

# Doctor of Philosophy

## Oceanography (PhD)

Richard Zimmerman, Graduate Program Director

### Admission

The doctoral degree in oceanography is granted to students who have:

1. mastered definite fields of knowledge, become familiar with research in these specific fields, and developed an informed understanding of opportunities for further advances;
2. demonstrated the capacity to do original, independent, scholarly work in their specific fields; and
3. shown the ability to integrate the field of specialization with the larger domains of knowledge and understanding.

All students are expected to demonstrate competency in oral communication and proficiency in writing.

All students in the oceanography Ph.D. program are responsible for reading and understanding the regulations and policies set forth throughout this catalog regarding requirements for the Ph.D. degree. The essential credit requirements for the Ph.D. are as follows: the student shall complete 48 credit hours beyond the master's degree or 78 credit hours for students admitted to the program with a bachelor's degree. Up to 24 credits can be granted for dissertation.

### Curriculum Requirements

Students who do not have an M.S. degree in oceanography normally complete the following within the first year:

OEAS 604	Introduction to Physical Oceanography	3
OEAS 610	Advanced Chemical Oceanography	3
OEAS 620	Advanced Geological Sciences	3
OEAS 640	Advanced Biological Oceanography	4

**Total Credit Hours** 13

### Additional Requirements

Waiving the requirement to take any of the core courses requires the approval of the GPD. Students must achieve a grade of B or better in each of these four core courses. Students may repeat any individual core course only once; if a student fails to earn a grade of B or better on repeating a core course, then the student will be dismissed from the program.

In consultation with the advisor and guidance committee, students will plan a complete program of course work designed to meet their objectives (see the section above). Depending on the entry status of the student, the following credit hours are also required:

- Those entering the Ph.D. program with an M.S. degree in oceanography must complete any needed core courses (see above), and a minimum of 48 credit hours of lecture courses and dissertation research.
- Those entering the Ph.D. program with a B.S. or M.S. degree in a discipline outside of oceanography shall complete 13 credit hours of the core courses listed above, and a minimum of 65 hours of additional lecture courses and dissertation research, for a total of 78 credit hours.

A maximum of 12 graduate credit hours may be transferred into a graduate degree program from non-degree status at Old Dominion University or from another accredited institution, except in the case of an approved interinstitutional program.

### Major Advisor and Guidance Committee

A major advisor must be identified to the graduate program director (GPD), at least provisionally, prior to admission to the program. After receiving admission to the program and enrollment, students should consult with the GPD and their major advisor for guidance on initial course work. Before the completion of nine semester hours (i.e. before the end of the student's

first semester), the student will form a guidance committee in consultation with the major advisor. Please see the graduate program director and the Requirements for Graduate Degrees section of this catalog for further information on forming a guidance committee.

### Plan of Study—Curriculum Plan

Sometime in the first year of study, the student shall prepare a plan of study with the aid and approval of the guidance committee. Students should see the graduate program director and refer to the Requirements for Graduate Degrees section of this catalog for further information on preparing a plan of study.

### Diagnostic Examination

Although not required, the guidance committee has the option to administer a written and oral diagnostic examination during the first semester of residence (or before nine credit hours have been completed) for students entering the program with an M.S. degree in oceanography. For students matriculating with a bachelor's degree or an M.S. degree in another field, the optional diagnostic examination should be administered no later than the third semester of residence (or before completion of 27 credit hours). The diagnostic examination will be prepared by the student's guidance committee in consultation with the graduate program director. The results of this examination are used as guidance for the curriculum plan. The guidance committee may also recommend to the graduate program director, based on the student's performance in the four oceanography core courses, that the diagnostic examination be waived.

### Computer Language Skills

To satisfy this requirement the student must either take a course in MATLAB programming (OEAS 595) or solve a substantial problem by writing an original computer program. The student's advisor in consultation with the guidance committee develops the problem and a reasonable timetable for its completion. The problem must be solved independently with no help from others. The results will be evaluated by the advisor and guidance committee who will determine whether the student has solved the posed problem to their satisfaction. This computer language skills requirement should be completed before taking the candidacy exam.

