

# COASTAL AND MARINE SCIENCES

## Overview and Contact Information

The Five College Coastal and Marine Sciences certificate enables students to select from a wide variety of marine-science-related courses, including coastal and marine ecology/geology, resource management and public policy, oceanography and coastal engineering to create a cohesive concentration.

Under the guidance of their faculty advisor for the certificate, students complete the three components of the program:

- a progressive series of courses available within the five campuses and in approved academic off-campus programs, such as Sea Education Association, School for Field Studies, Williams-Mystic, Duke University Marine Lab, Shoals Marine Lab, and others.
- proficiency in field/lab work through intensive field courses or internships.
- and a “capstone” independent, marine-related research project that will count toward the certificate.

Students interested in working toward the certificate should contact the FCCMS program coordinator to schedule an introductory meeting. After beginning the introductory course of study, students will be assigned a FCCMS faculty advisor. Advisors at Mount Holyoke College are Jason Andras (biological sciences), Renae Brodie (biological sciences), and Al Werner (geology).

## Contact Information

**Renae Brodie, Professor of Biological Sciences**

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<https://www.fivecolleges.edu/marine> (<https://www.fivecolleges.edu/marine/>)

## Requirements for the Certificate

A minimum of six courses:

Code	Title	Credits
A minimum of six approved courses (18 credit minimum), including at least one course in each of the following three categories:		
	Marine ecology and biodiversity	
	Marine geology and chemistry	
	Resource management and policy	
At least three of the six courses must be above introductory level, and in at least two fields of study		
At least three of the six courses must have a heavy concentration in coastal and marine sciences <sup>1</sup>		
<b>Total Courses</b>		<b>6</b>

<sup>1</sup> Courses with a heavy concentration in coastal and marine sciences are annotated as such on the list of approved courses for the certificate (<https://www.fivecolleges.edu/academics/coastal-and-marine-sciences/#courses>).

## Other Requirements

- Field/lab experience. Students must demonstrate competency in data collection by completing a minimum of 80 cumulative hours of coastal and marine-related field and/or lab work. This can be achieved by an appropriate combination of:
  - Courses that include field/lab experience (field trips, outdoor or indoor laboratory or practicum, field research). These courses may be taken among the Five Colleges or an approved study away program.
  - An approved summer internship, job, or volunteer experience in a coastal or marine environment. Field opportunities (<https://www.fivecolleges.edu/academics/coastal-and-marine-sciences/#internships>).
  - Work on the independent, marine-related research project (see below).
- Independent research project. Students must consult with FCCMS advisors to develop and complete an independent marine-related research project typically completed during the junior or senior year. Research projects may be based upon work begun during an internship, field course, volunteer or job experience. Requirements for this research project include:
  - A research project proposal: This must be submitted to the FCCMS advisor for review before the research is conducted; the research itself may be overseen by another faculty member or scientist. Research project proposal form (<https://www.fivecolleges.edu/sites/default/files/documents/FCCMS%20Research%20Proposal%20Form.docx>).
  - Poster presentation: The research project will culminate in a poster, to be presented at FCCMS symposia offered in November and April. Students will seek feedback from FCCMS advisors during poster development, prior to poster presentation.

## Additional Specifications

- Students must meet with FCCMS advisors ahead of time to ensure that internships, courses, field trips, etc. will meet the field/lab requirement. Students are required to keep a log of their field/lab experience hours for advisor approval and submission with the certificate application (<https://www.fivecolleges.edu/sites/default/files/documents/Coastal%20and%20Marine%20Sciences%20Certificate%20Application%20April%202021.docx>) and are encouraged to meet with their FCCMS advisor once per semester to review progress.
- Students must receive a cumulative grade point average of 3.0 or better for all courses contributing to the certificate requirements.
- Courses taken at other institutions (study abroad, domestic exchange, and transfer credits) may be applied towards the certificate, as long as approved by the certificate advisor. Study away programs with courses frequently approved for the certificate are listed on the certificate's website (<https://www.fivecolleges.edu/academics/coastal-and-marine-sciences/>).