SIO Institution of Oceanography Ph.D. Student Handbook 2025-26

UC San Diego | SCRIPPS INSTITUTION OF OCEANOGRAPHY

Revised 10/25

OVERVIEW

The purpose of this handbook is to provide clarity on policies and procedures in areas most critical to Ph.D. students at the SIO Institution of Oceanography. While this handbook is comprehensive, it is not exhaustive. This handbook should serve as a resource, in conjunction with other UC San Diego resources, such as the UC San Diego General Catalog on Graduate Education and the Division of Graduate Education and Postdoctoral Affairs Dean (GEPA) guide on Policies & Procedures. In addition, students can find practical insight and information on non-academic elements of student life on the Department's Student Guide.

Given that there's a number of online guides and resources, students are encouraged to contact the Department's Graduate Coordinators if there is any uncertainty regarding a policy or requirement. The Graduate Coordinators are ready to answer any questions or address any concerns. If you are ever unsure, please ask.

SIO Ph.D. DEGREE PROGRAMS

SIO Institution of Oceanography, a department of UC San Diego, offers instruction leading to a Ph.D. in Oceanography, Marine Biology, and Earth Sciences. In addition, the SIO Institution of Oceanography offers a joint doctoral degree with San Diego State University in Geophysics. The Ph.D. program is strongly research-oriented and is for students whose final degree objective is the Ph.D.

The Ph.D. program is organized into three academic programs: Climate-Ocean-Atmosphere Program (COAP); Geosciences of the Earth, Oceans, and Planets Program(GEOP); and Ocean Biosciences Program (OBP). Each of these programs is responsible for all graduate educational activities in its area, including teaching, advising, and examining.

Students choose a program when applying. Upon admission, students are assigned a pre-qualifying guidance committee and a curricular group based on their interests. Although students may change curricular groups in Fall Quarter of their first year, they should commit to a curricular group early on because this choice determines which Departmental Exam they will take and what coursework is required.

In addition, students must finalize their research advisor by the end of spring quarter, of their first year. Students are expected to advance to candidacy by the end of their third year. Students are expected to defend their dissertation and complete the program by the end of their fifth year.

Should students have any questions or concerns about this timeline or any other program requirements, they should contact the department's Graduate Coordinator, Gilbert Bretado.

GRADUATE STUDENT FINANCIAL SUPPORT

FUNDING GUARANTEE

Students admitted to the Ph.D. program, beginning fall 2025, receive a one-year funding commitment, renewable for a maximum of five years, provisional on the availability of funding and remaining in good academic standing (please see the section on Good Academic Standing). Students admitted to the Ph.D. program, prior to fall 2025, received a five-year funding guarantee, provisional on the availability of funding and remaining in good academic standing (please see the section on Good Academic Standing). Financial support may come in the form of employment as a Graduate Student Researcher or Instructional Assistant, fellowships, or external funding sources. Financial support includes tuition & fees, health insurance, and an annual salary/stipend. Salary/Stipend levels are as follows:

10/1/25 - 9/30/26 (first paycheck on 11/1/25):

- 2025 incoming students: $41,735.50/year; Equivalent to a 50% GSR, Step 3
- 2024 incoming students: $44,970.50/year; Equivalent to a 50% GSR, Step 4
- 2023 incoming students: $48,456/year; Equivalent to a 50% GSR, Step 5
- All other PhD students: $52,211.50/year; Equivalent to a 50% GSR, Step 6

Any extramural or outside funding will be applied first before any University of California or department funds are used.

Students should be aware of their source of funding. A student's source of funding may change, often several times, during their tenure. Some students are supported by department fellowships, pooled resources (often in the case of lab rotations), or external fellowships. Other students are supported by their advisor's research grant as a Graduate Student Researcher or as an Instructional Assistant (e.g. TA). First-year students should refer to their offer letter or contact the department's Funding Coordinator, Shelley Weisel, should they have any questions about the breakdown of their funding.

While students should be aware of their source of funding and may be asked to participate in the grant or fellowship-writing process, it is ultimately their advisor's responsibility to secure funding. Students should not be made to feel that it is their responsibility to secure funding or facilitate the information-sharing process between their advisor, business office, and the department. The department's Funding Coordinator works directly with the student's business office and advisor to coordinate logistics. Students are welcome to contact the department's Funding Coordinator if they have any questions.

Students should not be tasked with asking questions or gathering information on their advisor's behalf or facilitate communication between their advisor and the Funding Coordinator.

Should an advisor not have sufficient funding, the advisor can request bridge support from the department. Students are eligible for bridge support through their fifth (5th) year, provided that the student is in good academic standing. Approval of any requests for sixth year bridge support will be made at the discretion of the Department Chair as an exception to policy. The department will not provide support for students after six (6) years as this support is needed to sustain and help grow the size of the program.

Self-generated fellowships, such as the NSF GRFP, NDSEG, and the Nancy Foster fellowship, are considered support and count towards the five-year funding policy. In most cases, these fellowships do not provide total support, and the department provides supplemental support throughout the duration of these awards.

The department's funding commitment considers the total number of years that one is a registered student, and not the number of years a student is supported by University of California, departmental, or advisor funds.

Should bridge support be necessary, the advisor is required to submit the *Advisor Request for Student Support Form* to the Funding Coordinator. Bridge support requests can only be made by the advisor. It is expected that the advisor will formally submit the bridge support requests as soon as it is determined that bridge support is needed. The Funding Coordinator sends an annual announcement regarding bridge support to the faculty and teaching staff in Spring Quarter.

A student's advisor may choose to fund their student beyond the student's fifth year. However, UC San Diego's policy on support eligibility does not allow for funding to exceed seven years.

TYPES OF FUNDING

Fellowships

Fellowships provide funding for tuition/fees and stipends for living expenses and, depending on the source, vary in amount and duration of award. They are the most desirable arrangement for graduate student support from the point of view of the student as these awards are not contingent on employment or expectations of service to the University.

Information and tools to help students identify fellowships and grants may be found at: Fellowships and Cost & Funding. Students are encouraged to obtain extramural support by applying directly to fellowship granting agencies.

Graduate Student Researcher (GSR)

A GSR performs research support under the direction of a faculty supervisor on their research grants/contracts. In the most desirable cases, the contract supports the student and provides other funds necessary for the work leading to the dissertation.

A GSR represents a form of salaried appointment, as well as a research opportunity. The total number of weekly hours a Principal Investigator (P.I.) or grant recipient can ask a student to work is dependent on the appointment percentage. For example, a 50% appointment requires 20 hours of work per week, and a 40% appointment requires 16 hours of work per week. In the most ideal situation, this research work will also form the basis of the doctoral dissertation, but this need not be so. Students may be required to work on projects, outside of their doctoral dissertation research, based on the grant that is providing financial support to the student.

Instructional Assistants (IA)

IAs include Teaching Assistants (TAs), Readers, and Tutors. They assist in the instruction of lower and upper division courses under the supervision of the instructor. Applications for IA positions in SIO Department courses can be submitted online: https://academicaffairs.ucsd.edu/Modules/ASES/Apply.aspx?cid=5644 A list of hiring campaigns for IA positions in other university departments is available on GEPA's website. https://academicaffairs.ucsd.edu/Modules/ASES/OpenPositions.aspx

In determining IA positions, priority is given to Ph.D. students whose advisor has submitted a request for bridge support. If a full year of bridge support is requested, students can expect to serve as an IA for two quarters that year. Ph.D. students in their first-year are not permitted to serve as IAs so they can focus on coursework and preparation for the departmental exam. IA positions at SIO are available primarily through SIO and Environmental Systems undergraduate courses, but are sometimes available to SIO students through other departments. IA positions provide varying levels of support depending on the appointment. If a supplement is required to increase the Ph.D. student's funding to the department standard, the supplement will be provided by the department or the student's advisor. Teaching can be a valuable experience, and all Ph.D. students are encouraged to consider completing one quarter as an Instructional Assistant if it is not required of your curricular group.

Other Campus Employment

A student can seek employment through other departments or units on campus (e.g. Recreation, Teaching & Learning Commons). **Students must discuss additional employment with their advisor and the department's Funding Coordinator before accepting any offer of employment.** The department wants to ensure that additional employment will not negatively impact the student's academic progress and will address how this employment may impact the student's current funding.

Department Travel & Research Grants

The SIO department provides small research grants to its students, based on a short application. Priority will be given to doctoral students. Total funding for a PhD student will not exceed $3,000 over the course of the student's career at SIO. (Note that this does not guarantee a total of $3,000.)

Applications should include:

1. SIO Department Travel/Research Application form (The link to the application goes out with the call email each quarter)
2. Abstract submission and/or invitation to present work (for a conference)

   or

   Project proposal using non-specialist language (for research funds)
3. Detailed budget, not to exceed $3,000
4. Supporting documentation for costs

Allowable costs include:

- Conference travel transportation, hotel, and conference registration fees
- Page charges for publication of scholarly articles
- Supplies
- Fieldwork
- Travel for research, scholarly meetings or short courses
- Computer (some restrictions apply, contact Maureen McGreevy)

  ** Please note that salary will not be awarded.*

Submission deadlines:

- February 1
- May 1
- October 1

  * *If the date falls on a weekend, the deadline is the first business day after the deadline listed above.*

If awarded, research awards must be expended within 12 months of the award date. Conference travel awards must be used for the specific conference requested and cannot be transferred. Proposals with a contribution from other sources will be given higher priority, as will smaller grants (up to $500).

Please contact Maureen McGreevy for more information and to submit a proposal.

