

## Section 4: Ph.D. in Marine Science: Coastal and Marine Systems Science Requirements

The Ph.D. in Marine Science: Coastal and Marine Systems Science facilitates student work with faculty on original research expanding and applying knowledge of coastal systems. Emphasis is on developing predictive capabilities of coastal environmental systems and infusing an appreciation of associated environmental policy development.

### General Program Requirements

*Students must complete the Ph.D. Program Timeline and Degree Completion Checklist (Appendix B). Review this list with the Major Professor often and complete milestones/tasks in a timely manner.*

1. Successful completion of an approved program of study with a minimum of 60 graduate hours. (4.1, 4.2)
2. Successful Passing the SCMSS Comprehensive Examination. (4.3)
3. Successful Passing the SCMSS Qualifying Examination. (4.4)
4. Admission to candidacy. (4.5)
5. A minimum grade point average (GPA) of 3.0 (B) on all coursework.
6. Completion, presentation, and successful defense of a dissertation. (4.6, 4.7)
7. All work applied toward the degree must be earned in a maximum of six years.

**\* Note:** Transfer credit(s) cannot be used to raise the GPA at Coastal Carolina University.

### 4.1 Enrollment Requirement

Students in the Ph.D. in Marine Science: Coastal and Marine Systems Science program must be continuously enrolled during all phases of graduate work. This includes fall, spring and summer terms. Registering for a minimum of one graduate credit in each term typically satisfies this requirement. However, the situation may arise where students have completed all course requirements except the dissertation. In this case, students must enroll in CMSS 702 Project Completion to satisfy the continuous enrollment requirement. Registering in CMSS 702 maintains email and library privileges and also allows access to university facilities and faculty advisers. CMSS 702 does not, however, count toward degree requirements and does not substitute for the 6 credit hour requirement in CMSS 700 Thesis Research.

### 4.2 Required Graduate Coursework (60 Graduate Credit Hours)

The Ph.D. in Marine Science: Coastal and Marine Systems Science requires the successful completion of an approved program of study with a minimum of 60 graduate credit hours. The approved program of study includes a series of core and seminar courses required for all students, specialized content supporting a student's individual research or academic needs and a required thesis.

The core of the curriculum provides a comprehensive foundation across the sub-disciplinary areas of the marine sciences (Atmospheric, Physical, Chemical, Geological, Biological, and Policy) to facilitate a systems approach to the coastal marine environment

and preparation for the SCMSS Comprehensive Examination. Specialized coursework, directed study, and research courses identified by the student's Graduate Advisory Committee are required to support student research and professional objectives. Students may receive credits for an earned master's degree in an area related to the doctoral program.

The curriculum for the Ph.D. in Marine Science: Coastal and Marine Systems Science (60 credit hours) is as follows:

**CORE COURSES (21 credit hours)**

CMSS 605 Coastal and Marine Hydrodynamics .....	3
CMSS 606 Coastal and Marine Geological Processes .....	3
CMSS 607 Coastal and Marine Bio-Geochemistry .....	3
CMSS 608 Coastal / Marine System Science, Issues and Applications .....	2
CMSS 609 Coastal / Marine System Science Seminar * .....	4
CMSS 610 Temporal and Spatial Analysis or CMSS 611 Modeling Coastal and Marine Systems .....	3
CMWS 603 Coastal and Wetland Policy and Management .....	3

**SPECIALIZED COURSES AND DIRECTED STUDY \*\* (18-27 credit hours)**

Graduate coursework approved from an earned master's degree and/or required by a student's Graduate Advisory Committee.

**DISSERTATION RESEARCH (12-21 credit hours)**

\* One credit-hour course required for four semesters.

\*\* With the approval of the SCMSS Graduate Programs Coordinator, a student's Graduate Advisory Committee may specify other coursework to satisfy the core or specialized course requirements to suit a student's particular needs and the objectives of the curriculum.