### Ship Time and/or Fieldwork Requirement

Each student is required to have at least ten days of shipboard experience, fieldwork, or a combination of the two.

### Candidacy Exam

Near the completion of course work and before becoming heavily involved in dissertation work, the student shall pass a candidacy examination designed to test scholarly competence and knowledge of oceanography. The exam has written and oral portions prepared by the guidance committee. Additional details on the structure, form and content of the candidacy exam are available from the graduate program director and in the Requirements for Graduate Degrees section in this Catalog.

### Formation of a Dissertation Committee

After the candidacy examination has been passed and the dissertation committee formed, the guidance committee's responsibilities are completed. The dissertation committee is a new committee and is formed to supervise the student's dissertation research. Students should see the graduate program director or refer to the Requirements for Graduate Degrees section in this Catalog for further information on the formation of a dissertation committee.

Changes to the dissertation committee must be made in advance of the oral dissertation defense. Such changes are made only with the approval of the GPD and college dean.

### Advancement to Candidacy

Advancement to candidacy is a formal step that occurs after the student has:

1. completed formal coursework;
2. passed the Ph.D. written and oral components of the candidacy examination; and,
3. submitted a topic that is approved by the dissertation committee chair.

The student must be advanced to candidacy at least 12 months before the time the degree is expected to be received, but usually not before the completion of one-and-a-half years of graduate work.

## **Dissertation Preparation**

General regulations and procedures governing the submission of a doctoral dissertation are given in the Guide for Preparation of Theses and Dissertations (obtained at [https://www.odu.edu/content/dam/odu/offices/graduate-studies/thesis-dissertation/docs/thesis\\_dissertation\\_guide.pdf](https://www.odu.edu/content/dam/odu/offices/graduate-studies/thesis-dissertation/docs/thesis_dissertation_guide.pdf)). Students should read this guide carefully before beginning to write their dissertation. Writing the dissertation as chapters that can be submitted for publication is encouraged.

Please note that the thesis and dissertation guide in place at the start of the semester will remain in force for the entire semester, and any changes made to the guide over the academic year (and the dates of these changes) will be listed on the cover page of the guide. Changes to the previous guide will also be noted on the cover page of the guide, or in a separate document that can be downloaded from the same site as the complete guide. For more information on dissertation preparation and approval in the College of Sciences, contact your graduate program director.

## **Dissertation Defense**

The format of a dissertation defense is determined by the dissertation committee with the approval of the GPD. The defense is chaired by the director of the dissertation committee. The chair will act as moderator, ruling on questions of procedure and protocol that may arise during the defense. Students should see the graduate program director or refer to the Requirements for Graduate Degrees section in this catalog for further information on the format of the dissertation defense.

Satisfactory performance on this examination (oral dissertation defense) and adherence to all regulations outlined above complete the requirements for the Ph.D. degree. All requirements for the doctoral degree must be completed within eight calendar years from the date of initial registration in the program.

## **Dissertation Acceptance and Submission**

Once the dissertation committee has approved the dissertation, the student and major advisor must review the entire dissertation to ensure that it adheres to the format described in the Guide for Preparation of Theses and Dissertations before submitting the dissertation to the GPD for final review. Ten days should be allowed for GPD review. Once the GPD has approved the dissertation, the student submits the dissertation to the associate dean in the College of Sciences for approval. All approvals must be completed by the day before commencement. However, the associate dean generally requires that all dissertations be submitted prior to this deadline. Students should consult with the GPD for further details.

## **Request to Graduate**

The student should obtain a copy of the form Application for Graduation from the Registrar's Office and complete this application. The deadline for submitting this application is listed on the Registrar's Office website at [www.odu.edu/registrar](http://www.odu.edu/registrar) (<http://www.odu.edu/registrar/>) and usually falls near the end of the semester preceding the one during which graduation is anticipated. It is the student's responsibility to meet these deadlines and submit the necessary paperwork for graduation.

## **Removal of Incompletes**

At least one month prior to graduation, all incomplete grades should be cleared. An Academic Record Change form is used for this purpose, and the instructor of the course and the department chair need to sign this form.