Ship Funds

The SIO Department has some internal funds available to support ship time and related expenses. Made possible by support from UC San Diego, the SIO Department, and donors, this program provides significant support to enable graduate and undergraduate students, postdoctoral researchers and early career faculty to pursue independent research and instruction at sea aboard SIO ships. Awards are made through a competitive internal peer-reviewed proposal process, which itself exposes students to the important process of developing strong research proposals.

Since 1995, UC Ship Funds have supported an average of 55 days at sea per year on cruises ranging from one-day trips off San Diego to month-long expeditions from foreign ports.

The Ship Funds Policy can be read here:
https://SIO.ucsd.edu/ships/uc-ship-funds-program

ADVISOR

SELECTING OR CHANGING ADVISORS

All Ph.D. students are required to finalize their advisor by the end of spring quarter of their first year. This requires both an advisor that is willing to intellectually advise and financially support the student.

Many students are financially supported by an advisor at the onset of the program and, if they do not want to change advisors, they will continue to work and receive financial support from that same advisor after year one.

Any student who enters the program without a defined advisor, or who wishes to change advisors, are required to find an advisor who has financial support for the student.

Consulting with other students and faculty is useful but there is no substitute for meeting with the curricular group teaching staff and reading their papers and the dissertations of their students. If the student is a member of a curricular group that allows students to participate in rotations, or otherwise does not assign an advisor at the onset of the program, the curricular group leadership should provide guidance to students to help them identify potential advisors with funding. In addition, these curricular groups should provide opportunities to facilitate interaction between students and potential advisors.

Ultimately, it is the responsibility of the student to find an advisor who is willing to intellectually advise and financially support the student, but there are many individuals, at the curricular group and department level, who can help students navigate this process.

Once a student is beyond their first year, it becomes increasingly difficult to change advisors and adhere to the Ph.D. timeline. Students considering changing advisors are encouraged to meet with the department's Graduate Coordinators to discuss their concerns as early as possible. Whether a student ultimately changes advisors or not, early discussion is essential in order to identify possible solutions for the student.

While the department's policy requires students to select an advisor with available funding, there can be extenuating circumstances which make this impossible in certain situations. Exceptions to this policy can only be made by the Department Chair and Vice Chair.

ROLE OF THE ADVISOR

The advisor-advisee relationship is critical to the success of graduate students. The department and the SIO Graduate Student Reps developed a list of advisor and student expectations. The list of expectations should serve as a foundational document, as advisors and students work together to develop a respectful and productive professional relationship. It can be found here.

Students and their advisor are expected to meet and discuss the contents of the document. Students who enter the program without an advisor should review the document at the onset of the program, and again, once they have finalized their advisor. The document can also be helpful in directing conversations with potential advisors.

Ph.D. TIMELINE/MILESTONES

- **Year 1. Coursework and departmental exam.** Students complete core coursework. To be in good standing, students must maintain a GPA above 3.0, complete their core courses with a grade of B or better, and successfully pass the departmental exam for their curricular group, which will normally be scheduled during the end of spring quarter or summer of their first year. Curricular groups specify their own expectations for the first year, which may include identifying an advisor (if the student starts out with a rotating advisor or if the student wishes to switch advisors), identifying an initial research project, and possibly completing sufficient research to present results as part of the departmental exam.

- **Year 2**. **Initial research**. At the start of the academic year, the student should work with the advisor to determine objectives for the year. This process can be aided by the information in the SIO Advisor/Advisee Expectations document and the use of a student-initiated Individual Development Plan. In some curricular groups, students may be expected to complete additional coursework in year 2. As an outcome of the departmental exam, the exam committee might communicate to the student specific requirements to address identified shortcomings (e.g. additional coursework or supervised projects). Requirements made by the exam committee should be addressed in consultation with the advisor and the student. By the end of year 2, a student's research progress should be sufficient to contribute to the first chapter of their PhD thesis. Students should fulfill the ethics course requirement (usually by taking SIOG232 Ethical and Professional Science or SIOB 273 Professional Ethics in Science)..

- **Year 3. Advancement to candidacy (qualifying).** At the start of the academic year, the student should work with the advisor to determine objectives for the year. Students should form their PhD thesis committee by the end of winter quarter. To be in good standing, the student must qualify by the end of Year 3*. Before qualifying, students should have completed all required coursework, as specified by their curricular group, including fulfilling the ethics course requirement. The qualifying exam requires writing and orally defending (to the PhD committee) a thesis proposal that lays out a research plan for the PhD thesis.

- **Year 4**. **Ongoing research.** At the start of the academic year, the student should work with the advisor to determine objectives for the year. Students should meet with their PhD thesis committee at least once to check on progress since qualifying. By the end of year 4, students will have completed and written up research representing at least half of the material that will appear in the final dissertation. Ideally, this will have been submitted as at least one journal article, and a second article may be in preparation.

- **Year 5. Defending**. At the start of the academic year, the student should work with the advisor to determine objectives for the year. Students should be well on their way to finalizing their PhD thesis (e.g., research for all chapters is complete) at the end of year 5 in preparation for the upcoming defense. We recognize that there may be extenuating circumstances*, and the student's advisor and the PhD thesis committee can agree to extend the student's academic timeline beyond year 5 if adequate justification can be provided and if funding is available from the advisor. Advisors and committees often think of a thesis as having three substantive chapters, each of which could become a peer-reviewed paper, but this is not a formal rule. The student and advisor, in consultation with the committee, should agree on final expectations that are consistent with the students' research area and long-term career goals.

PRE-QUALIFYING GUIDANCE COMMITTEE

Programs of study vary widely among the curricular groups, but first-year students are generally expected to enroll in core courses that cover physical, geological, chemical, and biological oceanography. Each first-year student is assigned a guidance committee. The guidance committee is charged with advising the student during the first year and until the student forms their doctoral committee. The intent is to provide individualized guidance to students, particularly regarding advice about a course of study that may reach beyond a single curricular group.

First-year students are expected to meet quarterly with their guidance committee to discuss coursework and, if applicable, research direction. First-year students are required to submit the Quarterly Guidance Committee Meeting form to the department's Graduate Coordinator. This form serves as a planning tool for the upcoming quarter. Starting in year two, students are expected to meet with their guidance committee annually until the student constitutes their doctoral committee. The student and their guidance committee should make every effort to hold a single, in-person meeting. However, if this is not possible, the student can meet separately with individual members of the committee.

REGISTRATION AND SATISFACTORY PROGRESS REQUIREMENTS

REGISTRATION

Graduate students may register for classes anytime during the official enrollment period for each quarter. Students enroll via TritonLink.

The schedule of classes, available on TritonLink, will contain the most recent scheduling information available for SIO courses.

You must be registered for at least 12 units of graduate and/or upper division courses every quarter to maintain full-time status and to remain eligible for funding.

Deadlines are posted on the university Registrar's website. Enrollment reminders will be sent via email and questions may be directed to the Graduate Coordinator, but it is the student's responsibility to adhere to all enrollment policies and deadlines. **Failure to enroll by the registration deadline will result in a $100 late fee. If assessed a late fee, it is the student's responsibility to pay the fee.**

Schedule of Courses: The Schedule of Courses lists course offerings and other pertinent information for a given quarter. The schedule of classes can be viewed online via TritonLink.

Add/Change/Drop: For the first two weeks of the quarter, changes to your course schedule can be made via TritonLink.

After the second week of the quarter, students must submit an online request through UC San Diego's enrollment authorization system: easy.ucsd.edu Instructor, departmental, and GEPA approval is required for changes submitted through the online enrollment system. Deadlines are as follows:

- Dropping a course, without receiving a W on transcript, Friday of 4th week
- Dropping a course and receiving a W on transcript, Friday of 9th week (failure to drop course by 9th week deadline will result in F on transcript)
- Adding a course = Friday of 10th week

ACADEMIC STANDING AND PROBATIONARY STATUS POLICY

Good academic standing is required to be eligible for funding, to request a leave of absence, to continue registering for courses, and obtain a graduate degree from UC San Diego. Students remain in good academic standing by meeting departmental and university standards. This includes:

1) Maintaining a minimum cumulative GPA of 3.0 or above and enrolling in at least 12 units of graduate level (200 series) and/or upper division (100 series) courses each quarter. Students who do not maintain a cumulative GPA of 3.0 or above are placed on academic probation by GEPA and are subject to academic disqualification and removal from the program. The department will work with the student, student's advisor, and Curricular Group Coordinator to develop a plan, with the goal of raising the student's cumulative GPA, and removing them from academic probation by the end of the following quarter.
2) Students must earn a grade of B or better in any required course. A required course is defined as any course taken to complete the curriculum requirements of the student's curricular group. Students must enroll for the letter grade option in all required courses, unless the course is only offered for satisfactory/unsatisfactory (S/U) grades. If a student does not earn a grade of B or better in any required core course, it is at the discretion of the instructor, in consultation with the curricular group advisor, the student's advisor, and the department, to determine any further action. This includes: retaking the course, auditing portions of the course, taking a substitute course, or completing an independent study section (298) to focus on deficiencies.
3) Having no more than a total of eight units of "F" and/or "U" grades.
4) Satisfactory completion of the Departmental Exam (in accordance with Department timelines).
5) Satisfactory annual Spring Evaluation.
6) Identify an eligible faculty member who agrees to guide the student's research and to serve as chair of the dissertation/thesis committee, according to the time period
7) Satisfactory completion of the Qualification Exam (in accordance with Department timelines)
8) Adherence to UC San Diego time limits (see Time Limits section for more information).

* Additional information can be found on GEPA's website.

Probationary Status Policy

Probationary status within the Department is triggered in two ways: (i) unsatisfactory performance in courses (see above section “ACADEMIC STANDING”) and (ii) failure to meet performance standards on the Departmental and/or Qualifying exams.

The probationary procedures for failure to pass a Departmental Exam and/or Qualifying Exam are treated separately, though the overall process is similar in both cases. Please refer to the sections Departmental Exam and Qualification Exam sections for more information.

Ph.D. ANNUAL EVALUATIONS

UC San Diego’s Graduate Council requires that doctoral students be evaluated every spring quarter. This annual evaluation is also known as the Spring Evaluation.
A satisfactory evaluation is necessary for continued financial support in the following academic year. For those who have not constituted their doctoral committee, this review requires input and signature from both the advisor and student. Once the student constitutes their doctoral committee, this evaluation will require input and signatures from the advisor, (at least) two members of the student’s doctoral committee, and the student.

Spring Evaluations are a substantive progress review. Students are required to convene a yearly committee meeting with either their Guidance Committee or Doctoral Committee (if constituted). A committee meeting should be held prior to the submission of the Spring Evaluation. Students are encouraged to meet with their committee on a quarterly basis.

The evaluation process is initiated by the students submitting a self-evaluation. After the self-evaluation questions are completed the evaluation is routed to the student’s advisor and (if applicable) their doctoral committee members, for feedback. Once the student’s advisor and (if necessary) doctoral committee members have completed the evaluation, students must sign the evaluation, indicating that they have read it. The student's signature does not indicate agreement with comments made by the advisor or committee members and the student will be given additional space to comment on the evaluation. Finally, the Department Chair reviews and signs all annual evaluations before they are routed to GEPA.

The Department requires an annual Spring Evaluation of all doctoral students.

DEPARTMENTAL EXAM

At the end of the first year, Ph.D. students are required to take the Departmental Exam which is administered by their curricular group. The Departmental Exam is intended to test the general scientific background of the student, the ability to integrate material from specific courses in analyzing new problems, demonstration of a reasonable degree of originality and insight, and the ability to present clear verbal and/or written arguments. Expectations and format varies with the curricular group.

Individual Curricular Group exam details will be provided to the first-year Ph.D. students at the beginning of fall quarter. For a better understanding of the exam format and structure, you can find more details on the Departmental Exam here.

Failure to pass the Departmental Exam will result in the student being placed on academic probation. The Departmental Exam probationary procedure is as follows:

1. Written notification. Upon unsatisfactory performance in the Departmental exam, the Exam Chair notifies the curricular group lead and Department that a student has not passed the exam. The written notification should include a concise description of deficiencies in student performance. In many cases, the student may be placed on probationary status by the Department and given an opportunity to pass the same exam, or a modified form thereof, at a later date. Students that are judged severely deficient in the standards required for the Departmental exam by the curricular group might not be given the option to retake the exam.

2. Define a pathway to success. Following the unsuccessful exam, the advisor and committee should write down the reasons the student was unsuccessful in the exam, keeping in mind the written standards in the curricular group for passing Departmental exams. The advisor and student should meet to develop a precise and actionable written plan for remedying weaknesses in the exam. This plan may include, but is not limited to: coursework, additional experiments, readings, writing workshops, additional data analysis or modeling, etc. The nature of the plan will depend upon curricular group expectations and Departmental exam format. This written plan should be shared with the committee and curricular group lead, and approved by all in writing. The plan should include specific milestones, action items, and objectives, as well as a timeline for completion. The goal of the plan is to define a clear and actionable plan for the student to successfully pass the exam.

3. Define a realistic timeline for re-examination. The probationary period should typically range from one to six months, but may be up to 12 months at the discretion of the committee.

The student should retake the exam, or subset of the exam determined by the exam committee, at a specified duration after the initial unsuccessful attempt. During this period, the student should continue to meet with the advisor as normal. During this period, the student should document how and when they meet the expectations of the probationary period. Both the advisor and student should refer to the agreed-upon plan.

4. Re-examination. By the agreed-upon deadline, the student will retake the unsuccessful exam, or a modified form thereof. If the committee agrees that the student has met expectations for the exam, the student is taken off probationary status and continues with their degree as usual. If the committee agrees, written materials can be submitted and approved in lieu of organizing a re-examination. If the committee finds that the student has failed to reach stated milestones or make reasonable progress towards achieving stated milestones, the student will be terminated from the doctoral program at the end of the current quarter. In the event that the student disagrees with the committee's re-examination assessment, the student may appeal in writing to the Department Chair.

MASTER'S DEGREE POLICY

Students enrolled in the Ph.D. degree program may be eligible to obtain a Master of Science degree on the way to completing the Ph.D. program. Please note that only students who have not previously earned a Masters of Science (MS) Degree are eligible.

Please also note that students in the SDSU Joint Doctoral Geophysics program are not eligible to earn a Master's degree, regardless of previous graduate academic history.

The Master's Degree is completed by either a thesis or comprehensive examination. Most Ph.D. students earn their M.S. by comprehensive exam, with the Departmental Exam serving as the comprehensive exam.

A minimum of 36 units are required, including all courses required by your curricular group. You must have a GPA of at least 3.0 in upper division and graduate coursework with no more than eight total units of F and/or U grades. Ph.D. students are required to complete all M.S. degree requirements. Please see the section on M.S. requirements, below.

The minimum residence requirement for a Master's Degree is three academic quarters. Most Ph.D. students become eligible for the Master's Degree in the Fall quarter of their second year.

However, it does vary based on curricular group and curriculum requirements.

Continuing Ph.D. students can receive an M.S. degree during the Fall, Winter, and Spring quarters. Students are eligible to earn a terminal Summer M.S. degree, if they will leave the program. These students are not required to pay the filing fee, as long as they were registered in the preceding Spring quarter.

Students must submit the Application for Candidacy Form. The form requires the signature of the advisor and the Department Chair. The form is due to the Division of Graduate Education and Postdoctoral Affairs (GEPA) at the end of the second week of each quarter. The department sends out an email reminder each quarter of the upcoming second week deadline. Students who have met all degree requirements and submit the paperwork by the necessary deadlines will have their MS degree conferred at the end of that quarter. A diploma will be mailed to the student's permanent address approximately 6-8 weeks after the conferral of their degree.

UNIVERSITY POLICY ON SECOND MASTER'S DEGREE

UC San Diego will not award a master's degree to a student who already holds one, unless it is in a substantially different area of study (e.g. Literature and Oceanography). Please check with the Graduate Coordinator to discuss each individual situation.

M.S. DEGREE REQUIREMENTS

Plan I—Thesis

This course of study involves both coursework and research; culminating in the preparation of a thesis. A total of thirty-six units of credit is required: twenty-four units must be in coursework, including all required coursework within the appropriate curriculum and additional units in recommended electives; and twelve units must be in research work (SIO 299) leading to the thesis. Students interested in completing Plan I must have the approval from their Curricular Group Coordinator and Pre Candidacy Guidance Committee.

Plan II—Comprehensive Exam

This course of study involves course work and requires students to pass a comprehensive final examination. A total of thirty-six (36) units of credit is required, including twenty-four (24) units in graduate course work. Please note that SIO 299 does not count toward the thirty-six (36) required units. Ph.D. students use the results from the Departmental Exam to satisfy the Comprehensive Exam requirement. Ph.D. students should review the section on Departmental Exam for the format and structure of their curricular group's Departmental Exam.

CURRICULAR GROUP M.S. REQUIREMENTS

See Appendix for M.S. degree requirements by Curricular Group

TIME LIMITS

UC SAN DIEGO TIME LIMITS

All graduate students are subject to UC San Diego's policy on time limits. GEPA has three time limits pertaining to students' academic progress toward the Ph.D. degree:

- Pre-Candidacy Time Limit (PCTL): Maximum registered time in which a student must advance to doctoral candidacy and may not exceed four years.
- Total Support Time Limit (SUTL): Maximum time during which a doctoral student is eligible for support may not exceed seven years (refer to section Student Support).
- Total registered Time Limit (TRTL): Maximum registered time in which a student must complete all doctoral requirements and may not exceed eight years.

Additional information regarding leaves of absence, parenting leave, withdrawal, etc. can be found on GEPA's website.

Please note that time limits include all time a student spends as a graduate student. If a student begins in an MS program (either at SIO or another UC San Diego department), their time limits will include any time spent in the MS program, as well as any unregistered time between the two programs.

DEPARTMENT POLICY ON DOCTORAL TIME TO CANDIDACY

Although UC San Diego's time limit for advancement to candidacy is the end of the fourth year, the Department's policy is that all students must take their qualifying examination and advance to candidacy no later than spring quarter of their third year. Students who do not advance to candidacy by the end of their third year will not be considered in good academic standing by the department and will not be eligible for department funding, including: teaching assistantships, travel funds, and bridge funding. Beginning with the FA25 PhD cohort, any extension to the Department's third year policy must go through an exception process. In the event that this spring quarter deadline cannot be met, the student and advisor must request a one quarter extension in writing from the curricular group lead and Department to ensure that there is no interruption in stipend,tuition, and fee payments. The student and advisor must provide a

realistic, written plan and timeline for completion of the qualifying exam by the end of the summer following the third year.

PRE-CANDIDACY REQUIREMENTS

Pre-Candidacy Grade Requirements

Prior to advancing to candidacy, each Ph.D. student is required to successfully complete all academic requirements, as outlined by their curricular group. See each curricular group's academic requirements below. In addition, all Ph.D. students are required to complete one of the Responsible Conduct of Research courses. See "Ethics Requirement" below.

Successful completion entails taking all required coursework for a letter grade and earning a grade of B or better. Any coursework that is only offered for S/U grades must be completed with a grade of S.