**4.3 Program SCMSS Comprehensive Examination**

Students are required to pass the SCMSS Comprehensive Examination to be taken within a year of completion of the core curriculum courses. This is typically after the third semester of the program. The format of the exam consists of written and oral components. In the written exam, students will respond to questions established by the SCMSS Comprehensive Examination Committee to assess the broad range of sub-disciplinary knowledge required to address complex coastal systems and the ability to identify and explain the linkages between sub-disciplinary concepts and processes. The Committee will schedule a follow-up oral examination with each student based on the responses given in the written exam and allow for further examination of sub- and interdisciplinary knowledge and applications not emphasized in the written exam. Following the oral examination, the Committee will identify one of the three following outcomes: pass, fail, or retake the exam within three months. Students must pass the SCMSS Comprehensive Examination to continue in the doctoral program.

#### **4.4 SCMSS Qualifying Examination**

Students are required to present and defend their dissertation research plan. This examination of the student's dissertation research plan and specific technical background required to complete the proposed research must be completed before the sixth full semester in residence to advance to candidacy in the program. The dissertation proposal will be constructed as a formal research proposal addressing the objective and need for the proposed research, command of the existing literature and foundation of the proposed research, specific testable hypotheses or research questions, an experimental design and work plan to address the research questions, and description of proposed analyses and the broader implications of the research results. The proposal is reviewed by the student's Graduate Advisory Committee which will schedule a formal presentation and defense of the proposal by the student. The presentation will be open to all SCMSS faculty and students. Following the public presentation, the Committee will meet with the student for an oral examination of the proposal and presentation. The oral examination will assess the student's research plan and preparation for the proposed research. The Committee will also identify any deficiencies in the proposal and assign one of three outcomes: pass and approval of the final proposal/work plan; provisional pass and require a resubmission of an improved proposal and work plan and re-exam within three months; or failure. Upon passing the Qualifying Examination, the student may proceed with the dissertation research.

The SCMSS Graduate Programs Coordinator or designee from the SCMSS faculty will serve as chair of the examination in an ex officio capacity. The role of the chair is to ensure the exam follows school requirements and that key questions related to overall program objectives (integrating concepts) are explored in addition to the more specific technical content being examined by the Graduate Advisory Committee and Major Professor. The chair of the committee also ensures the Committee's vote on acceptableness of the work is documented along with any other information, perspectives or guidance for the student going forward.

Students failing the SCMSS Qualifying Examination may petition to convert their program of study to the CMWS master's degree with the positive recommendation of the student's Graduate Advisory Committee, SCMSS Graduate Programs Coordinator, and approval of the SCMSS Director. The Graduate Advisory Committee and SCMSS Graduate Programs Coordinator will determine the applicable conversion of course and degree program requirements satisfied by work to date and provide an updated course of study to enable the student to complete the master's program.

#### **4.5 Admission to Candidacy**

Admission to the graduate program does not signify admission to candidacy for the Ph.D. in Marine Science: Coastal and Marine Systems Science. To be eligible for candidacy, a student must satisfy the corresponding requirements.

1. Achieve regular admission status;
2. Complete a minimum of 30 semester hours of graduate work at Coastal Carolina

- University, including core curriculum courses;
3. Earn a B or better average on all graduate work pursued and a B or better in the SCMSS core courses;
  4. Successfully pass the SCMSS Comprehensive Examination;
  5. Receive approval of dissertation proposal by Graduate Advisory Committee and SCMSS Graduate Programs Coordinator;
  6. Successfully pass the SCMSS Qualifying Examination; and
  7. Be recommended by the Graduate Advisory Committee, SCMSS Graduate Programs Coordinator, SCMSS Director and Dean of the College of Science.

#### **4.6 Dissertation**

Students will submit the results of their doctoral research as a formal dissertation and/or series of publications in compliance with Coastal Carolina University Graduate Studies and SCMSS policy and procedures.

#### **4.7 Dissertation Defense**

The SCMSS Graduate Programs Coordinator will schedule a formal public presentation of the work by the student to be followed by an Oral Examination (Defense) of the work by the student's Graduate Advisory Committee.

The SCMSS Graduate Programs Coordinator or designee from the SCMSS faculty will serve as chair the examination in an ex officio capacity. The role of the chair is ensure the exam follows school requirements and that key questions related to overall program objectives (integrating concepts) are explored in addition to the more specific technical content being examined by the Graduate Advisory Committee and Major Professor. The chair of the Committee also ensures the Committee's vote on acceptableness of the work is documented along with any other information, perspectives or guidance for the student going forward.

Upon passing the defense, the student will submit the completed dissertation as specified by SCMSS and University guidelines.