome

Student name (print): _____

Dissertation committee chair name (print): _____

Defense date: _____

The student PASSED / FAILED (circle one) the exam with the following conditions, if any:

Names and signatures of the dissertation committee:

Print name

Signature

Print name

Signature

Print name

Signature

Print name

Signature

Print name

Signature

Print name

Signature

Student signature and date: _____

Graduate Programs Director approval: _____

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MCP Curriculum Checklist, 2016-2017

Student name: _____ Date: _____

A. Marine Sciences - two courses, one in a basic biological field plus any other MAR course

Suggestions for biology courses (several others are available):

- MAR 502 Biological Oceanography (Spring)
- MAR 515 Phytoplankton Ecology (Fall)
- MAR 540 Marine Microbial Ecology (Spring)
- MAR 560 Ecology of Fishes (Fall)
- MAR 588 Molecular Marine Ecology (Fall)

B. Conservation - two courses

- MAR 507 Marine Conservation Biology (**required**) (Fall)

And one of:

- MAR 512 Marine Pollution (Fall)
- MAR 522 Environmental Toxicology and Public Health (Spring)
- MAR 523 Marine Mammal Biology and Conservation (Fall)
- MAR 554 Aquatic Animal Diseases (Spring)
- MAR 578 Biology and Conservation of Seabirds (Spring)

C. Communications - two courses

- MAR 557 Case Study and Project Planning Seminar (**required**) (Fall)

And either:

- JRN 500 Introduction to News Media Concepts and Institutions (Spring)

or one of the following:

- any three of JRN 501, 502, 503, 504, 505, 508, 509 Communicating Science (Fall, Spring, Summer depending upon course)
- MAR 550 Policy 3Rs: Read, Write, Raise \$

D. Policy/Law/Economics/Management - one course

- MAR 514 Environmental Management (Spring)
- MAR 536 Environmental Law and Regulation (Fall)
- MAR 539 Economics of Coastal and Marine Ecosystems (Spring)
- MAR 553 Fisheries Management (Spring)
- POL 543 Environmental Politics and Policy (Fall)

E. Quantitative Assessment - one course

- MAR 558 Remote Sensing (Fall)
- MAR 561 Quantitative Fisheries Ecology (Fall)
- MAR 569 Statistics with R (Fall)
- MAR 587 GIS: Display and Analysis of Environmental Data (Spring)
- GSS 513 GSS Fundamentals I (Fall, Spring)
- GIS 525 GIS Fundamentals II (Spring)

F. Field Biology - one course

- MAR 531 Long Island Marine Habitats (Summer I)
- MAR 537 Tropical Marine Ecology (Winter)

(continued on next page)

G. Project or Internship – six credits

- MAR 589 Capstone Project in Marine Conservation and Policy*

or:

- MAR 592 Internship in Marine Conservation and Policy*

* - *Capstone and Internship credits can be taken at any time with permission of the advisor.*

Total Credits (30) _____

Approved: _____

Date: _____

(Rev. 8/16)