In addition, students are required to fulfill any seminar requirements, as outlined by their curricular group. Any exception to this policy requires the approval of the student's curricular group Curriculum Advisor or Curricular Group Coordinator, in consultation with the student's advisor and any relevant instructors. Written approval must be submitted by the Curriculum Advisor or the Curricular Group Coordinator to the Graduate Coordinator, to be added to the student's file.

Please note a student may take any required coursework in the quarter that they hold their qualifying exam. It is expected that the student will satisfactorily complete any outstanding coursework.

Pre-Candidacy Curricular Group Coursework Requirements

The following contains the Pre Candidacy Coursework Requirements of each curricular group.

Please note that while these requirements may, for some curricular groups, appear identical to the M.S. degree requirements, differences do exist. In addition to any specific required courses, please pay attention to any seminar requirements, as outlined by your curricular group.

Climate, Oceans, and Atmosphere Program

Applied Ocean Science

Required Coursework:

- SIOC 202A and SIOC 202B. Fundamentals of Wave Physics (two-quarter sequence; 4 units each)
- Two of the following four courses which must be completed in the first year
    - SIOC 210 Physical Oceanography (4 units)
    - SIOG 240 Marine Geology (4 units)
    - SIOG 260 Marine Chemistry (4 units)
    - SIOB 280 Biological Oceanography (4 units)
- One math and one data analysis class must be taken in either the first or second year of study
    - SIOC 203A and SIOC 203B Introduction to Applied Mathematics (4 units each)
    - SIOC 207A and SIOC 207B (4 units each)
    - SIOC 221A and SIOC 221B (4 units each)
    - MAE 294A and MAE 294B (; 4 units each)
    - ECE275A Parameter Estimation (4 units)
    - MAE 208 Mathematics for Engineers (4 units)
- SIOC 208 Seminar in Applied Ocean Science (1 unit, required every quarter)

Elective Coursework:

- Two additional technical courses must be taken prior to the doctoral qualifying exam, selected in consultation with the students' advising committee. Examples include: SIOC 200AB Computational Ocean Acoustics; SIOC 214A Introduction to Fluid Mechanics; SIOC 213 Turbulence and Mixing; MAE 210 AB Fluid Mechanics; MAE 224 A Environmental Fluid Mechanics; SIOC 237A Introduction to Ocean Optics; SIOC 237B Ocean Color Remote Sensing, SIOG 227A Introduction to Seismology, and SIOG 227B Advanced Seismology.

Climate Science

Required Coursework:

- SIOC 210 Physical Oceanography (4 units)
- SIOC 217A Atmospheric and Climate Sciences I (4 units)
- SIOC 217B Atmospheric and Climate Sciences II (4 units)

- SIOC 217C Atmospheric and Climate Sciences III (4 units)
- SIOC 217D Atmospheric and Climate Sciences IV (4 units)

Elective Coursework:

Students are also expected to supplement their backgrounds with five to seven additional courses, including, for most climate sciences students, at least one additional quarter of fluid dynamics. These additional course(s) will be chosen in consultation with the students' advisers. It is recommended that students participate actively in at least two quarters of seminar courses designed to complement and stimulate individual research.

**Students can petition to substitute any of these required courses with a higher-level course that covers similar material, if such a course is offered before the Departmental Exam. Students should first consult with the CS Curriculum Advisor. If the request is approved, formal documentation will be provided to the Graduate Coordinator to include in the student's file.*

Physical Oceanography

Required Coursework:

- SIOC 210 Physical Oceanography (4 units)
- SIOC 203A Introduction of Applied Mathematics (4 units)
- SIOC 203B Introduction of Applied Mathematics (4 units)
- SIOC 211A Ocean Waves I (4 units)
- SIOC 212A Geophysical Fluid Dynamics I (4)
- SIOC 214A Introduction to Fluid Mechanics (4 units)
- SIOC 221A Analysis of Physical Oceanographic Data (4 units)
- SIOC 221B Analysis of Physical Oceanography Data (4 units)

Students normally take a total of twelve four-unit graduate courses in the first year (the eight required plus four additional four-unit courses) and at least four additional four-unit courses after the first year. For PhD students who apply to receive an MS, a total of nine four-unit courses are required (see MS requirements).

PhD course work should include a breadth component of two or more four-unit courses in other scientific disciplines. These might come from the SIO Department core courses in other oceanographic disciplines (SIOG 240, SIOG 260, SIOB 280) or from related graduate-level courses taught at UC San Diego. Exceptions to the above requirements may be granted with written approval by the Curricular Group Coordinator in consultation with the guidance committee and the PO Curricular Group Coordinator.

The SIO Department offers regular seminars in several areas of current interest. After the departmental exam, students in residence are encouraged to enroll for credit in at least one one-unit seminar each quarter.

Geophysics

The class requirements for the Geophysics graduate program consist of 50 units which are completed as follows.

1. Complete the foundational courses (26 units) in year one.
2. Complete an additional 10 units from the electives in year one.
3. Complete an additional 12 units of electives by the end of year three (but preferably earlier).
4. Complete the “Professional and ethical science requirement” (SIOG 232, 2 units) by the end of year three.

Note that you can complete the required course work in year one if you take 16 units per quarter (and then take SIOG 232 in year 2). You need 36 units for the MS by coursework, which you can complete in year 1.

Foundational courses (26 units total)
- SIOG 200 a,b,c (2 units each = 6 units) - Geophysics Research Skills.
- SIOG 223 a,b (4 units each = 8 units) - Data Analysis.
- SIOG 225 (4 units) - Physics of Earth Materials.
- SIOG 234 (4 units) - Geodynamics.
- SIOG 238 (4 units) - Practical PDEs.

Electives
- SIOG 224 (4 units) - Internal Constitution of the Earth.
- SIOG 227a (4 units) - Introduction to Seismology.
- SIOG 227b (4 units) - Structural Seismology.
- SIOG 227c (4 units) - Earthquake Source Seismology.
- SIOG 229 (4 units) - Gravity and Geodesy.
- SIOG 230 (4 units) - Inverse Theory.
- SIOG 231 (4 units) - Geomagnetism and Electromagnetism.
- SIOG 233 (4 units) - Introduction to Computing.
- SIOG 235 (4 units) - Computational Inverse Problems.
- SIOG 236 (4 units) - Satellite Remote Sensing.
- SIOG 237 (2 units) - Space Geodesy.

• SIOG 239 (1 unit) - Seismology seminar.
• SIOG 240 (4 units) - Marine Geology and Geophysics.

• We sometimes offer special topics courses (SIOG 239), and these courses also count as electives.

Students may also take the following graduate courses in the geosciences graduate program as electives:
• SIOG 242 - Rates and Dates.
• SIOG 246 - Global Tectonics and Basin Formation.
• SIOG 251 - Whole Earth Geochemistry.
• SIOG 253 - Interactions of Oceanic Plates and CA Margin.

In addition, students are also encouraged to attend Geophysics and Earth Section seminars for exposure to a broad range of geophysical research topics.

Geosciences

Required Coursework:

- SIOG 240 Marine Geology (4 units)
- One geophysics course, from the following:
    - SIO 103 Introduction to Geophysics (4 units)
    - SIOG 234 Geodynamics (4 units)
    - SIOG 247 Rock Magnetism and Paleomagnetism (4 units)
- One geochemistry course, from the following:
    - SIOG 251 Whole Earth Geochemistry (4 units)
    - SIOG 252A Introduction to Isotope Geochemistry (4 units)
- One geology course, from the following:
    - SIO 100 Geology core classes include Field Methods (4 units)
    - SIO 105 Stratigraphy and Sedimentology (4 units)
    - SIO 170 Introduction to Volcanology (4 units)
    - SIOC 201 Geological Record of Climate Change (4 units)
    - SIOG 244 Shape and Structure of the Ocean Floor (4 units)
    - SIOG 253 Interactions of Oceanic Plates and the California Margin (4 units)

Elective Coursework:

Students are also encouraged to take Introduction to Computers at SIO (SIOG 233), Analysis for Physical Oceanographic Data (SIOC 221B), Physical Oceanography (SIOC 210), Marine Chemistry (SIOG 260), and Biological Oceanography (SIOB 280), but these may not be used to substitute for the geology, geophysics and geochemistry core requirements.

Marine Chemistry and Geochemistry

Required Coursework:

- First Year
    - SIOC 210 Physical Oceanography (4 units)
    - SIOG 260 Marine Chemistry (4 units)
    - One of the following:
        - SIOB 280 Biological Oceanography (4 units)
        - SIOG 240 Marine Geology (4 units)
    - Three (3) additional four-unit graduate level courses
- Second Year
    - Three (3) additional four-unit graduate level courses
- Seminar Requirement
    - SIOG 268 - Seminar in Marine Chemistry and Geochemistry (2 units, required 1 quarter per year, unless excused by Curricular Group Coordinator)

Biological Oceanography

Required Coursework:

- SIOC 210 Physical Oceanography (4 units)
- SIOG 260 Marine Chemistry (4 units)
- SIOB 280 Biological Oceanography (4 units)
- One of the following marine ecosystems courses::
    - SIOB 270 Pelagic Ecology (4 units)
    - SIOB 270A Fisheries Oceanography (4 units)
    - SIOB 275A Benthic Ecology (4 units)
    - SIOB 277 Deep-Sea Biology (4 units)
- One of the following marine organisms courses:
    - SIOB 271 Marine Zooplankton (5 units)
    - SIOB 282 Phytoplankton Diversity (4 units)
    - SIOB 283 Phycology: Marine Plant Biology (5 units)
    - SIOB 284 Marine Invertebrates (6 units)
    - SIOB 294 Biology of Fishes (5 units)

- One of the following statistical and quantitative courses:
    - SIOB 272 Advanced Statistical Techniques
    - SIOB 276 Quantitative Theory of Populations and Communities

    - SIOB 298 Applied Bayesian Data Analysis
- Seminar in Biosciences (SIOB 278), Biological Oceanography Graduate Student Presentations (SIOB 296), or equivalent participatory seminar must be taken in at least one quarter of each year in years 2-5, for a total of at least 4 quarters of participatory seminar

In addition, participation in an oceanographic cruise (minimum of two weeks' duration) and service as a teaching assistant (one quarter) are required.

Marine Biology (MB)

Required Coursework:

- SIOC 210 Physical Oceanography (4 units)
- SIOG 260 Marine Chemistry (4 units)
- SIOB 280 Biological Oceanography (4 units)

MB Ph.D. students also must take at least two graduate-level marine organismal courses or labs. A partial list of courses that fulfill this requirement include:

- SIOB 271. Marine Zooplankton
- SIOB 274 Natural History Below the Tides
- SIOB 277. Deep Sea Biology
- SIOB 281. Marine Physiology
- SIOB 282. Phytoplankton Diversity
- SIOB 283. Phycology: Marine Plant Biology
- SIOB 284. Marine Invertebrates
- SIOB 287A. Marine Microbial Ecology
- SIOB 293. Applications of Phylogenetics
- SIOB 294. Biology of Fishes
- SIOB 296. Marine Tetrapods
- Seminar Requirement
    - SIOB 278, SIOB 296, or equivalent, once per year beginning in year two.
    - SIOB 291, annual participation in years two through four.

Marine Chemical Biology (MCB)

Required Coursework:

- SIOC 210 Physical Oceanography (4 units)
- SIOG 260 Marine Chemistry (4 units)
- SIOB 280 Biological Oceanography (4 units)

- SIOB 262 Marine Chemical Biology Seminar (2 units, every quarter)

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings selected in consultation with the students' guidance committee. Typical recommended electives are below:

- Chem 257. Bioorganic and Natural Products Chemistry (4 units)
- SIOB 242 A-B. Marine Biotechnology I and II (8 units)
- SIOB 264. Special Topics in Marine Natural Products Chemistry (3 units)
- Chem 254. Mechanisms of Organic Reactions (4 units)
- Chem 258. Applied Spectroscopy (4 units)

ETHICS REQUIREMENT

Each Ph.D. student is required to complete one of the approved UC San Diego Responsible Conduct of Research courses before taking their Qualifying Exam. Students are required to take an Ethics course by the end of their second year.

SIO offers two ethics courses, SIOB 273A and SIOG 232. To see a listing of ethics courses offered through other UC San Diego departments, please review the following website: http://ethics.ucsd.edu/courses/index.html. Students must register and receive credit for one of these courses, in order to fulfill the Ethics Requirement.

DOCTORAL COMMITTEES

Each Ph.D. student is required to constitute a doctoral committee. GEPA provides an eligibility table to reference, as students will work with individuals who hold a number of different instructional and research titles.

Doctoral Committees in the SIO Department consist of four (4) members who hold appropriate instructional titles at UC San Diego (see eligibility table). Committee members are chosen from at least two departments (the SIO Department and one other department).

Each committee must include one member who is a tenured or Emeritus UC San Diego professor and one member from another UC San Diego department.

Generally, three (3) members of the committee are from the SIO Department. The member from another department can have a joint appointment with SIO if the officially designated home department for their appointment is in a UC San Diego department other than SIO. Each committee must have a Committee Chair. A Co-Chair may be appointed but is not required, unless the student is advised by an Adjunct Professor.

A fifth member can be appointed to a student's doctoral committee, at the discretion of the student's Committee Chair(s) and upon approval by the Department Chair and Dean of Graduate Division.

A fifth member is typically someone who is not eligible to serve as one of the required five members (e.g. SIO Project Scientist or a professor from outside of the UC system). A copy of the fifth member's CV is required, along with a justification of the individual's inclusion on the committee. Appointment of a fifth member is at the discretion of the Dean of GEPA and is not guaranteed.

Once the committee membership is decided, the student should send the members' names to the Graduate Coordinator. The Graduate Coordinator will ensure that the membership meets all SIO Department and UC San Diego requirements. The Graduate Coordinator will also prepare the necessary forms and route the forms to GEPA for final approval.

If a graduate student is employed by a company outside of UC San Diego in which a faculty member has a fiduciary interest (e.g. owns, consults for), then that faculty member may not be the thesis/dissertation advisor of the graduate student. The faculty member may be on the Doctoral Committee.

If the faculty member is on the Doctoral Committee then they must inform the University, through the appropriate offices, of the situation and any possible conflict of interest. Upon review, the Dean of GEPA may grant exceptions

COMMITTEE RECONSTITUTION

For a variety of reasons, a doctoral committee may need to be reconstituted. Should this be the case, email the Graduate Coordinator with the proposed changes and the reason(s) for requesting the change. The change must be submitted at least three weeks before a scheduled qualifying examination or final defense to allow sufficient time to prepare the necessary forms, obtain signatures, and route the form to GEPA for final approval.

Please remember, any changes to committee membership must continue to adhere to all UC San Diego committee policies, as outlined above.

QUALIFYING EXAM AND ADVANCEMENT TO CANDIDACY EXPECTATIONS AND TIMELINE

All doctoral students must complete a Qualifying Exam in order to advance to candidacy. The exam consists of a written document in addition to an oral presentation of research accomplishments and plans to the thesis committee. A typical oral exam includes an approximately 45-minute science presentation outlining research accomplishments and plans, followed by discussion with the committee about the written document and presentation.

Typically, the committee asks the student questions about the present and proposed work, as well as the scientific background and context for the work, but questions are not meant to re-hash coursework per se. The qualifying exam is also an opportunity to get constructive feedback from the assembled committee. The exam must be completed by no later than the spring quarter of the third year, though may be completed sooner with satisfactory progress. Students should understand the standards for advancement to candidacy and expected timelines and discuss them with their advisor(s) and committee members. Advisors should ensure that students are aware of and understand the standards for advancement to candidacy and expected timelines.

Standards for Advancement to Candidacy

1. Comprehensive Knowledge of the Field
The student should demonstrate mastery of literature and background information relevant to the proposed research project, reflecting understanding of the current state of knowledge, key methodologies, and major research questions. Additionally, students should demonstrate broad scientific literacy indicative of intellectual curiosity beyond the immediate research area. A key point of this standard is that a student should be able to place their original and proposed research in context with previous work.

2. Research Competency
The student should show an ability to understand and undertake multiple parts of a research project, which includes design, execution, and analysis. These steps may vary depending on whether the student is working with data, theory, and/or models.

3. Skill Acquisition and Mastery
The student should show clear evidence of the acquisition and refinement of technical and intellectual skills necessary for conducting high-quality, innovative research.

4. Scholarly Contributions
The student should provide evidence of significant research progress, which may, for example, be met by presentation of a detailed and organized thesis proposal, peer-reviewed publications, manuscripts in preparation, and/or substantial data that support future publications.

5. Alignment with Career Goals
The student should be able to provide an explanation of how the candidate's PhD research aligns with and supports their long-term career objectives. This should extend beyond the degree as a credential, emphasizing how the research fosters the development of critical knowledge, skills, and training essential for professional advancement.

Timeline for Qualifying Exam Preparation and Completion

1. Formation of Thesis Committee
Students are encouraged to form a thesis committee as soon as is practical in the second year. However, the exam committee must be finalized and approved by the program before the end of the Fall quarter in the student's third year. The candidate should collaborate with their advisor to identify suitable committee members based on their expertise and relevance to the research topic.

2. Qualifying Exam Timeline
The qualifying exam should be completed no later than the spring quarter of the student's third year of the PhD program unless an extension has been approved due to exceptional circumstances. In the event that this spring quarter deadline cannot be met, the student and advisor must request a one quarter extension in writing from the curricular group lead and Department to ensure that there is no interruption in stipend, tuition, and fee payments.

The student and advisor must provide a realistic, written plan
and timeline for completion of the qualifying exam by the end of the summer following the third year.

3. Scheduling the Exam
The candidate must coordinate with the committee to schedule the qualifying exam date by the end of the Winter quarter in the student's third year. If the student plans to qualify prior to the end of the spring quarter in the third year, the qualifying exam date should be organized at least two months in advance of the exam. The finalized date should be communicated to the program coordinator for approval and administrative Support. Once the examination date is scheduled, the student must contact the Graduate Coordinator, so that the examination is on the Department calendar. The Graduate Coordinator will prepare the electronic paperwork, via Docusign, and assist with logistics.

4. Completion of Coursework Prerequisites
Candidates must complete all required coursework no later than the spring quarter of the third year or the quarter of advancement (if advancing before the end of the third year). For students qualifying before the end of their third year, the expectation is that they will complete any remaining coursework by the summer quarter of their third year.

5. Proposal Submission Deadline
Candidates must submit a written research proposal to the entire committee for the oral qualifying exam no later than two weeks before the intended date of the qualifying exam. This document should include a clear and succinct overview of the proposed research, key questions, methodologies, results, and additional expected outcomes. The typical proposal length is 15 pages (exclusive of citations and appendices), but students should consult with their advisor and committee members about the expected format of the written proposal. A written research proposal is required, and a set of presentation slides, even with references, cannot be substituted for the written proposal. The student and advisor should discuss the scientific content of the proposal well in advance of the proposal submission deadline, and the student should share a completed draft of the written proposal with the advisor no later than one month, or other mutually-agreed upon timeline, prior to the qualifying exam date.

*Please note that there must be three (3) quarters of academic residency between advancement to candidacy and the final defense of the Ph.D. dissertation.

QUALIFYING EXAM FORMAT AND PAPERWORK

Qualifying Exams can be held in-person, virtually, or a combination of both. The committee chair and "upper campus" member must participate in the exam. One member of the committee, outside of the chair and "upper campus" member, can be absent from the exam.

The student will need to make arrangements to present to that member prior to the exam. That member should forward any questions to the committee chair, to be discussed at the exam.

Prior to the exam, the Graduate Coordinator will submit the paperwork through Docusign and route it to the appropriate parties for electronic signature. Should the student pass the exam, the electronic paperwork will be processed by GEPA and the Advancement to Candidacy date will be posted to the student's transcript.

QUALIFYING EXAM PROBATION

In the event that a student does not pass the Qualifying Exam, the student will be placed on probation and the following outlines the probationary process.

1. Written notification. Upon unsatisfactory performance in the Qualifying exam, the advisor notifies the curricular group lead and Department that a student has not passed the exam. The written notification should include a concise description of deficiencies in student performance. In many cases, the student may be placed on probationary status by the Department and given an opportunity to pass the same exam, or a modified form thereof, at a later date. Students that are judged severely deficient in the Standards for Advancement to Candidacy for the Qualifying exam might not be given the option to retake the exam

2. Define a pathway to success. Following the unsuccessful exam, the advisor and committee should write down the reasons the student was unsuccessful in the exam, keeping in mind the written expectations of the curricular group and SIO as a whole. Expectations for the Qualifying Exam are described in "QUALIFYING EXAM AND ADVANCEMENT TO CANDIDACY". The advisor and student should meet to develop a precise and actionable written plan for remedying weaknesses in the exam. This plan may include, but is not limited to: coursework, additional experiments, readings, writing workshops, additional data analysis or modeling, etc. This written plan should be shared with the committee and curricular group lead, and approved by all in writing. The plan should include specific milestones, action items, and objectives, as well as a timeline for completion. The goal of the plan is to define a clear and actionable plan for the student to successfully pass the exam in question.

3. Define a realistic timeline for re-examination. The probationary period should typically range from one to six months, but may be up to 12 months at the discretion of the committee. The student should retake the exam, or a modified form thereof, at a specified duration after the initial unsuccessful attempt. During this period, the student should continue to meet with the advisor as normal. For longer and more involved probationary periods, it is recommended, but not required,

that the student schedule an additional committee meeting. During this period, the student should document how and when they meet the expectations of the probationary period. Both the advisor and student should refer to the agreed-upon plan.

4. Re-examination. By the agreed-upon deadline, the student will retake the unsuccessful examination, or a modified form thereof. If the committee agrees, written materials can be submitted and approved in lieu of organizing a committee meeting. If the committee agrees that the student has met expectations for the exam, the student is taken off probationary status and continues with their degree as per usual. At this point, the Graduate Coordinator will resubmit the Advancement to Candidacy paperwork which will be processed by GEPA and posted to the student's transcript.

If the committee finds that the student has failed to reach stated milestones or make reasonable progress towards achieving stated milestones, the student will either be advised to seek a new thesis advisor, if that option is available, or be terminated from the doctoral program. In the event that the student disagrees with the committee's re-examination assessment, the study may appeal in writing to the Department Chair. The student may be eligible for a course-based MS degree in certain cases if degree requirements have been met.

The probationary process requires the involvement of the advisor, student, committee, curricular group lead, and the Department. The goal is to facilitate student success through a precise and actionable plan with realistic timelines. This plan must be discussed and agreed upon by all parties.

FINAL DEFENSE PROCEDURES

Congratulations, you are ready to graduate! As soon as you schedule your defense, please contact the SIO Department Office. First contact the Funding Coordinator, Shelley Weisel. Funding issues can take several weeks to resolve. Be sure to tell the Funding Coordinator if you have accepted a job, since there may be some employment and fee issues that must be handled before you leave. The Funding Coordinator will let you know if there is anything special you must do for your support, taxes, tuition and/or fees before you defend and file your thesis. It is your responsibility to make an appointment with the Funding Coordinator.

Notify the Graduate Coordinator at least three weeks prior to the defense. Send your title exactly as you would like it to appear in all notices. Also include in this e-mail the day, date, time, location of the defense, and zoom link (if offering this option).

If your defense title will be different than your dissertation title, let the Graduate Coordinator know at this time. The Graduate Coordinator will prepare the final defense report, as well as the public announcement of your defense. The Graduate Coordinator will also confirm the members

of your doctoral committee, your major, and official spelling of your name (for diploma purposes). If any changes are needed, the Graduate Coordinator will help process the request.

As part of the preparation process, the Graduate Coordinator will submit the Final Defense paperwork through Docusign and route it to the appropriate parties for electronic signature. The committee members are required to sign the form, indicating whether the student passed.

FINAL QUARTER REGISTRATION STATUS

To be awarded a graduate degree, all students must be in a fee-based relationship with the University the quarter they finish their degree requirements. Establishing a fee-based relationship with the University is done in one of two ways:

- Register the quarter of degree completion.
    - Payment of registration fees and tuition allows students to file their dissertation.
- Pay the Filing Fee in lieu of registering
    - The Filing Fee is for the use of unregistered students who have completed all degree requirements.
    - Students, who will pay the Filing Fee, are not eligible to serve as a TA, or for any other student employment.
    - Students, who still need the use of laboratory space or equipment, or are otherwise engaged in on-campus activities that would fall under the purview of SIO 299, are not eligible to pay the filing.
    - The Filing Fee is always half the amount of the registration fee:
    - Currently, the Filing Fee is $215, but is subject to change
    - Students do not pay the Filing Fee until all other degree requirements, including the defense of the doctoral dissertation are completed.

Students should consult with the department to determine which course of action would be most appropriate.

ORAL DEFENSE AND FINAL EXAM

A final defendable draft of the doctoral dissertation should be submitted to each member of the doctoral committee at least four weeks prior to the oral defense and final examination. The form of the final draft must conform to the procedures outlined in the *"Preparation and Submission Manual for Doctoral Dissertations and Master's Theses".*
Students are encouraged to publish appropriate parts of their theses in scientific literature. In many cases, individual chapters are published as research articles prior to completion of the entire dissertation.

The doctoral committee supervises and conducts the oral defense and final examination, which shall be publicly held and so announced. The oral defense must be scheduled during the standard work week, Monday-Friday, and must be held during normal business hours. Defenses can be held in-person, virtually, or a combination of both. The committee chair and "upper campus"member must participate in the defense. One member of the committee, outside of the chair and "upper campus" member, can be absent from the defense. The student will need to make arrangements to present to that member prior to the defense. That member should forward any questions to the committee chair, to be discussed at the defense.

The Report of the Final Examination and Filing of the Dissertation for the Degree of Doctor of Philosophy form is initiated by the Graduate Coordinator, and signed by members of the Doctoral Committee and the Department Chair.

Filing Paperwork with GEPA

Students are no longer required to schedule appointments with GEPA to submit their thesis and paperwork for review. The new process is as follows:

- Student submits File for Doctoral/Master's (Thesis) Degree online form (via Kuali). Ideally it is submitted by week 4 of the graduation term.

- With this filing submission, GEPA Academic Affairs is notified that the student is planning to graduate this quarter. GEPA reviews the academic history and then the student will be prompted to also review it. If there is an issue (e.g., blank grade, academic residency, etc.) then the student will be notified to take corrective action.

- Students must follow the "Final Degree Checklist" in Kuali. The student marks that the final degree paperwork is completed (final version of dissertation/thesis, co-author permission letters, Final Report Form, etc.). Then the student submits the completed checklist and the form routes to GEPA as notification that all final degree paperwork has been submitted.

- GEPA reviews all of the student's final degree paperwork. If there are any issues, we will reach out to the student via email.

PROOF OF DEGREE COMPLETION AND DIPLOMA

The student's degree will be conferred and posted to their transcript after the conclusion of the quarter. Whether the student completes all degree requirements in Week Two or Week Ten, their degree will not be conferred until after the conclusion of that quarter.

It takes GEPA, in conjunction with the Registrar's Office, several weeks to process degree paperwork following the conclusion of the quarter. Each quarter hundreds of graduate degrees are conferred. For this reason, it may take up to two months after the conclusion of the quarter for the student's degree to be conferred.

Each student will receive a *Letter of Completion* following successful completion of their Final Appointment. This letter affirms that all degree requirements were satisfied. Students who need to provide proof of degree to a prospective employer, agency, academic institution, etc. should use the *Letter of Completion* until their degree appears on their transcript.

The student's diploma will be mailed to the permanent address, as listed in the student's record. Students can review their permanent address and make any changes through MyTritonLink. More information on diplomas can be found on the Registrar's Website.

HEALTH INSURANCE

If the student is enrolled in the student health insurance plan (UC SHIP), they should be aware of their last date of coverage. Coverage dates do not mirror the first and last date of the academic quarter. Students can find coverage dates and information on other post graduation health insurance considerations on the Student Health Website.

If the student will not be registered in their final quarter but instead choose to pay the Filing Fee, the student may purchase voluntary UC SHIP for that quarter. More information on optional coverage can be found on the Student Health Website.

DEFENSE CELEBRATION

Students, who wish to use Surfside, must submit the Surfside Reservation form at least three weeks in advance.

NON-ACADEMIC IMPORTANT TOPICS

ELECTRONIC MAIL LISTS AT SIO

The following public email distribution lists have been created for your use.

It is **mandatory** that you be subscribed to the phd-students@sio.usd.edu or ms-students@sio.ucsd.edu mailing list, and the student mailing list for your program and curricular group at all times. You are added automatically upon acceptance to SIO. Should you have any questions regarding public email distribution lists, please contact the Graduate Coordinator

phd-students@sio.ucsd.edu - All Ph.D. Students
aos-students@sio.ucsd.edu - AOS students
bo-students@sio.ucsd.edu - BO students
coap-students@sio.ucsd.edu - All COAP students (AOS, CS, and PO)
cs-students@sio.ucsd.edu - CS students
geo-students@sio.ucsd.edu - All GEO students (GP, GS, and MCG)
gp-students@sio.ucsd.edu - GP students
gs-students@sio.ucsd.edu - GS students
mb-students@sio.ucsd.edu - MB student
mcg-students@sio.ucsd.edu - MCG students
obp-students@sio.ucsd.edu - All OBP students (BO and MB)
po-students@sio.ucsd.edu - PO students
ecology-seminar@sio.ucsd.edu - Ecology (BO) seminar notices
gsmcg-seminar@sio.ucsd.edu - GS/MCG shared seminar notices
gp-seminar@sio.ucsd.edu - GP seminar notices
mb-seminar@sio.ucsd.edu - MB seminar notices
students@sio.ucsd.edu - Unmoderated student list

You may subscribe or unsubscribe to these (and other) public mailing lists at http://siomail.ucsd.edu/mailman/listinfo

SIGN-OUT

When you are leaving campus for more than a few days, be it for business, a cruise, or vacation, you MUST contact the department to sign out and provide your contact information. This is necessary in case we must notify you of an emergency or other important business.

Please contact the Graduate Coordinator, Gilbert Bretado, and the Funding Coordinator, Shelley Weisel, to make sure all academic and funding issues are resolved before you leave.

REMOTE WORK

UCSD's remote work policies are articulated on the Flexible Work website: https://blink.ucsd.edu/HR/services/flexible.html. Here are some key points:

- UCSD allows remote work from locations *within the US*. Keep in mind that UCSD graduate coursework is in-person. In order to retain California residency for tuition purposes, the university does not permit students to spend more than six weeks outside of California each year. Please note that time spent conducting official university business (e.g. fieldwork, research cruises, research at another institution) does not count towards the six week maximum. Students must adhere to both employment and academic policies if seeking to work remotely from another state. Remote employees are not eligible to be reimbursed for travel to UCSD.
- *International remote work is not allowed* under University of California system-wide policy. The flexible work web site suggests an unpaid leave of absence, once paid vacation time is exhausted. International work is allowed for field work, attending a conference, or collaborating with a research group at an overseas institution (if the collaboration is consistent with the terms of your funding).
- If you are thinking about asking to work remotely you must reach an agreement with your advisor. Advisors and advisees should regularly discuss whether the arrangement is meeting operational needs and adjust as necessary in accordance with the agreement.

PAID TIME OFF

Under the current UAW contract, students with a GSR appointment accrue 1 day per month of paid time off (PTO). PTO is available from the start of each contract and does not roll over between contracts. If you are paid on a 3-month one-quarter contract, you have 3 days of PTO available at the start of the contract and can use those days at any point during the contract period. PTO is calculated based on paid work effort. A student who is paid at 50% formally receives PTO for the paid portion of their time (e.g. 50% of a work day of PTO per month).

GSR contracts do not distinguish between term time and inter-term periods such as the winter campus closure or spring break. For example, if you plan a 3-day (Tuesday-Wednesday-Thursday) trip to visit your family or friends during spring break, that will use 3 days of PTO.

Holidays: UC San Diego provides paid time off for holidays for eligible employees. The university provides 14 paid holidays a year, listed below. To find the dates that they will be observed this year, see the payroll calendar. A holiday that falls on Saturday is typically observed on the preceding Friday; a holiday that falls on Sunday is typically observed on the following Monday. It is important to note that eligible employees are never expected to work on university holidays. Please consult with your business office should you have any questions.

- New Year's Day
- Martin Luther King Jr. Day, observed on the third Monday in January

- Presidents' Day, observed on the third Monday in February
- César Chávez Day, observed on the last Friday in March
- Memorial Day, observed on the last Monday in May
- Juneteenth National Independence Day, June 19
- Independence Day, July 4
- Labor Day, observed on the first Monday in September
- Veterans Day, November 11
- Thanksgiving Day, observed on the fourth Thursday in November
- Friday after Thanksgiving
- Winter Break (2 days)
- New Year's Eve (or equivalent)

Holiday Closure: Each holiday season, UCSD closes for a period of time. Dates vary by year, you can find the most current information here. Labs/groups that have research-based needs to continue operations during the closure. PIs are responsible for submitting any requests, which must be approved in advance by the appropriate Section Head.

SAFETY

SIO Institution of Oceanography operates its safety program in conjunction with UC San Diego's Environment, Health and Safety (EH&S) division, which manages a coordinated safety program for the entire UC San Diego campus. Safety at SIO is a responsibility shared by everyone: students, volunteers, faculty, and staff.

A safe research environment begins with hazard awareness and risk management.

Safety training is required for anyone who works in or uses a research lab, instrument development shop, test facility or other space at UC San Diego where workplace hazards exist. This includes researchers, faculty, post-docs, students (graduates and undergraduates), staff research associates, visiting scientists, and volunteers. The following listing will get you started.

For more information, please look at our website or contact Dennis Brand.

TRANSPORTATION AND PARKING

Students who wish to park on the SIO campus or on the main UCSD campus at any time, must purchase a UC San Diego parking permit from the UC San Diego Parking Office. Graduate students can purchase a "B" (staff) or “S” (student) permit.

In addition, any SIO student wishing to park in a SIO lot, with a UC San Diego B or S parking permit, must obtain the SIO supplemental permit. The supplemental permit has no additional charge. Current UC San Diego parking permit rates, instructions for purchasing a permit, and further information regarding parking and transportation services (free bus passes, rideshare options, SIO/UC San Diego Shuttle, etc.), are available at https://transportation.ucsd.edu/.

Shuttle Services and Public Transit: UC San Diego Transportation offers a shuttle service between the SIO campus and the main UC San Diego campus as well as shuttles around the La Jolla and Hillcrest area. More information can be found here.

In addition, Triton U-Pass is a UC San Diego universal transit pass program that provides students unlimited rides on all regional MTS and NCTD mass transit bus and trolley/light rail routes during academic quarters. All current undergraduate and graduate students who have paid quarterly registration fees are eligible for U-Pass. Please note that students are not eligible for the U-Pass during the summer, unless they are registered for summer session. More information can be found here.

Also, the Triton Commuter Club recognizes and rewards your actions to reduce the traffic, parking and environmental impacts of driving alone. Whether you're coming to campus daily, learning and working from home, choosing lower-impact modes every day or mixing up your commute, you can reduce your impact and earn rewards. More information can be found here.

OFFICE SPACE AND KEYS

Office space is controlled by the Research Division Section Heads, with room assignments and facility maintenance being delegated to the Research Division business offices. Ph.D. students will be assigned office space from the business office of their Research Division. Some units may require deposits ranging from $15 per key. You must remain a registered student to be eligible for office space. Upon leaving, the key(s) must be returned to the unit from which the key(s) was checked out.

Please refer to the grid below to find the appropriate facilities contact for your business office.
If you are unsure of which research division that you belong to, please ask your advisor.
If you are an incoming student and do not have an advisor, please contact the department office, Gilbert Bretado gbretado@ucsd.edu, or Shelley Weisel sweisel@ucsd.edu

Business Office	Staff Contact	Position	Email	Phone
CASPO	Will Rivera	Facilities/Offices/Keys	wrivera@ucsd.edu	4-1875
CMBB--MBRD	Dejan Ristic	Facilities/Offices/Keys	dristic@ucsd.edu	2-1229
GRD	Megan Smith	Facilities/Offices/Keys	mas006@ucsd.edu	4-6852
IGPP	Megan Smith	Facilities/Offices/Keys	mas006@ucsd.edu	4-6852
IOD	Dejan Ristic	Facilities/Offices/Keys	dristic@ucsd.edu	2-1229
MPL	Will Rivera	Facilities/Offices/Keys	wrivera@ucsd.edu	4-1875

GRADUATE PROGRAM CONTACTS

Josh Reeves, Student Affairs Manager
jdreeves@ucsd.edu
Program administration and oversight of student services: including both undergraduate and graduate advising services, instructional services, admissions and recruitment, and teaching assistantships

Gilbert Bretado, Graduate Student Affairs Advisor
gbretado@ucsd.edu
Ph.D. advising, doctoral committees, qualifying exam, advancement to candidacy and defenses, departmental exams, new student orientation, recruitment and outreach, diversity coordinator, leave of absence, withdrawal, and re-admissions.

Dana Jimenez, Graduate Student Affairs Advisor
dljimenez@ucsd.edu
MS advising, advancement to candidacy and defenses, new student orientation, recruitment and outreach, diversity coordinator, leave of absence, withdrawal, and re-admissions.

Carrie Owen, Instructional Scheduling Coordinator
c2owen@ucsd.edu
Course scheduling, course evaluations, course approvals, educational facility access and maintenance requests, course reserves, website updates, data/statistics requests

Shelley Weisel, Graduate Student Funding Coordinator
sweisel@ucsd.edu
Graduate student financial support: fellowships, scholarships, traineeships, employment, bridge funding requests, grad student income verification, international student visa matters, exceptions to policy, and teaching assistantships

Maureen McGreevy, Financial Affairs
mpmcgreevy@ucsd.edu
Financial administrator: student travel and seminar reimbursement, purchase orders, faculty start-up funds

Denise Darling, Department Manager
ddarling@ucsd.edu

Department Chair and Program Directors

Dr. Eric Allen, Department Chair
eallen@ucsd.edu

Dr. Yuri Fialko, Vice Chair
yfialko@ucsd.edu

Dr. Lihini Aluwihare, Program Director, SIO Department Education
laluwihare@ucsd.edu

Dr. Joel Norris, Program Director, Climate-Ocean-Atmosphere Program (COAP)
jnorris@ucsd.edu

Dr. Katherine Barbeau, Program Director, Geosciences of the Earth, Oceans, and Planets (GEOP)
kbarbeua@ucsd.edu

Dr. James Leichter, Program Director, Ocean Biosciences Program (OBP)
jleichter@ucsd.edu

SIO Ombuds* Contacts

Dr. Paul Jensen, Ombudsperson
pjensen@ucsd.edu

Dr. Jennifer MacKinnon, Ombudsperson
jmackinnon@ucsd.edu

*These individuals are “mandatory reporters” and not a completely confidential resource.

