



The Five College Coastal and Marine Sciences Certificate Program

The Five College Coastal and Marine Sciences (FCC&MS) Certificate enables students to select from a variety of courses in marine sciences, including coastal and marine ecology/geology, resource management and public policy, oceanography, and coastal engineering, to create a concentration of study. Smith, Mount Holyoke, and Hampshire Colleges and the University of Massachusetts-Amherst currently award certificates. Under the guidance of faculty advisors on each campus, students choose a progressive series of courses available within the five campuses and in approved academic off-campus programs (e.g. Sea Education Association, Williams-Mystic, Shoals Marine Laboratory, Marine Biological Laboratory, Duke Marine Laboratory, and others). Some of these courses must include an intensive field component, ensuring that students gain competence in field studies. Students must also participate in a “capstone” independent, marine-related research project that counts toward the Certificate. This requirement may be met by participating in one of several Five Colleges Coastal & Marine Sciences funded internships offered each year at Woods Hole and other research facilities.

Students interested in working toward the Certificate **must begin by selecting a faculty advisor** (from the list below) who reviews and approves the program of study proposed by the student to ensure a strong concentration in marine sciences, as well as the necessary field experience.

Faculty Advisors

Amherst College: Whitey Hagadorn*, Ethan Temeles

Hampshire College: Charlene D'Avanzo*, Steve Roof

Mt. Holyoke College: Renae Brodie*, Jill Bubier, Stan Rachootin*, Al Werner

Smith College: Paulette Peckol*, Sara Pruss*, L. David Smith,

University of Massachusetts Amherst: Bruce Byers*, Francis Juanes*, Mark Leckie*

* denotes member of the Steering Committee

Requirements for the Certificate

1. Course Requirements

A minimum of six courses, with at least one course in each of the following categories (see Five College Coastal & Marine Sciences Course Listing at www.fivecolleges.edu/sites/marine/courseswork.)

Marine Biodiversity

Marine and Coastal Ecology

Marine Geology, Chemistry, and other related sciences

Resource Management and Public Policy

- a. At least three of the six courses must be above the introductory level and in at least two fields of study (geology & biology, etc.).
- b. At least one of the following marine courses is required. An introductory course in marine science is strongly recommended, either through Five Colleges or an approved study-away program. (introductory courses are indicated with *):

*GEOL 103	Oceanography	Mt. Holyoke College
*GEO 108	Oceanography	Smith College
*BIO 268	Marine Ecology	Smith College
GEO 270:J-term	Carbonate Systems and Coral Reefs	Smith College
BIO 390	Ecology of Coral Reefs	Smith College
*GEO-SCI 103	Intro. Oceanography	UMASS
BIOLOGY 297B	Biology of Marine Vertebrates	UMASS
GEO-SCI 392B	Coastal Resource Policy	UMASS
GEO-SCI 591M	Marine Micropaleontology	UMASS
GEO-SCI 591P	Paleoceanography	UMASS
GEO-SCI 595D	Physical Oceanography	UMASS

c. Each student must show competency in field studies by either completing a course with a field component or by participating in an intensive Five College field course or approved semester-away program (e.g., Sea Semester, Williams-Mystic, Shoals Marine Laboratory, Marine Biological Laboratory, Duke Marine Laboratory, etc.).

d. Students must receive a cumulative grade point average of 3.0 or better for all courses contributing to the Certificate requirements. Advisors of Hampshire College students will determine the grade equivalents for courses, based on written evaluations supplied by course instructors.

2. Marine-related Research Project

Completion of an independent marine-related research project through an internship, thesis, Division III project, independent study, or other activity acceptable to the campus program advisor.

3. Certificate Application Form

The campus program advisor submits the completed application **and transcript** to the FCC&MS steering committee (December/January graduation deadline: October 15th; May graduation deadline: April 15th). After the Steering Committee certifies that a student has completed all program requirements, Five Colleges, Inc. contacts campus registrars so the Certificate can be noted on the official transcript. Eligible students receive a Certificate recognizing their achievement.

The application form can be downloaded at
www.fivecolleges.edu/sites/marine/certificate.



Clark Science Center
 109 Bass Hall
 Smith College
 Northampton, MA 01063
 (413) 585-3799
marinesci@email.smith.edu
fivecolleges.edu/sites/marine



CERTIFICATE APPLICATION

This form should be completed in consultation with the applicant's home campus program advisor. Courses recommended for the Certificate are listed on the program website (www.fivecolleges.edu/sites/marine/courses), grouped by the distribution categories they fulfill. Course requirements must be fulfilled or in progress before this application is submitted. **Deadline for December/January graduation: October 15th ; deadline for May graduation: April 15th**. *Transcripts must be submitted with this application for the certificate to be processed.*

Name:	Graduation Month/Year:
Email:	Institution:
Phone:	Permanent Address:

A. Six Required Courses (www.fivecolleges.edu/sites/marine/coursework)

Course title	Course Number	Institution	Semester & Year	Credits	Grade	FCC&MS Category
Required course:						

Grade Point Average for these courses:

