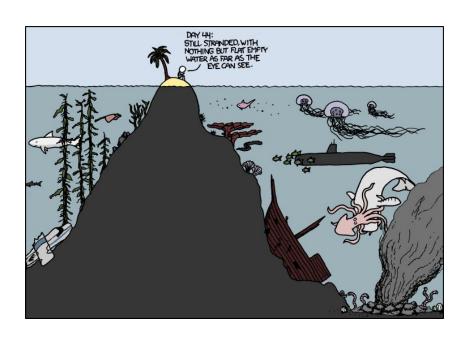
Marine Biology Graduate Program

University of Hawai'i at Mānoa

Student Handbook

2017-2018



Prepared by: MBGP Co-Directors and Program Coordinator

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Introduction

Welcome to the Marine Biology Graduate Program!

This handbook sets forth our fundamental policies, requirements and procedures for graduate students pursuing a graduate degree in Marine Biology. Please read this handbook carefully as **you** are responsible for the information contained within. We wish you great success in pursuing your educational goals and hope that this handbook provides you with a good tool in meeting those goals.

Program Overview

Administrative Organization

The graduate program in Marine Biology is a joint program offered by the College of Natural Sciences (CNS) and the School of Ocean and Earth Science and Technology (SOEST) to award PhD and MS degrees in Marine Biology. The program began in 2012 and includes over 40 Regular, Cooperating and Affiliate faculty members whose research interests include marine ecosystems, marine biogeochemical processes, reef and oceanic fisheries and human/marine ecosystem interactions.

The Program is administered by SOEST and CNS under the direction of the Program Co-Directors, Judy Lemus (SOEST) and Celia Smith (CNS). The Co-Directors also act as the Graduate Chairs of the Program. The Program has one staff member, the Program Coordinator.

The Program's policies are governed by a series of committees that include the Marine Biology Admissions Committee and Marine Biology Curriculum Committee. The former committee reviews graduate application materials and determines eligible students for admission, while the latter is consulted on curricular issues, including, but not limited to course and program requirements. Another standing committee, the Marine Biology Assessment Committee, is responsible for designing and implementing annual program assessments. Ad hoc committees will be formed to address program issues or concerns as needed.

Address:

Marine Biology Graduate Program University of Hawaiʻi at Mānoa 2525 Correa Rd., HIG 132 Honolulu, HI 96822 (808) 956-5651 mbiograd.manoa.hawaii.edu

College of Natural Sciences (CNS)

The College of Natural Sciences is one of the four Colleges responsible for undergraduate and graduate training in Arts and Sciences at Mānoa. Dr. Aloysius "Loek" Helminck is the Dean of CNS. The Departments of Biology, Botany, Chemistry, Information & Computer Sciences, Mathematics,

Microbiology and Physics & Astronomy operate within CNS. The CNS offices are located in Keller Hall with the main office in room 201.

School of Ocean and Earth Science and Technology (SOEST)

The School of Ocean and Earth Science and Technology is a multidisciplinary school that includes the Departments of Oceanography, Geology and Geophysics, Meteorology, and Ocean and Resource Engineering as well as the Hawai'i Institute of Geophysics and Planetology, the Hawai'i Institute of Marine Biology, the Hawai'i Natural Energy Institute, the Sea Grant and Space Grant College Programs, the Hawai'i Undersea Research Laboratory, and the Joint Institute of Marine and Atmospheric Research. Dr. Brian Taylor is the Dean of SOEST. The SOEST offices are located in Pacific Ocean Science and Technology (POST) building, with the main office in room 802.

Graduate Faculty

The Marine Biology Graduate Program is an interdisciplinary program that integrates participating units in CNS and SOEST at UH Mānoa. Regular graduate faculty are members of participating Departments and Units in these two colleges and lead the program in its curricular activities. Cooperating graduate faculty come from other departments/units within the University system, and Affiliate graduate faculty from non-University establishments such as State and Federal agencies. All Regular and Cooperating faculty can serve as Chairs of Masters and PhD committees. Generally, Affiliate faculty may serve on student committees, but may not chair MS and PhD committees.

Faculty Committees

All Committee members are appointed by the co-directors and consist of at least 3 faculty. One member rotates off the committee every year.

Admissions Committee: members serve a minimum 2-year term. Curriculum Committee: members serve a minimum 3-year term. Assessment Committee: members serve a minimum 2-year term.

Graduate Student Representatives

Each year the graduate students may elect 2 students to represent their interests at the faculty meetings and on the Curricular Committee (if requested).

Graduate Division

The Marine Biology Graduate Program is part of the University's Graduate Division, which is headed by the Graduate Dean, Dr. Krystyna Aune. Graduate Division offices are on the 3rd floor of Spalding Hall. The Marine Biology Graduate Program must comply with many rules of Graduate Division that are available at:

http://manoa.hawaii.edu/graduate

http://manoa.hawaii.edu/graduate/content/marine-biology

Program Activities

Marine Biology Graduate Program Seminars

The Marine Biology Program hosts a seminar series on Fridays from 3:30-4:30 pm during the regular academic year. All Marine Biology graduate students and faculty are expected to attend these weekly seminars. The seminar (MBIO 691B) may be taken for credit twice in the MBGP. For more information, check with Marine Biology's webpage for speakers and location. Friday seminars are usually followed by a social hour in conjunction with the Zoology graduate program. mbiograd.manoa.hawaii.edu

Other Seminars in Related Departments and Units

If you'd like to attend a HIMB, Oceanography or Botany Seminar, please check the Program calendar for upcoming speakers and topics or check the individual program's calendars:

http://www.soest.hawaii.edu/oceanography/seminar.html http://manoa.hawaii.edu/biology/seminars

The Biology Department hosts the annual Tester Symposium during the spring semester. Detailed information on the Tester Symposium is available directly through the Biology department as well as on their website here. The Oceanography Department holds their annual Conference of Biological Oceanography Graduate Students (CBOGS) Symposium.

Program Requirements and Procedures

Disclaimer

This handbook outlines the requirements to receive a graduate degree in Marine Biology from the University of Hawai'i at Mānoa. While every effort has been made to make this document as accurate as possible, it is not a legal document. Also, note that the degree requirements come from two sources: the University-wide graduate student requirements, set by the Graduate Division, and the Marine Biology Graduate Program. Please consult UH Mānoa's website http://manoa.hawaii.edu/graduate/ for general university regulations and graduate degree requirements. This handbook focuses on additional requirements specific to the Marine Biology Graduate Program.

Which Requirements and Rules Apply to Me?

The degree requirements applicable to each student are those that were in effect at the time the student entered (or re-entered) the program. For future reference, please keep a version of the Graduate Handbook applicable to the semester you were admitted. If the requirements change during a student's tenure in the program, that student may elect to either follow the new requirements, or remain with the original requirements, but may choose **one** of these options. If an existing student chooses to follow a new set of requirements, the student must notify the MBGP Coordinator in writing which Student Handbook version (e.g., academic year) they are following upon submitting the Graduate Division's Form II.

Prerequisites

Students admitted to the Marine Biology Graduate Program are expected to have strong undergraduate or MS training in biological oceanography, biology, botany, environmental science, marine science, marine biology, microbiology, zoology or other life sciences. Calculus is highly recommended. The GRE general exam is also required. Foreign students, whose native language is not English, will be required to satisfactorily pass the TOEFL exam (see http://manoa.hawaii.edu/graduate/content/english-proficiency).

Interim Committee and Preliminary Conference

Upon admission to the Marine Biology Graduate Program, each student will attend a Preliminary meeting with their Interim Committee that is comprised of the student's advisor/faculty sponsor and two additional members of the Marine Biology Graduate Faculty. The Program Coordinator in conjunction with the Co-Directors will assign the two additional faculty members to the Interim Committee.

The Preliminary meeting is to review any general deficiencies in preparation (such as a lack formal coursework in calculus, chemistry, or physics at the undergraduate level) and recommend appropriate courses for the student. The meeting will take place by the end of the first week of classes of the Fall semester. The student's Thesis or Dissertation Committee will replace the Interim Committee.

MBIO Core Courses

All students entering the program are required to enroll in and successfully complete MBIO 603 and MBIO 604 courses for a letter grade in their first year of study. Students failing to successfully complete the core courses will be dropped from the program.

Annual Requirements for All Students

Continuous Enrollment

University <u>policy</u> requires that a student must maintain continuous enrollment of at least one credit per semester (excluding Summer). With the exception of an Graduate Division-approved Leave of Absence, failure to stay enrolled will be considered a resignation from the graduate program. To be reinstated the student must formally re-apply. If you are supported on a Graduate Assistantship (GA) you must enroll in a minimum of six credits of research or coursework during each semester for which you are awarded a GA.

Annual Progress Report

All Marine Biology Graduate Students are required to submit a yearly progress report to the Program Coordinator's office no later than September 1. This report should describe research progress, course work taken, and any other activities during the preceding year. It should also outline plans for the coming year and report progress towards or plans for meeting any course work requirement. The student's committee members and Co-Directors will review these reports. Students failing to submit reports or those not making sufficient progress will be put on probation for the Fall semester (see http://manoa.hawaii.edu/graduate/content/disciplinary-actions).

Thesis/Dissertation Committee Meetings

All Marine Biology graduate students are required to meet with their committees at least once a year. Failure to submit documentation of these meetings (no later than 15 May) will result in probation for the subsequent Fall semester. PhD students shall meet with their assigned Interim Committee members until they have formed their official dissertation committee.

Research Presentation

After the 4th semester, all graduate students are required to make an annual public presentation on their thesis or dissertation research. Acceptable venues for this presentation include the MBIO seminar series, Tester Symposium, Conference of Biological Oceanography Graduate Students (CBOGS), annual meetings of professional societies, etc. Your thesis or dissertation defense may count as the public presentation in your final year. The students should inform the Program Coordinator when they are to give their presentations and include this information in the annual progress reports.

Theses and Dissertations

The Marine Biology Graduate Program offers the MS (Plan A only) and PhD degrees. In addition to coursework, each MS student is required to produce a Thesis and each PhD student is required to produce a Dissertation on their graduate research. A style and policy guide can be found at: manoa.hawaii.edu/graduate/sites/manoa.hawaii.edu.graduate/files/documents/misc/tdstylepolicy_e.p df. In addition, the Program requires that sections or the entirety of the thesis or dissertation must be written in a format suitable for publication in a peer-reviewed publication.

Master's Degree —Thesis (Plan A)

Requirements

Residency

Master's students must complete at least **two** semesters of Full-time enrollment (or the equivalent in credit hours) at UH Mānoa.

Graduate Seminar

A minimum of one graduate seminar in the program or in a related program is required.

Course Requirements

MS Plan A

Summary

A minimum of 30 graduate-level credits* total with a grade of B, or better, maintaining a GPA of at least 3.0.

At least 18 credits of formal coursework (Students may receive up to four credits of 1-unit seminar courses).

- Maximum of six credits of 400 level courses may be counted toward the 18 credits.
- Total maximum of 12 credits of 699 and 700 (Up to six credits of 699 Research will be applied towards the degree).
- Minimum one Graduate Seminar

Students MUST be enrolled in MBIO 700 or MBIO 700F during the final semester leading to graduation.

*Only credits earned with a required letter grade (including seminars) may be applied toward a graduate degree. For complete details and exceptions, see the Graduate Division policy at: https://manoa.hawaii.edu/graduate/content/course-applicability

Course Requirements

- A. Two (2) Core Courses
- MBIO 603 Career Skills for Marine Biologists (1)
- MBIO 604 Current Research in Marine Biology (1)
- **B.** Two (2) Content Courses from the following list are required prior to graduation:
 - MBIO 611 Introduction to Quantitative Methods in Fisheries Science (4)
 - MBIO 715 Marine Conservation Ecology (1-3)
 - MBIO 710 Topics in Marine Fisheries and Natural Resource Management (1-4) approval on a case-by-case basis by petition
 - MBIO 725 Topics in Marine Physiology, Behavior, and Organismal Biology (1-4) approval on a case-by-case basis by petition
 - MBIO 740 Advanced Topics in Quantitative Biology (1-4) approval on a case-by-case basis by petition
 - OCN 626 Marine Microplankton Ecology (4)

- OCN 627 Ecology of Pelagic Marine Animals (4)
- OCN 628 Benthic Biological Oceanography (4)
- OCN 630 Deep Sea Biology (3)
- BOT 682 (3) & 682L (1) Plants in Marine Environments (4 total) to be taken concurrently
- ZOOL 780/781 (8) Foundations of Evolution and Ecology must be taken together but will only count as credit toward one MBIO content course
- **C.** One graduate course in **statistics** is required prior to graduation and can include the following**:
 - ZOOL 631 Biometry (4)
 - ZOOL 632 Advanced Biometry (4)
 - OCN 682 Intro to Programming and Statistics in R (3)
 - OCN 683 Advanced Statistics in R (3)
 - BOT 660 Ecological Statistics with R (3) offered occasionally
- **Other courses in statistics may be substituted at the discretion of the student's committee
- **D.** Graduate Seminar: A minimum of one graduate seminar in the student's graduate program or in a related program is required.

Other related courses are those that are directly applicable to the student's research program. While at UH you might want to take advantage of the University's strengths in arts, drama, Asian studies, etc., but unless any of those courses can be shown to be directly related to your research, they will not count as part of the 30 credits. If in doubt check with your Interim Committee, Thesis Committee or Program Coordinator at the beginning of the semester in which you intend to take the course.

Time Limit

The Marine Biology Graduate Program considers sufficient progress to be a student capable of meeting all requirements for the Master's degree within **three** years of enrollment. For students transferring from the PhD track to the MS track while still in the program, the time limit begins when the student was admitted into the original track (see section on transferring, below). That is, the clock does NOT reset when you change your degree objective.

Extensions

Extensions of these time limits require approval by the Marine Biology Co-Directors and the Graduate Division. To request an extension a student must submit a letter, endorsed by their Advisor, to the Co-Directors that addresses, at minimum, the three elements below:

- Formal request for an extension with the length of time specified;
- Detailed explanation as to why an extension is appropriate; and
- Detailed and realistic (i.e. feasible) plan for the completion of the degree within the requested time.

Thesis Committee

Plan A thesis committees are made up of at least three members of the UH graduate faculty, including the Advisor. At least two members of the committee, including the Advisor, should be from the Marine Biology graduate regular or cooperating faculty. The third member may be a regular, cooperating, or affiliate Marine Biology faculty member. Qualified non-UH graduate faculty may serve on Plan A committees by submitting a formal request to the Co-Directors with a compelling argument as to why the member is more qualified to serve on your committee than any of the other available MB faculty. If approved, the Co-Directors will subsequently forward the request for final approval by Graduate

Division. Please see the Graduate Division's site for a list of potential committee members: http://manoa.hawaii.edu/graduate/content/select-committee-member

The committee is officially established by filing the Graduate Division's Form II. It is strongly recommended that the committee be formed unofficially well before admission to candidacy.

MS Timeline

1. Pre-Candidacy

In the first semester of enrollment, the Program Coordinator will suggest times for a meeting of a student's Interim Committee. All students should meet with their Interim Committee members, seek initial guidance, and evaluate undergraduate course deficiencies. This should be completed before the end of the first week of classes.

Form Required: Graduate Division's Master's Plan A, Form I

2. Formation of the Thesis Committee

The Thesis committee is to be formed no later than 2 semesters after entering the program.

Form Required: MBGP Thesis Committee Formation Form

3. Advancement to Candidacy and Approval of Thesis Proposal

After forming a Thesis Committee, MS degree candidates will present a written thesis proposal to their graduate committee **no later than the end of the 3**rd **semester of enrollment**. If the proposal is accepted, file Form II.

Form Required: Graduate Division's Master's Plan A, Form II

*IMPORTANT: If the proposed research involves the use of human subjects, nonhuman vertebrate animals, recombinant DNA, radioactive materials, scuba diving, fieldwork, or hazardous materials or activities, approval must be obtained from the appropriate institutional office or committee (e.g., Institute Animal Care and Use Committee, Diving Safety Office, etc.) before research can begin, and before the Graduate Division will approve a student's advancement to candidacy. Copies of the approvals should be submitted with Form II.

4. Enroll in MBIO 700, Directed Research for your final semester.

5. Write Thesis

The approved thesis proposal must result in an MS thesis that is a scholarly contribution based on original research conducted by the student under the supervision of the thesis committee chair.

a. Copies of the thesis must be submitted to committee members at least six weeks prior to the date of the defense. All members of the thesis committee must be present at the defense; see —proxy members in thesis/dissertation defenses issued by the Graduate Division for exceptions (see http://manoa.hawaii.edu/graduate/content/final-defense).

^{*}Note: Certain aspects of the style of the thesis are set by the Graduate Division see http://manoa.hawaii.edu/graduate/content/style-policy for more information.

6. Thesis Defense

The final examination for the Master's Degree (Plan A) is an oral thesis defense presentation to the thesis committee. The defense is open to all faculty and students.

a. A majority of the committee must vote "pass," otherwise the candidate fails. Students failing the defense may repeat it only once. Students who fail the second examination are dropped from the program.

Forms Required: Graduate Division Master's Plan A, Form III

7. Thesis Submission & Approval

Two copies of the thesis, one with the original signature page signed by members of the committee in black ink, the other with a copy of the signature page, must be deposited with the Graduate Division.

Form Required: Graduate Division Master's Plan A, Form IV

8. Exit Interview

All graduate students will be required to participate in a written exit interview with the option to meet in person with the Program Coordinator and/or Co-Directors prior to graduation. Questionnaires will be distributed at the beginning of the student's final semester.

Doctor of Philosophy Degree

Requirements

Residency

Doctoral students must complete at least **three** semesters of full-time enrollment (or the equivalent in credit hours) at UH Mānoa.

Course Requirements

Students entering with a BS or BA degree:

PhD without Prior MS

Summary

A minimum of 30 graduate-level credits* total with a grade of B, or better, maintaining a GPA of at least 3.0.

At least 18 credits of formal coursework (Students may receive up to four credits of 1-unit seminar courses).

Maximum of six credits of 400 level courses may be counted toward the 18 credits. Total maximum of 12 credits of 699 and 800 (Up to six credits of 699 Research will be applied towards the degree).

Students MUST be enrolled in MBIO 800 (Dissertation) in the semester of graduation.

*Only credits earned with a required letter grades may be applied toward a graduate degree. For complete details and exceptions, see the Graduate Division policy at https://manoa.hawaii.edu/graduate/content/course-applicability

Course Requirements

- A. Two (2) Core Courses
- MBIO 603 Career Skills for Marine Biologists (1)
- MBIO 604 Current Research in Marine Biology (1)
- **B.** Two (2) Content Courses from the following list are required prior to graduation:
 - MBIO 611 Introduction to Quantitative Methods in Fisheries Science (4)
 - MBIO 715 Marine Conservation Ecology (1-3)
 - MBIO 710 Topics in Marine Fisheries and Natural Resource Management (1-4) approval on a case-by-case basis by petition
 - MBIO 725 Topics in Marine Physiology, Behavior, and Organismal Biology (1-4) approval on a case-by-case basis by petition
 - MBIO 740 Advanced Topics in Quantitative Biology (1-4) approval on a case-by-case basis by petition
 - OCN 626 Marine Microplankton Ecology (4)
 - OCN 627 Ecology of Pelagic Marine Animals (4)
 - OCN 628 Benthic Biological Oceanography (4)
 - OCN 630 Deep Sea Biology (3)
 - BOT 682 (3) & 682L (1) Plants in Marine Environments (4 total) to be taken concurrently

- ZOOL 780/781 (8) Foundations of Evolution and Ecology must be taken together but will only count as credit toward one MBIO content course
- C. One graduate course in statistics is required prior to graduation and can include the following**:
 - ZOOL 631 Biometry (4)
 - ZOOL 632 Advanced Biometry (4)
 - OCN 682 Intro to Programming and Statistics in R (3)
 - OCN 683 Advanced Statistics in R (3)
 - BOT 660 Ecological Statistics with R (3) Offered occasionally
- **Other courses in statistics may be substituted at the discretion of the student's committee

Other related courses are those that are directly applicable to the student's research program. While at UH you might want to take advantage of the University's strengths in arts, drama, Asian studies, etc., but unless any of those courses can be shown to be directly related to your research, they will not count as part of the 30 credits. If in doubt check with your Interim Committee, Thesis Committee or Program Coordinator at the beginning of the semester in which you intend to take the course.

Students entering the PhD program with a MS degree (or equivalent) in the life sciences must:

- Complete courses specified above in part (A) (MBIO 603 & 604)
- Complete courses prescribed by the student's Interim or Dissertation committees
- Enroll in MBIO 800 (dissertation)

Teaching Experience

The Marine Biology Graduate Faculty considers experience in teaching as an integral part of the academic training program, and teaching experience is required of all doctoral students. This experience usually takes the form of a teaching assistantship of at least one semester, but may also be fulfilled by experience in teaching high school biology or other teaching experience. These later options must be documented and coordinated with the Program Coordinator.

Time Limit

The degree must be completed within **seven** years of admission to the graduate program. For students admitted directly into the PhD track, this time limit begins when the student was admitted to the Program. For students transferring from the MS track to the PhD track while still in the program, the time limit begins when the student was admitted into the MS track (see section on transferring). That is, the clock does NOT reset when you change your degree objective. Students considering a transfer to the PhD program should consult with their advisor and committee no later than the end of their second year since the comprehensive exam must be taken by the end of the third year.

Extensions

Extensions of these time limits require approval by the Marine Biology Co-Directors and the Graduate Division. To request an extension a student must submit a letter, endorsed by their Advisor, to the Co-Directors that addresses, at minimum, the three elements below:

- A formal request for an extension with the length of time specified;
- A detailed explanation as to why an extension is needed; and
- A detailed and realistic (i.e. feasible) plan for the completion of the degree within the requested time period.

Dissertation Committee

The Dissertation Committee must include at least five faculty members, including the advisor, who is the dissertation committee chair. The chair must be a UHM member of the Marine Biology Graduate faculty, and a majority (i.e., 3 or more) of the committee members should be members of the Marine Biology regular or cooperating graduate faculty (i.e., not Affiliate faculty). In addition, a majority of the committee members should be UHM graduate faculty (i.e., not Affiliate faculty). Any member of the UH graduate faculty can serve on a Marine Biology dissertation committee. To include non-UH graduate faculty on a committee, a memo from the committee chair with the prospective member's *curriculum vita* should be submitted to the Co-Directors for approval by Graduate Division. For potential committee members, select Marine Biology on the following Graduate Division web page or check with the Program Coordinator http://manoa.hawaii.edu/graduate/content/select-committee-member

University Representative

One member of the committee must serve as the University Representative. The University Representative's primary function is to serve as a representative of the Graduate Division to ensure procedures and standards are fairly and reasonably applied. The University Representative must be a tenured member of the graduate faculty at UH, is **not** a member of the Marine Biology Graduate Faculty, and serves to insure that the Graduate Division's policies and procedures are followed in a student's graduate program. Students should speak with their advisors to discuss who might be potential University Representatives for their committee. Graduate Division guidelines for committees are located here: http://manoa.hawaii.edu/graduate/content/committee-composition-potential-members and eligible faculty are listed here: https://manoa.hawaii.edu/graduate/content/select-committee-member

PhD Timeline

1. Pre-Candidacy

In the first semester of enrollment, the Program Coordinator will suggest times for a meeting of a student's Interim Committee. All students should meet with their Interim Committee members, seek initial guidance, and evaluate undergraduate course deficiencies. **This should be completed prior to the end of the first week of classes.**

Form Required: Graduate Division Master's Plan A, Form I

2. Form the Dissertation Committee

See above for the requirements of the committee composition. As with the Masters program, the student will consult with his/her faculty mentor and identify faculty who could have time, interest and expertise to be part of the student's committee. The student will communicate with prospective committee members, ask them to be part of the committee, and ultimately organize a meeting of his/her full committee. Once the committee is formed, the student submits a proposed Dissertation Committee Form to the Program Coordinator.

If any proposed faculty are not members of the UH graduate faculty, a *curriculum vitae* and memo from the student's Committee Chair needs to accompany the form justifying the non-UH-faculty member's participation (subject to approval by Graduate Division). The Co-Directors will review the form, memo, and *curriculum vitae* and, if approved, forward to Graduate Division for approval. This **must** be completed *before* the comprehensive exam is scheduled.

Deadline: The Dissertation committee is to be formed no later than 3 semesters after entering the program.

Form Required: MBGP Dissertation Committee, Form IIa

3. **Dissertation Proposal**

A dissertation proposal must be formulated, discussed, and accepted by the approved Dissertation Committee by the end of the 6th semester. The dissertation proposal format should follow that of a research proposal and clearly define the scientific problem, questions or hypothesis; include detailed methods; predicted outcomes and significant of their research. Students should work with their sponsor and committee members to develop the research proposal.

Oral Comprehensive Exam

The Dissertation Committee will administer to the student a comprehensive oral examination. The purpose of this exam is to ensure that the student has A) the general knowledge as well as B) knowledge related to the student's dissertation field or research area and C) the ability to think critically and creatively as is necessary for conducting independent research at the PhD level. All criteria must be evaluated.

Effective October 2016:

Remote participation by a committee member during the student's Comprehensive Exam will be allowed under the following circumstances:

- One member of the committee is not physically on the island of Oahu during the exam
- Physical attendance is required for the Chair, University Rep, and AT LEAST 2 of the other 3 committee members
- In the event of extraordinary circumstances, variance of the above requirements may be allowable by written petition to the MBGP Co-Directors

Deadline: It is the student's responsibility to schedule the exam, which must be completed by the end of their 6th semester. If the exam is not scheduled by the end of the 5th semester, the Co-Directors will schedule the exam on behalf of the student. Unless the Co-Directors grants a specific exception, failure to complete the exam by the deadline will result in dismissal from the program.

At the end of the oral exam, the student will be excused from the room. Prior to any discussion among the committee members about the student's performance, they will conduct an anonymous, non-binding pass/fail written vote to assess the initial impressions of each committee member. After discussion, the committee will take a final vote. Passing the Comprehensive Exam requires approval by at least four of five committee members.

There are three possible outcomes for the Oral Comprehensive Exam:

<u>I. Pass.</u> This meets one criterion for the student to advance to Ph.D. candidacy.

II. <u>Fail, but with the committee's permission to retake the exam.</u> The Comprehensive Exam may be retaken only once. The second attempt to pass the exam should occur within two months of the first exam and should not exceed the 6-semester time limit for completion of the entire exam process without prior approval from the Co-Directors. The committee and student may consider adding a written component to the exam for the second attempt, particularly if the oral exam format was considered to play a significant role in the student's poor performance.

Note: Graduate Division rules allow a student only two attempts to gain admission to Ph.D. candidacy. A second denial results in loss of status as a classified graduate student and dismissal from the program.

III. Fail. Students without a prior master's degree in Marine Biology may, at the discretion of the committee, transfer to the MS program after failing the comprehensive exam the first time. A student with a prior master's degree in Marine Biology, or one without such a degree but who is not granted permission to transfer to the MS program, will lose their status as a classified graduate student and will be dismissed from the program. Students may NOT transfer into the MS program after a second failed attempt at the comprehensive exam; a second failed attempt will result in dismissal from the program.

Within one week of the exam, the Dissertation Chair and Committee will prepare a written report, to be signed by all committee members, relating the outcome of the exam and summarizing reasons for the committee's evaluation. It is the student's responsibility to follow up with his/her advisor to ensure that this signed report is submitted to the Program Coordinator. This report should be modeled on an NSF panel summary, with the aim of providing the student with valuable, substantive feedback on both the strengths and weaknesses of their performance. Copies will be given to the student and entered in the student's file.

Form Required: Graduate Division Doctorate Form II (in part)

*IMPORTANT: If the proposed research involves the use of human subjects, nonhuman vertebrate animals, recombinant DNA, radioactive materials, scuba diving, other hazardous materials or activities, approval must be obtained from the appropriate institutional office or committee before research can begin, and before the Graduate Division will approve a student's advancement to candidacy. Copies of the approvals should be submitted with Form II.

4. Advancement to Candidacy

Upon successful completion of the comprehensive exam and acceptance of Form II by the Graduate Division, the student is considered a Doctoral Candidate and may request All But Dissertation (ABD) certificate from Graduate Division. The student may now enroll in dissertation research MBIO 800.

5. Write Dissertation

Under the guidance of the dissertation committee, the candidate prepares a doctoral dissertation according to the rules established by the Graduate Division (see http://manoa.hawaii.edu/graduate/content/thesis-dissertation) and the dissertation committee.

6. Submit Dissertation

A draft of the final Dissertation must be submitted to the dissertation committee **at least 6 weeks prior** to the public defense. Committee members will read the dissertation and if approved, sign Form III after the public defense.

7. Defend Dissertation

The final examination is in the form of a dissertation defense, which consists of a public oral presentation by the candidate of the dissertation research, and addressing question by the public and dissertation committee. The full dissertation committee must participate. The defense must be scheduled one month in advance and announced via the University Calendar (see below). Students must also inform the Program Coordinator of the defense time and location.

Announcement of the defense is submitted to the Graduate Records Office at least three weeks prior to the date of the defense (four weeks in advance during summer). The defense must be announced in the University Calendar to be a valid dissertation defense.

https://manoa.hawaii.edu/graduate/sites/manoa.hawaii.edu.graduate/files/documents/forms/final_oral.pdf

Results of the defense are reported on Form III. A majority of the members of the doctoral committee, including the committee chair, must vote "Pass," otherwise the candidate fails. Candidates failing the final examination may repeat it only with approval of both the Graduate Program faculty and the Graduate Dean. Candidates that fail the final examination twice are dropped from both the Graduate Program and the Graduate Division. For other Graduate Division rules and regulations (including the policies in regard to Proxy committee members) http://manoa.hawaii.edu/graduate/content/current-students

Form Required: Graduate Division Doctorate Form III

Deadline: Submit after defense or no more than three weeks prior to Graduate Division due date

8. Publish

Doctoral students are required to publish their dissertation document. Students may publish through ProQuest or an alternative publisher. To publish through ProQuest, see http://manoa.hawaii.edu/graduate/content/submission-publication. Students seeking to publish through an alternative publisher must obtain advance approval from the Graduate Division. Actual publication must occur within one year of graduation.

9. Final Dissertation Submission

Final dissertation must be submitted to Graduate Division by due date along with Form IV that has been signed by all committee members.

Form Required: Graduate Division Doctorate Form IV

Deadline See Calendar for due dates (http://manoa.hawaii.edu/records/calendar/index.html)

10. Exit Interview

All graduate students will be required to participate in a written exit interview with the option to meet in person with the Program Coordinator and/or Co-Directors prior to graduation. Interviews will be distributed at the beginning of the student's final semester.

Transfers from MS to PhD track

Students may transfer from the MS to the PhD track in two ways:

- A student who enters the MS program but subsequently would like to move directly to the PhD track needs to obtain the unanimous written approval of their MS Committee on the "Approval to Proceed toward Ph.D. Candidacy" form (PhD Transfer Request) and then notify the Co-Directors. The letter from the committee should include a clear statement that the student has demonstrated the intellectual and creative ability to attempt the PhD track. The student must also submit a new Graduate Admissions Application Form and pay the application fee.
 - The student switching tracks is held to the PhD timeline (including the comprehensive exam timing), which begins with their *original* semester of admission to the Program. In other words, switching tracks in this way does NOT increase the total timeline for the student in any way. MS students wishing to transfer into the PhD program should make this request no later than the end of the 4th semester, as the dissertation committee must be formed and the comprehensive exam taken by the end of the 6th semester.
- 2. A student working toward a Master's degree in Marine Biology, who desires the completion of an MS degree and subsequent transfer to the PhD track should take no official action until near the end of the MS program. At that time, the student must obtain the unanimous written approval of their MS Committee on the Marine Biology "Approval to Proceed toward Ph.D. Candidacy" form (PhD Transfer Request) before notifying the Co-Directors. The student should follow guidelines to complete the Master's degree, including a public presentation and defense of the thesis. The student needs to apply to the Graduate Division the semester before wanting to start the PhD program using the Graduate Division Petition for Admission to a Doctorate in Same Discipline form and pay the application fee.

Academic Rules, Regulations and Policies

Minimum GPA

Graduate students are required to maintain a 3.0 GPA

- In all UH courses that are to be applied to degree requirements
- In all courses taken as a classified degree-seeking graduate student
- In all graduate (600-level or higher) courses.

Students may petition Graduate Division to exclude from the GPA up to two grades lower than B for undergraduate courses taken in the first semester of graduate school. If this is done those courses cannot be counted towards degree requirements.

Academic Probation

Students whose cumulative grade point average fails to meet these GPA minimum requirements after completing 8 credit hours or two semesters of coursework are placed on academic probation for the following semester. Students admitted conditionally (due to low undergraduate GPA) will be placed on academic probation if they fail to meet the minimum GPA requirement after completing one semester.

Students who fail to attain the required minimum GPA at the end of the probationary semester are dismissed from graduate school.

Enrollment

After admission to candidacy, students must be registered each semester (excluding summer session) for course work, thesis/dissertation, or research credit. Students who are not enrolled, or are NOT on an approved leave of absence, are regarded as having withdrawn from the degree program. These students will have to apply for readmission if they wish to resume graduate studies.

Course Loads

A graduate student is considered as enrolled full time if his/her course load is:

- 8 16 credits if not a graduate assistant (students whose financial aid, e.g., fellowships, requires they be enrolled full time, must be registered for at least 8 credits)
- 6 9 credits if a graduate assistant (without financial aid)
- At least one credit of Dissertation 800 if a doctoral candidate
- One credit of Thesis 700F if a Master's Plan A candidate and all degree credit requirements, including that for Thesis 700, have been met.

Courses used to remedy undergraduate deficiencies are considered degree-related and count toward full-time status, but do not count toward meeting the required graduate degree credits. Audited courses do not count towards these course-load limits. The upper limits may be exceeded with permission from the student's advisor, the Co-Directors, and the Graduate Division. Students must be enrolled in at least one course or register for one credit of 700 /800 during the semester in which they graduate.

Grades

Only courses in which a letter grade of B or better was earned can be counted towards degree requirements. Additionally, a minimum B letter grade is required for the core courses. Graduate

students may take courses for credit/no credit (CR/NC) or may audit courses, but such courses cannot be counted towards degree requirements.

Incompletes

An incomplete grade, recorded on transcripts as an I, is given to students who fail to complete a small but important part of a semester's work in a course before the semester grades are determined. Students are expected to complete all courses and will be allowed to graduate with "I" grades on their transcript only by permission from the Co-Directors and Graduate Division. Students receiving an "I" should contact the instructor to determine the steps to be taken to remove it.

Transfer of Credits (only applicable to MS students)

Credits for courses taken prior to entering the graduate program, or at another institution while in the graduate program at UH, may be transferred and applied to MS graduate degree requirements, subject to the following conditions

- Transfer credits do not reduce the minimum residence requirements
- Up to 15 credits earned at another accredited institution that were not used for a previous degree may be transferred.
- Only courses in which a B or better was earned may be transferred
- Courses that were taken within 7 years of completion of the degree

UH Unclassified Credits (only applicable to MS students)

Up to 15 credits earned at UH as an unclassified post-baccalaureate student prior to entering the graduate program may be transferred. Courses must have been taken within five years of entry into the graduate program. Credits for directed research (699) cannot be transferred. The request to transfer non-699 credits must be made during the first semester in the graduate program, and must be approved by the Co-Directors and the Graduate Division.

Leaves of Absence

Students who have been admitted to candidacy may request and be granted leave from their studies on recommendation of the Co-Directors and approval by the Dean of the Graduate Division. Leave of absence may be taken for a period of up to one year over the course of your graduate program. The date of return from a leave must be set at the time the leave is requested. Students not returning from leave on time will be required to apply for readmission to the University in accordance with established regulations.

Students on approved leave do not pay tuition fees, and time on approved leave is not counted against the five- or seven-year limits for completion of degree programs. No re-admission procedure is required.

Research Regulations

Federal, State and University regulations require that proposed research projects of certain types be reviewed and approved to ensure that the proposed research complies with applicable protective standards. Students who are unsure whether these regulations apply to their research should consult with their advisor, with the Graduate Division, or with the Office of Research Services.

For Compliance regarding

Human Studies, Environmental, Health and Safety, Institutional Animal Care and Use

Laboratory Animal Service (IACUC), and Ethical Standards, please see the Graduate Division's website http://manoa.hawaii.edu/graduate/content/compliance-ethical-standards

Graduate Assistantships and Other Types of Support

All graduate assistants who hold research or teaching positions (GAs) are expected to spend half time (not more than 20 hours per week) working in instruction or research and associated duties.

Teaching Assistantships (TAs)

Graduate teaching assistantships are sometimes available from several departments in CNS and SOEST with undergraduate courses, for students who have a minimum 3.0 GPA. TAs carry a stipend that is paid over a 12-month period for 9 months of service. TAs are expected to spend half time (not more than 20 hours per week) working for the department in instruction and associated duties. Tuition is waived for all students with teaching assistantships.

Application

Application forms for Teaching Assistantships may be obtained by writing to the Chair of the Department in which TA slots are available. Application may be processed simultaneously with the application for admission. However, recommendations for appointments as graduate assistants are finalized only for applicants who have been admitted to the Graduate Division as potential degree candidates for the period during which they will be serving as graduate assistants.

Course Load

All graduate assistants must carry a minimum of six credit hours, but may carry a maximum of nine credit hours each semester. GAs receiving additional financial aid must register for a minimum of eight credit hours. Audit hours do not count toward the minimum. The six credit hours may be at any level, 100-800. GAs taking only Dissertation 800 for less than six credits may be certified by the Graduate Division as carrying a full load. To be eligible for such certification, receipt of Student Progress Form II verifying that the dissertation proposal has been approved must be recorded in the Graduate Division.

Tenure of Assistantships

Teaching assistantships are reviewed and awarded each semester. Positions are not automatically renewed.

Foreign Teaching Assistants

The English Language Institute at Manoa has developed a course to provide practice for foreign teaching assistants in speaking in classroom situations with an emphasis on oral skills ESL 111. Foreign teaching assistants are encouraged to take this course, Practicum for Foreign Teaching Assistants.

Research Assistantships (RAs)

Research assistantships frequently are available to qualified students in connection with research projects of the faculty. Such assistantships rarely are available until after the faculty has had the opportunity to assess the student's research potential. The stipend and working conditions are similar to those of graduate teaching assistantships, although research assistantships may or may not include a tuition waiver. Tuition waivers are dispersed from the Office of Research Services, and are only awarded if the student is working at least 12 of the 16 weeks of the semester. Tuition waivers are not awarded to

students directly receiving funding for assistantships from sources outside of the University, and are not directed through the Office of Research Services.

Scholarships

Graduate Division

Various forms of merit-based financial support are available to graduate students at UHM, including Graduate Division Achievement Scholarships, intramural graduate fellowships, extramural funding, and graduate assistantships. Information can be found on the Graduate Division website at: http://manoa.hawaii.edu/graduate/content/financial-support

The Denise B. Evans Fellowships in Oceanographic Research

These awards support outstanding SOEST graduate students in many different fields of oceanographic research. Awards are in the amount of \$28,000 per student year, and are paid as salary to graduate research assistants at UH Mānoa who will be continuing their studies. Marine Biology students are eligible for this fellowship and apply through the director of the Hawaii Institute of Marine Biology. https://www.higp.hawaii.edu/DeniseBEvans/

SOEST Hau'oli Mau Loa Graduate Fellowship

Available for local students dedicated to careers in natural resource management in the state of Hawai'i. Each assistantship comes with generous support for two years.

https://www.soest.hawaii.edu/soestwp/hauoli-mau-loa-graduate-fellowship/

EECB Fellowships

Available to students in the Ecology, Evolution and Conservation Biology interdisciplinary graduate specialization program. https://www.hawaii.edu/eecb/current.html

East-West Center

These scholarships are designed to promote mutual understanding by bringing together students from Asia, the Pacific area, and the United States for study, interchange of ideas, and shared living experiences. Grants are ordinarily for 24 months and include travel to and from Hawaii, tuition, books, food and lodging, health insurance, and a small monthly personal allowance.

http://www.eastwestcenter.org/education/student-programs/opportunities-study/ewc-graduate-degre e-fellowship

Part-time Employment

Part-time employment sometimes is available with the National Marine Fisheries Service Honolulu Laboratory of the National Oceanographic and Atmospheric Administration (NOAA), the Pacific Islands Office of the United States Fish and Wildlife Service (USFWS), the Bernice P. Bishop Museum, and local offices of other agencies.

Tuition Waivers

Tuition exemptions are included in each teaching assistantship contract. Other tuition waivers, some requiring that the student's work have a Pacific-Asia focus, are available through the Graduate Division. Inquiries about the availability of waivers should be made at the time of application. Applicants should

thoroughly explore the University's website to discover potential sources of support and to find out how they may apply for such support.

Additional Employment

It is expected that the combined responsibilities of graduate student and assistantship duties will occupy all the time available to a student during the academic year. University policy on outside (off-campus) or overload (on-campus) employment by a graduate assistant in addition to the assistantship limits such employment to eight hours per week.

Health Insurance

Graduate assistants may enroll in the State Health Fund medical insurance program if appointed at 0.50 FTE for a period of at least three months. There are several plans to choose from, both single and family, with the cost shared in part by the State. Alternatively, assistants may enroll in one of the student health plans, either single or family.

APPENDIX 1: Student Conduct and Ethics

The following text is from the University of Hawai'i Graduate Division webpage: http://manoa.hawaii.edu/graduate/content/conduct-code

The University of Hawai'i at Mānoa exists for the pursuit of knowledge through teaching, learning, and research conducted in an atmosphere of physical and intellectual freedom. Members of the UHM academic community are committed to engage in teaching, learning, research, and community service and to assist one another in the creation and maintenance of an environment that supports these activities.

Members of the academic community may not violate the rights of one another nor disrupt the basic activities of the institution. Students who are disruptive are subject to a variety of disciplinary actions that may include reprimand, probation, restitution, suspension or expulsion. Continued enrollment at UHM is contingent on appropriate academic conduct. Some graduate students are professionals or professionals-in-training in their respective fields, and as such, are subject to the ethical and conduct standards of their profession. Students may be dismissed by such fields for behavior which is determined to violate the codes of conduct set by that profession. These codes may be guided by the profession's accrediting or licensing bodies. Appeals of the dismissal will be heard by the dean of that school (or the dean of the college in which the department is housed).

It must be recognized that members of the academic community have the same privileges and responsibilities with respect to the law as do members of the larger society. As a result, members of the UHM campus community must acknowledge that when the interests of the university are violated by a student, the student is accountable to the institution and may also be held responsible to civil authorities. These interests of the university are described in the University of Hawai'i at Mānoa Student Conduct Code.

Any questions regarding the Student Conduct Code should be addressed to the Dean of Students.

APPENDIX 2: Safety in Research and Creative Activities

To ensure a safe and healthy working environment for faculty, students and staff, the University of Hawai'i at Mānoa sets and enforces rigorous safety standards that meet and exceed local, state and federal law. The Environmental Health and Safety Office (EHSO) at the University sets a multitude of rules and regulations pertaining to common laboratory materials and other research related activities in Hawai'i, and they may be quite different from those at other institutions. The University has specific programs and requirements for

- a. Radioactive material
- b. **Biological "commodities"** including microorganisms, plants, animals, biological toxins, cell or tissue samples, recombinant DNA, etc.
- c. Compressed gas (SCUBA) diving
- d. Certain chemicals and hazardous materials
- e. Disposal of hazardous waste

In addition, there are regulations governing the importation and shipment of these materials or types of equipment into the State and/or University. For more information, please visit the EHSO website at http://www.hawaii.edu/ehso/

Students who work in a laboratory setting are required to attend and maintain health and safety training in skill areas that are relevant to their work. The EHSO offers a variety of training programs in laboratory safety, radiation safety, hazardous waste, scientific diving, fire extinguisher use, and shipping of biological commodities. Please contact EHSO to check on class schedules or to arrange for training. Labs and lab members must be certified in compliance with EHSO guidelines at all times.

EHSO Director's office (808) 956-8660

Radiation Safety Program	(808) 956-8591
Biological Safety Program	(808) 956-3197
Diving Safety Program	(808) 956-9643
Fire Safety Program	(808) 956-4953
Hazardous Materials Management Program	(808) 956-3198
Laboratory Safety Program	(808) 956-5180
Environmental Compliance Program	(808) 956-9173

University of Hawai'i Resources

Counseling and Student Development Center

Counseling and testing services for students, using a holistic approach to promote wellness and personal success

http://manoa.hawaii.edu/counseling/

956-7927

Department of Public Safety

Campus security, emergency and crime prevention services.

http://manoa.hawaii.edu/dps/index.html

956-6911

Human Resources (UHM)

Administers staff labor relations and human resources management.

https://manoa.hawaii.edu/ovcafo/uhmhr/

956-0712

LGBTI Student Services

Provides education, information and advocacy programs.

http://manoa.hawaii.edu/lgbt/

956-9250

Mānoa Career Center

Provides many employment resources including Career counseling, job fairs, and workshops.

http://manoa.hawaii.edu/careercenter/

956-7007

Matsunaga Institute for Peace and Conflict Resolution

Confidential conflict resolution and mediation services referrals.

www.peaceinstitute.hawaii.edu

956-6433

Office of Gender Equity

Provides assistance and information to students, faculty and staff on matters relating to sexual harassment and discrimination.

http://manoa.hawaii.edu/genderequity

956-9499

Office of the Vice Chancellor for Academic Affairs (UHM)

https://manoa.hawaii.edu/ovcaa/

956-8447

Office of the Vice Chancellor for Students

Assists students with special problems or concerns such as discrimination, academic grievances, and student conduct code issues.

http://studentaffairs.manoa.hawaii.edu/ 956-3290

Student Judicial Affairs

Administers Student Conduct Code; committed to upholding student rights and responsibilities to create a safe campus.

http://www.studentaffairs.manoa.hawaii.edu/departments/judicial_affairs.php 956-4416

Women's Center

Provides personal and academic support for women and LGBT students www.hawaii.edu/womenscenter
956-8056