APPENDIX

MS DEGREE REQUIREMENTS

Applied Ocean Science Curriculum

Required Coursework:

- SIOC 202A and SIOC 202B. Fundamentals of Wave Physics (two-quarter sequence; 4 units each)

Any two of the following SIO introductory courses:

- SIOC 210 Physical Oceanography (4 units)
- SIOG 240 Marine Geology (4 units) or SIOG 227 Intro to Seismology
- SIOG 260 Marine Chemistry (4 units)
- SIOB 280 Biological Oceanography (4 units)

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings selected in consultation with the students’ guidance committee.
In addition, enrollment in SIOC 208 (Seminar in Applied Ocean Sciences, one unit per quarter) is expected during the student’s entire period of study. SIOC 208 serves as a communications bridge across the program.

Climate Sciences Curriculum

Required Coursework:

- SIOC 210 Physical Oceanography (4 units)
- SIOC 217A, SIOC 217B, SIOC 217C, and SIOC 217D. Atmospheric and Climate Sciences I-IV (4 units each)

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings selected in consultation with the students' guidance committee. For most climate sciences students, this includes at least one additional quarter of fluid dynamics.

Physical Oceanography Curriculum

Required Coursework (20 units selected from the following designated courses):

- SIOC 203A and SIOC 203B. Introduction to Applied Mathematics I-II (4 units each)
- SIOC 210. Physical Oceanography (4 units)
- SIOC 212A and SIOC 212B. Geophysical Fluid Dynamics I-II (4 units each)
- SIOC 214A. Introduction to Fluid Mechanics (4 units)
- SIOC 221A and SIOC 221B. Analysis of Physical Oceanographic Data A-B (4 units each)

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings selected in consultation with the students' guidance committee. These might come from the core courses in other oceanographic disciplines (SIOG 240, Marine Geology; SIOG 260, Marine Chemistry; SIOB 280, Biological Oceanography) or from related graduate-level courses taught at UC San Diego.

Geophysics Curriculum

The geophysics master's degree provides a solid grounding in the fundamentals of geophysics for students intending to pursue professional positions in government, industry, or nonprofit organizations or to apply to Ph.D. programs. Two different degree options are available:

Plan I—Thesis. This involves both coursework and research, culminating in the preparation of a thesis. A total of thirty-six units of credit is required: twenty-four units must be from Category A courses (see below); and twelve units in research work leading to the thesis.

Plan II—Comprehensive Exam. At least twenty-four units must be from Category A and will be selected in consultation with the geophysics MS program director. The remaining twelve units are electives chosen from either Category A or B, or other courses taken with permission of the geophysics MS program director.

Category A courses:

- SIOG 223A Geophysical Data Analysis I (4 units)
- SIOG 223B. Geophysical Data Analysis II (4 units)
- SIOG 225. Physics of Earth Materials (4 units)
- SIOG 227A. Introduction to Seismology (4 units)
- SIOG 229. Gravity and Geomagnetism (4 units)
- SIOG 230. Introduction to Inverse Theory (4 units)
- SIOG 231. Introduction to EM Methods in Geophysics (4 units)
- SIOG 234. Geodynamics (4 units)
- SIOG 236. Satellite Remote Sensing (4 units)
- SIOG 238. Numerical Methods (4 units)

Category B courses:

- SIO 105. Sedimentology and Stratigraphy (4 units)
- SIO 110. Introduction to GIS and GPS for Scientists (4 units)
- SIO 113. Introduction to Computational Earth Science (4 units)
- SIO 160. Introduction to Tectonics (4 units)
- SIO 162. Structural Geology (4 units)
- SIO 182A. Environmental and Exploration Geophysics (4 units)
- SIO 182B. Environmental and Exploration Geophysics (4 units)
- SIOG 224. Internal Constitution of the Earth (4 units)
- SIOG 226. Introduction to Marine Geophysics (4 units)
- SIOG 227B. Advanced Seismology I (4 units)
- SIOG 227C. Advanced Seismology II (4 units)
- SIOG 233. Introduction to Computing (4 units)
- SIOG 239. Special Topics in Geophysics (4 units)
- SIOG 247. Rock Magnetism and Paleomagnetism (4 units)

Students are encouraged to participate in SIOG 239, Special Topics in Geophysics, where students have a chance to practice their speaking skills before their peers.

Geosciences Curriculum

Required Coursework:

- SIOG 240. Marine Geology (4 units)
- One geophysics course, from the following:
    - SIO 103. Introduction to Geophysics (4 units)
    - SIOG 226. Introduction to Marine Geophysics (4 units)

    - SIOG 234. Geodynamics (4 units)
    - SIOG 247. Rock Magnetism and Paleomagnetism (4 units)
- One geochemistry course, from the following:
    - SIOG 245. Marine Sediments-Paleo Proxies (4 units)
    - SIOG 251. Whole Earth Geochemistry (4 units)
    - SIOG 252A. Introduction to Isotope Geochemistry (4 units)
- One geology course, from the following:
    - SIO 105. Stratigraphy and Sedimentology (4 units)
    - SIO 160. Introduction to Tectonics (4 units)
    - SIO 170. Introduction to Volcanology (4 units)
    - SIOC 201. Geological Record of Climate Change (4 units)

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings selected in consultation with the students' guidance committee. Recommended course electives are below:

- SIOG 233. Introduction to Computers at SIO (4 units)
- SIOC 221B. Analysis for Physical Oceanographic Data (4 units)
- SIOC 210. Physical Oceanography (4 units)
- SIOG 260. Marine Chemistry (4 units)
- SIOB 280. Biological Oceanography (4 units)

Marine Chemistry and Geochemistry Curriculum

Required Coursework:

- SIOC 210. Physical Oceanography (4 units)
- SIOG 260. Marine Chemistry (4 units)
- Select one of the following:
    - SIOG 240. Marine Geology (4 units)
    - SIOB 280. Biological Oceanography (4 units)

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings selected in consultation with the students' guidance committee.

Biological Oceanography

Required Coursework:

- SIOC 210. Physical Oceanography (4 units)
- SIOG 260. Marine Chemistry (4 units)
- SIOB 280. Biological Oceanography (4 units)
- One of the following:
    - SIOG 240. Marine Geology (4 units)
    - SIOG 255. Paleobiology and History of Life (6 units)

- One of the following:
    - SIOB 270. Pelagic Ecology (4 units)
    - SIOB 270A. Fisheries Oceanography (4 units)
    - SIOB 275A. Benthic Ecology (4 units)
    - SIOB 277. Deep-Sea Biology (4 units)

- One of the following:
    - SIOB 271. Marine Zooplankton (5 units)
    - SIOB 282. Phytoplankton Diversity (4 units)
    - SIOB 283. Phycology: Marine Plant Biology (5 units)
    - SIOB 284. Marine Invertebrates (6 units)
    - SIOB 294. Biology of Fishes (5 units)
    - SIOB 296. Marine Tetrapods (4 units)

Elective Coursework:

Other coursework required for the Plan II (comprehensive exam) masters will be recommended by the student's guidance committee, usually including: one quarter of SIO 278, Seminar in Ocean Biosciences (or equivalent participatory seminar); a course in introductory parametric statistics; and at least one advanced-level course in physical, chemical, or geological oceanography.

Marine Biology Curriculum

Required Coursework:

- SIOC 210. Physical Oceanography (4 units)
- SIOG 260. Marine Chemistry (4 units)
- SIOB 280. Biological Oceanography (4 units)

Students also must take at least two graduate-level marine organismal courses or labs. A partial list of courses that fulfill this requirement include:

- SIOB 283. Phycology: Marine Plant Biology
- SIOB 287A. Marine Microbial Ecology
- SIOB 282. Phytoplankton Diversity
- SIOB 284. Marine Invertebrates
- SIOB 271. Marine Zooplankton
- SIOB 274 Natural History Below the Tides (6 units)
- SIOB 293. Applications of Phylogenetics
- SIOB 277. Deep Sea Biology
- SIOB 294. Biology of Fishes
- SIOB 296. Marine Tetrapods
- SIOB 281. Marine Physiology

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings that may be recommended by the guidance committee.

Marine Chemical Biology Track

Required Coursework:

- SIOC 210. Physical Oceanography (4 units)
- SIOG 260. Marine Chemistry (4 units)
- SIOB 280. Biological Oceanography (4 units)

Elective Coursework:

Students may fulfill the remaining units of required course work through elective course offerings selected in consultation with the students' guidance committee. Typical recommended electives are below:

- Chem 257. Bioorganic and Natural Products Chemistry (4 units)
- SIOB 232. Ethical and Professional Science (2 units) or equivalent
- SIOB 242 A-B. Marine Biotechnology I and II (8 units)
- SIOB 264. Special Topics in Marine Natural Products Chemistry (3 units)
- Chem 254. Mechanisms of Organic Reactions (4 units)
- Chem 258. Applied Spectroscopy (4 units)