GRADUATE SCHOOL OF OCEANOGRAPHY

UNIVERSITY OF RHODE ISLAND

DEGREE REQUIREMENTS

2022

This manual was approved by the Graduate School of Oceanography (GSO) Faculty on 12 October 2022.

This manual serves two purposes. First, it provides program-specific requirements for the GSO graduate degrees: PhD, MS, in-person and online MO. Second, it includes recommended timetables for key milestones in each of the graduate programs. This manual serves as a supplement to the URI Graduate School Manual.

STUDENT RESPONSIBILITY

It is the student's responsibility to become familiar with GSO and URI regulations. As stated in the URI Graduate School Manual: 'Although advice and counsel regarding progress through a graduate degree program should always be sought from a student's major advisor, Graduate Program Director, research committee, or the Graduate School, each student is ultimately responsible for knowing and following the policies in this Graduate School Manual.' In addition, each student is responsible for completing additional requirements set forward in this manual and for ensuring that each step is entered into the University record system. To help guide the student and their major advisor through this process, this manual provides a table of degree-program forms (Table 1) highlighting the individual responsible for initiating each form within the Graduate School's forms management system.

The Community Standards and Student Conduct System pertain to all part-time and full-time students; graduate and undergraduate; matriculating and non-matriculating; to newly admitted students; and to students participating in exchange programs or cooperative programs on all University of Rhode Island campuses. Expectations and policies are stated in the Student Handbook.

ADMISSION TO PROGRAM

A student is admitted to the Oceanography program at GSO as a student for either the PhD, MS, or MO degree. PhD and MS students are typically assigned to an oceanography curricular group (Biological, Chemical, Geological, and Physical), each with different course requirements. In-person MO students may choose from four program tracks (Fisheries Science, Coastal Systems, Ocean Data and Technology, and General Oceanography), each with different course requirements. Online MO students take the General Oceanography track. Refer to the particular degree requirement sections for clarification (Tables 2-7).

For additional information, go to Section 3. Admission of the URI Graduate School Manual.

CHANGE OF STATUS

A request from an MS student for a change of status to the PhD program can be submitted after the completion of the PhD qualifying courses and will be reviewed by the faculty, the Student Admissions and Review Committee (SARC), and the URI Graduate School. At least two letters of recommendation from URI faculty must accompany the request. One of these letters is to be submitted by the major professor. The student's thesis committee, if one has been formed, must also endorse the request. Finally, the SARC will require a statement from the student indicating the student's objectives in undertaking a PhD program of study. If approved by the SARC, the request must be submitted by the student to and approved by URI Graduate School.

A student within the PhD program may elect to meet the requirements for the MS degree before continuing toward the PhD. Alternatively, the student may choose to take an MS degree instead of the PhD. In either case, the student must write a memorandum to the URI Graduate School requesting the change and have it endorsed by the major professor and the GSO Associate Dean of Academic Affairs before being approved by the URI Graduate School.

Forms to be used for submitting the change of status are available at the URI Graduate School website listed as "Request to Change or Add a Degree Program."

If a student wishes to continue for a PhD degree after receiving the MS degree, they must reapply for admission and be accepted into the PhD program.

SEMINAR IN OCEANOGRAPHY (OCG 695)

In-person GSO students are required to register for and attend the Seminar in Oceanography (OCG 695) each semester while in residence. All students, with the exception of first-year students and MO students, will present a 13-minute oral seminar once during the academic year. A PhD student is allowed to list OCG 695 in the program of study for six credits, a MS student may list it for three credits, and an in-person MO student may list it for up to two credits. If a PhD candidate is classified as ABD (All But Dissertation) for a semester, they cannot register for OCG 695 but should attend to support their peers.

OCEAN RESEARCH CRUISE

Each PhD and MS student is required to participate in an approved oceanic research cruise while the student is enrolled as a graduate student at GSO. This requirement may be waived if the student participated in an oceanic research cruise prior to attending GSO. Under unusual circumstances, it is possible that individuals may be excused from this requirement when appropriate. Requests for a waiver of the cruise requirement must be submitted to and approved by the GSO Associate Dean of Academic Affairs.

An "approved oceanic cruise" means the vessel was a member of the UNOLS fleet or comparable ship, the vessel was involved in oceanographic research as its primary mission while the student was on board, the ship was continuously at sea for at least five days and nights, and the student actively participated in the scientific activities. MO degree students are not required to participate in an oceanic research cruise, but are encouraged to do so.

The purpose of this requirement is to expose the student to techniques, technologies, and procedures for collecting oceanographic data at sea. The cruise must be approved by the student's major professor or advisor and submitted to the GSO Associate Dean of Academic Affairs via the Cruise Requirement Form.

PROGRESS REPORT

All PhD and MS students are required to submit a Graduate Student Progress Tracking Form to the GSO Academic Affairs Office when they begin matriculation and every following September until graduation. It is the intention of the report to be an informative summation of accomplished work and future plans, not an exhaustive and detailed account of research progress. This report must be completed in collaboration between students, their major professor, and one or more committee member(s) if a committee has been formed. A progress report is not required for the MO students.

Students should refer to the URI Graduate School Calendar for pertinent dates, especially as they near milestones and the completion of their degree. Degree timetables and graphical representations of milestones for each degree program are included in Figures 1-3.

PERFORMANCE REVIEW

A Review Committee, consisting of the SARC plus the student's major professor or temporary advisor, may review the performance of a student's coursework, research, and/or general progress.

Grounds for review of the student's status are as follows:

1. Any grade of "C–", "D" or "F" in Required Courses.
2. More than one "C" in Required Courses. Note: If a PhD student earns a grade lower than "B" in a Qualifying Course, the student's status must be reviewed since the PhD Qualifying Requirements have not been met.
3. A grade-point average less than 3.0
4. Any report to the GSO Associate Dean of Academic Affairs from the advisor, major professor, or any GSO faculty member, indicating dissatisfaction with the student's progress.

Should the Review Committee recommend that a student be dismissed or that the student's status as a degree candidate be changed, such action is subject to approval by the GSO faculty and the URI Graduate School. The deans of the URI Graduate School have the final decision to dismiss a student.

REQUIRED FORMS

Table 1 identifies the necessary forms for students' degree programs and the party responsible for initiating each form. Links are provided, however all students need to refer to the URI Graduate School Manual for appropriate form links where relevant on the URI Graduate Forms portal. The deadlines for submitting forms are available at the Graduate School Academic Calendar.

Form	Responsible for initiating form	Degree type
Program of Study	Student	MO, MS, PhD
Establishment of a Committee	Student	MS, PhD
Results of a Doctoral Qualifying Examination	Major Professor	PhD
Results of Written Doctoral Comprehensive Examination	Major Professor	PhD
Results of Oral Doctoral Comprehensive Examination	Major Professor	PhD
**Dissertation Proposal Approval Form (PhD) **Thesis Proposal Approval Form (MS)	Student	MS, PhD
All But Dissertation Status Agreement (ABD)	Student (4 semesters max.)	PhD
Last Semester Status Request Form	Student	MS, PhD
Nomination for Graduation Form	Student	MO, MS, PhD
Request to Schedule an Oral Defense	Student	MS, PhD
Results of an Oral Examination in Defense of a Doctoral Dissertation (PhD) Results of an Oral Examination in Defense of a Masters Thesis (MS)	Defense Chair	MS, PhD
Certification that Mandatory Corrections were Made to a Successfully Defended Thesis/Dissertation	Student	MS, PhD
Progress Tracking (GSO)	Student	MS, PhD
Cruise Requirement Form (GSO)	Student	MS, PhD

** Please note that Responsible Conduct of Research training must be completed prior to submission of the Thesis/Dissertation Proposal Approval Forms.

Table 1. Table of degree program forms. Note that the GSO cruise requirement and progress tracking forms are NOT available on the URI Graduate School forms portal.

ADVANCED COURSES

Students who do not have the prerequisites for any of the required courses must begin study to acquire the skills or knowledge required for their graduate study immediately. These courses are typically at the undergraduate level (≥ 400) and are normally taken for no-program credit and depend on the student's admission requirements. For students with Master's degrees, all coursework must be at the 500-or 600-level.

For additional information, go to Section 9. Distribution of Courses of the URI Graduate School Manual.

REQUIRED COURSE WAIVER

If students have previously taken graduate coursework equivalent to any of the required courses for each degree (see appropriate table below), they may request a waiver of the course requirement(s). A request for the waiver of a required course is made by submitting to the GSO Associate Dean for Academic Affairs a "Request for Waiver of Core Course Requirements." This form must include approval of the temporary advisor or major professor, and the course instructor. A request to waive more than two required courses must be approved by the SARC. Requests must be approved by the GSO Associate Dean for Academic Affairs and submitted, along with the students program of study, to the URI Graduate School for final approval.

PhD DEGREE REQUIREMENTS

Program of Study

The minimum program for the PhD is 64 credits beyond the baccalaureate, composed of a minimum of 34 credits of course-work completed at URI and 30 credits of research. Students with a MS degree in a closely related field may request to transfer up to 30 credits from their MS program to their PhD program. See section 7.20 Transfer Credits in the URI Graduate Manual for additional information.

Required courses for the PhD degree are listed in Table 2 and a recommended timetable is provided in Table 3. Students must receive a 'B' or better in the courses listed per their sub-discipline to qualify. Typically, this is done within the first year of residence.

The University imposes a time limit of seven years from the date of enrollment for completion of the PhD degree. Section 7.51 of the Grad School manual describes the time to degree limit.

All students		OCG 695 every semester but only six credits apply to program of study
Sub-Discipline	**Qualifying Course Requirements**	**Required Courses**
Biology	OCG 501, OCG 521, OCG 540, and OCG 561	Same as qualifying
Chemistry	OCG 501, OCG 521, OCG 540, and OCG 561	Same as qualifying
Geology	OCG 540 any two of OCG 501, OCG 521, OCG 561	Same as qualifying
Physics	OCG 501 **one class** from OCG 530, OCG 610, OCG 613 **one class** from OCG 521, OCG 530, OCG 540, OCG 561, OCG 610, OCG 613, EGR 515	OCG 501, OCG 530, OCG 610, OCG 613 Any 6 credits of OCG 500-600 level courses outside of discipline.

Table 2. List of course requirements for PhD students in the various sub-disciplines.

34 course credits (not including OCG 699)

30 research credits of OCG 699

= Total of 64 credits

Courses referred to in Table 2:

- OCG 501 Physical Oceanography
- OCG 521 Chemical Oceanography
- OCG 530 Principles of Ocean Circulation
- OCG 540 Geological Oceanography
- OCG 561 Biological Oceanography
- OCG 610 Geophysical Fluid Dynamics I
- OCG 613 Waves
- OCG 695 Seminar in Oceanography
- EGR 515 Hydrodynamics

Graduate Student Pay Level

Depending on degree progress, PhD students funded on URI assistantships receive pay raises throughout their GSO education (Figures 1 & 2). PhD students who arrive at GSO with a BA or BS degree begin at Level I, are promoted to Level II upon completion of the qualifying requirements, and are promoted to Level III upon successful completion of their comprehensive examinations. PhD students who arrive at GSO with a previously earned MS degree begin their studies as a Level II student and transition to a Level III PhD candidate after successful completion of their comprehensive exams.

For additional information, go to Assistantship Stipends and Levels of Appointment.

Dissertation Proposal and Proposal Defense

Each PhD student, having formed a dissertation committee, is required to submit a written statement of the proposed problem to be investigated and a research plan for a dissertation. Students are referred to the document "Thesis/Dissertation Process: From Proposal to Defense" for information on formats and content, and the URI Graduate School forms portal for the "Dissertation Proposal Approval Form".

The dissertation proposal should be submitted in the early stages of research, normally the semester following successful completion of the comprehensive exams. If the research involves the use of human or animal subjects, the proposal must be submitted

for approval to the appropriate University committee prior to the start of research (see Appendix D or Appendix E of the URI Graduate School Manual).

Prior to submission of the dissertation proposal to the URI Graduate School, the candidate is required to complete appropriate Responsible Conduct of Research training and give an oral presentation of the written proposal. The presentation is convened by the major professor and includes all members of the student's doctoral committee. The doctoral committee is allowed to ask questions and make suggestions for improvement of the proposal. Although no additional committee members are required, the presentation is open to other invited faculty at the discretion of the student and major professor. The proposal defense is usually no longer than 2 hours in length (see 7.58.1 of the Grad School Manual). A reasonable guideline would be a 45-minute presentation followed by a discussion.

Publication of Results

It is expected that students publish portions of their dissertation research in the peer-reviewed literature. The rigorous examination of the research by outside experts in the field that comes with publication will strengthen the dissertation and make the results available beyond the university.

Requirements	**Recommended Timetable**
Doctoral Committee	Before end of third semester
Program of Study	**Students with BA/BS** Tentative: second semester Final: after 24-30 credits and successful completion of qualifying exam (e.g., by end of second year) **Students with MS**: second semester
Research Cruise	By end of program
Dissertation Proposal	During third year
Comprehensive Exams	At or near the completion of formal course work as listed in the program of study and preferably before the end of the fifth semester.
Annual Progress Report	Annually
Dissertation Defense	Within five years of entry

Table 3. PhD Degree Requirements Timetable (see Figures 1 & 2 for reference).

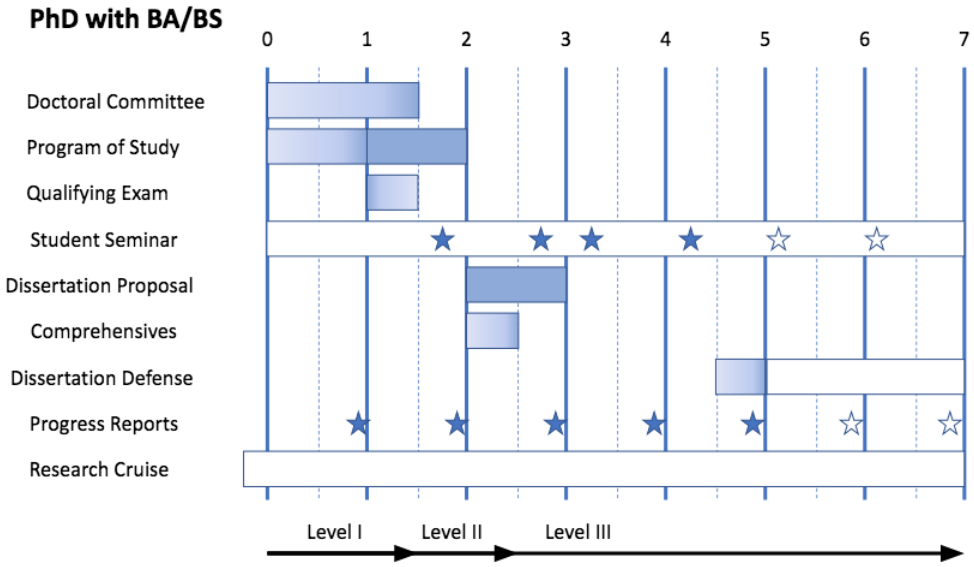

Figure 1. Graphic representations of key milestones as a function of time since matriculation (years) of the PhD program for students entering with a BA or BS degree. Bars with colors indicate preferred timing of milestones with gradients indicating target deadlines. Bars with no filling indicate open timeframes. Stars indicate approximate timing of discrete events, open stars indicate "if needed."

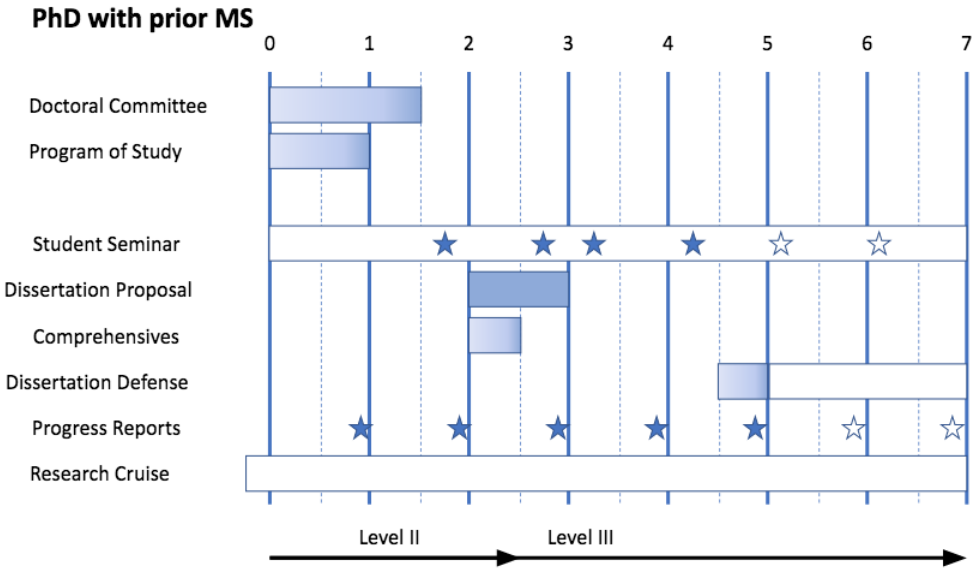

Figure 2. Graphic representations of key milestones as a function of time since matriculation (years) of the PhD program for students entering with a prior MS degree. Bars with colors indicate preferred timing of milestones with gradients indicating target deadlines. Bars with no filling indicate open timeframes. Stars indicate approximate timing of discrete events, open stars indicate "if needed."

MASTER'S OF SCIENCE DEGREE REQUIREMENTS

Program of Study

The minimum program for the MS is 30 credits. At least 18 of these credits will be from didactic, content-based courses, exclusive of thesis, special problems, and directed studies and at least six additional credits must be thesis. Additional courses may be required either with or without plan credit according to the needs of the student and the judgment of the major professor. The minimum required number of thesis research credits allowed in the plan is six, the maximum is nine. Required courses for the MS degree are listed in Table 4 and a recommended timetable is provided in Table 5.

The University imposes a time limit of five years from the date of enrollment for completion of the MS degree (see Section 7.42 of the Grad School Manual).

All students	OCG 695 every semester but only three credits apply to program of study
SUB-DISCIPLINE	
Biology	OCG 501, OCG 521, OCG 540, and OCG 561
Chemistry	OCG 501, OCG 521, OCG 540, and OCG 561
Geology	Six credits of OCG 500-600 level courses outside their discipline (not including OCG 695)
Physics	OCG 501, OCG 530, and OCG 610 or OCG 613

Table 4. List of course requirements for MS students in the various sub-disciplines.

Courses referred to in Table 4:

- OCG 501 Physical Oceanography
- OCG 521 Chemical Oceanography
- OCG 530 Principles of Ocean Circulation
- OCG 540 Geological Oceanography
- OCG 561 Biological Oceanography
- OCG 610 Geophysical Fluid Dynamics I
- OCG 613 Waves
- OCG 695 Seminar in Oceanography

Graduate Student Pay Level

MS students funded on assistantships from URI are paid at Level I (Fig. 3).

For additional information, go to Assistantship Stipends and Levels of Appointment.

Thesis Proposal and Proposal Defense

Each MS student, having formed a thesis committee, is required to submit a written statement of the proposed problem to be investigated and a research plan for a thesis. Students are referred to the document "Thesis/Dissertation Process: From Proposal to Defense" for information on formats and content, and the URI Graduate School forms portal for the "Thesis Proposal Approval Form".

The thesis proposal should be submitted in the early stages of research. An MS student should do this by the beginning of the third semester. If the research involves the use of human or animal subjects, the proposal must be submitted for approval to the appropriate University committee before research is begun (see Appendix D or Appendix E of the URI Graduate Student Manual).

Prior to submission of the thesis proposal to the URI Graduate School, the candidate is required to complete appropriate Responsible Conduct of Research training and give an oral presentation of the written proposal. The presentation is convened by the major professor and includes all members of the student's thesis committee. The thesis committee is allowed to ask questions and make suggestions for improvement of the proposal. Although no additional committee members are required, the presentation is open to other invited faculty at the discretion of the student and major professor. The proposal defense is usually no longer than 2 hours in length, including a 45-minute presentation (see section 7.44.5 of Grad School manual).

Requirements	Recommended Timetable
Thesis Committee	First year, second semester
Program of Study	First year, second semester
Research Cruise	By end of program
Thesis Proposal	Beginning of third semester
Annual Progress Report	Annually
Thesis Defense	Within two years of entry

Table 5. M.S. Degree Requirements Timetable (see Figure 3 for reference).

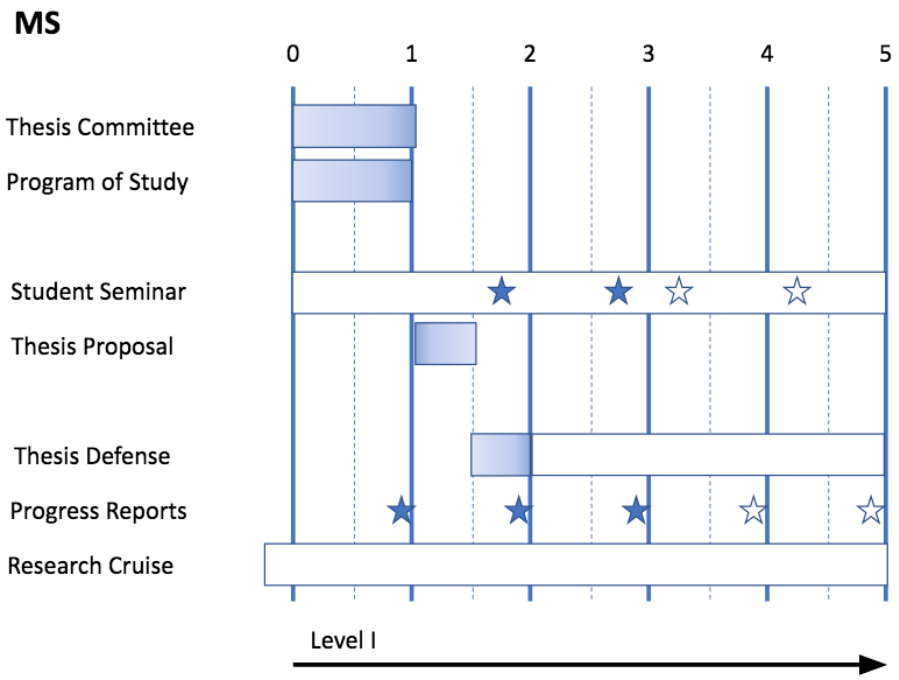

Figure 3. Graphic representation of key milestones since matriculation (years) of the MS program. Bars with colors indicate preferred timing of milestones with gradients indicating target deadlines. Bars with no filling indicate open timeframes. Stars indicate approximate timing of discrete events with open stars indicate "if needed."

MASTER'S OF OCEANOGRAPHY DEGREE REQUIREMENTS

The GSO offers three MO programs: In-person MO, Online MO, 5th-year MO, which all lead to the Master of Oceanography degree. There is no distinction in the degrees conferred between the programs.

Program of Study: In-Person MO Program

There are four tracks: **Marine Fisheries Science, Ocean Technology and Data, Coastal Ocean Science, and General Oceanography.** For all tracks a minimum of 30 credits, of which at least 15 credits are OCG classes, OCG 695 (two credits maximum); major paper or equivalent product (OCG 591/592, six credits) are required.

Required courses for each track are listed in Table 6 and a recommended timetable is provided in Table 7.

All in-person students	OCG 695 maximum of two credits apply to program (Online students do not take OCG 695). OCG 591/592
IN-PERSON MO TRACKS	
Marine Fisheries Science	OCG 561, OCG 670, and AFS 531; one from each of the following groups: A) OCG 501, 517, 521, 540 B) OCG 506, 673, NRS 410, 527, STA 550, EEC 543 C) MAF 523, 526, 651, BIO 563, OCG 673, NRS 527
Ocean Technology and Data	At least one from OCG 521, 540, 561 At least one from OCG 501, 517 At least four classes from the following: CSF 430, 432, 534, 580 ELE 457, 503, 504, 506, 509, 583 GEO 577 MAF 461, 521, 564 NRS 509, 516 OCE 467, 512, 514, 516, 522, 550, 562, 581, 582, 583 OCG 404, 506, 555

Coastal Ocean Science	At least one from OCG 521, 540, 561 At least one from OCG 501, 517 At least four classes from one or more of the following groups: GEO 511, 577 MAF 461, 515, 521, 564 NRS 423, 501, 509, 516, 555, 585 OCE 581, 582, 583 OCG 506, 512, 513, 517, 519, 522, 555, 580
General Oceanography	Three from the following group: OCG 501 or 517, 521, 540, 561; 3 credits in statistics, data analysis, or scientific writing; 6 credits in oceanography or other science departments; 3 credits in policy, management, economics, or related field.
ONLINE MO TRACK	
Online MO students	Follows the General Oceanography track; does not include OCG 695.
5th YEAR MO TRACK	
Fifth-year MO students	Follow one of the four in-person tracks.

Table 6. List of course requirements for the MO program tracks.

Courses referred to in Table 6:

- AFS 531 Fisheries Stock Assessment
- BIO 563 Biology and Ecology of Fishes
- CSF 430 Intro. to Information Assurance
- CSF 432 Intro. to Network & Systems Security
- CSF 534 Advanced Topics in Network and System Security
- CSF 580 Professional Skills for Cyber Security
- EEC 543 Economic Structure of the Fishing Industry
- ELE 457 Control Systems
- ELE 503 Linear Control Systems
- ELE 504 Optimal Control Theory
- ELE 506 Digital Signal Processing
- ELE 509 Introduction to Random Processes
- ELE 583 Computer Vision
- GEO 577 Coastal Geologic Hazards
- MAF 461 Coastal Zone Management
- MAF 515 Marine Pollution Policy
- MAF 521 Coastal Zone Law
- MAF 523 Fisheries Law and Management

- MAF 526 Management of Marine Protected Areas
- MAF 564 Port Planning and Policy
- MAF 651 Marine Affairs Seminar
- NRS 410 Fundamentals of GIS
- NRS 423 Wetland Ecology
- NRS 501 Foundations of Restoration Ecology
- NRS 509 Concepts of GIS and Remote Sensing in Environmental Science
- NRS 516 Remote Sensing in Natural Resources Mapping
- NRS 527 Marine Protected Areas: An Interdisciplinary Analysis
- NRS 555 Applied Coastal Ecology
- NRS 585 Salt Marsh Ecology
- OCE 467 Design of Remotely Operated Vehicles
- OCE 512 Ocean Waves and Storm Surge Modeling
- OCE 514 Engineering Wave Mechanics and Nearshore Processes
- OCE 516 Biomimetics in Ocean Engineering
- OCE 522 Dynamics of Waves and Structures
- OCE 550 Ocean Systems Engineering
- OCE 562 Modeling, Simulation and Control of Marine Vehicles
- OCE 581 Experimental Geomechanics
- OCE 582 Marine Geotechnics
- OCE 583 Deep Foundations
- OCG 404 Environmental Data Acquisition and Analysis
- OCG 501 Physical Oceanography
- OCG 506 Numerical Models and Data Analysis in Ocean Sciences
- OCG 512 Ocean Waves and Storm Surge Modeling
- OCG 513 Ocean Renewable Energy
- OCG 517 Foundations Of Earth System Dynamics
- OCG 519 Marine Environmental Organic Chemistry
- OCG 521 Chemical Oceanography
- OCG 530 Principles of Ocean Circulation
- OCG 540 Geological Oceanography
- OCG 555 Modern Oceanographic Imaging and Mapping Techniques
- OCG 561 Biological Oceanography
- OCG 580 Introduction To Marine Pollution
- OCG 610 Geophysical Fluid Dynamics I
- OCG 613 Waves
- OCG 670 Fish Population Dynamics
- OCG 673 Fisheries Oceanography
- OCG 691/692 Individual Study
- OCG 695 Seminar in Oceanography
- STA 550 Ecological Statistics

Program of Study: Online MO Program

The Online MO is delivered asynchronous online. The program follows the General Oceanography track (see Tables 6 and 7 for requirements and recommended timeline, respectively). OCG 695 is not required for online MO students.

Program of Study: 5th-year MO Program

The Fifth-year MO program is designed for students who want to enter the program while still undergraduates and earn the degree in the year following completion of their undergraduate degree. In general, students will take three of the core courses required for the MO degree during their fourth year, leaving 20-21 credits to be completed during the fifth year, following one of the MO tracks (see Tables 6 and 7 for requirements and recommended timeline, respectively). Students must earn a grade of "B" or better in PHY 111 or 203, CHM 112 or 192, MTH 132 or 142, and BIO 101 (or equivalent/AP credit).

Requirements	**Recommended Timetable**
Program of Study	First semester, second semester
Research Cruise	Optional

Table 7. MO degree requirements timetable.

HISTORY OF GSO DEGREE REQUIREMENTS MANUAL

The previous version of the GSO Degree Requirement Manual was approved by the Educational Policy Committee (EPC) on 6 September 2011 and by the GSO Faculty on 26 September 2011.

This version of the manual was updated by members of the GSO EPC during the spring and summer of 2022, submitted for review on 17 August 2022, and approved by the GSO Faculty on 12 October 2022. The members of the contributing committee include….

Kathy Donohue (Professor)
Diana Fontaine (PhD Candidate)
Kei Inomura (Professor)
Martha McConnell (Lecturer)
Sarah Nickford (PhD Candidate)
Robert Pockalny (Marine Research Scientist)
David C. Smith (Professor and Associate Dean of Academic Affairs)
Arthur Spivack (Professor)

UPDATES

2023-07-25 Edited Table 1 in **Required Forms** section
- replaced links from Airslate Forms with Adobe Forms.
- removed "Certification that Mandatory Corrections were made to a Successfully Defended Thesis/Dissertation" form link.
- corrected link to "Cruise Requirement" form.
Rob Pockalny

2023-07-25 Modified **Change of Status** section, paragraph 1.
- replaced
"At least three letters of recommendation from URI faculty must accompany the request."

with

At least two letters of recommendation from URI faculty must accompany the request."
Rob Pockalny

2023-07-25 Removed course from MO, which are no longer available
Rob Pockalny