

COASTAL & MARINE SCIENCES, MINOR

William & Mary's Batten School of Coastal & Marine Sciences & VIMS are unique among coastal and marine science institutions. As a state agency, VIMS has a legal mandate to provide research, education and advisory service to government, citizens and industry. In the Batten School, graduate students have an unparalleled opportunity to conduct research that matters. Research at the Batten School & VIMS extends from inland watersheds to the open ocean, with an emphasis on coastal and estuarine science.

W&M's Batten School & VIMS rank among the top coastal and marine science institutions in the U.S. and currently offers two graduate research degrees (Ph.D. and M.S.), a professional master's degree (M.A.), and an undergraduate degree (B.S.). Additionally, an undergraduate minor is offered in collaboration with W&M's College of Arts & Sciences.

The Coastal & Marine Sciences major offers students a robust interdisciplinary foundation in the science of estuaries and coasts, with student engagement across biological, physical, and social dimensions. The program combines rigorous scientific training with applied learning in coastal systems, public policy, and sustainability.

The program prepares graduates for careers and further study in marine and environmental science, public policy, education, conservation, and related fields. All undergraduate Coastal & Marine Sciences majors take a common core curriculum. Typically, in the fall semester of their junior year, newly admitted majors participate in an immersive semester at VIMS, located in Gloucester Point, VA. Round trip daily transportation is provided from the main campus to VIMS during the immersion semester.

Admission to the Major Program

Current W&M students wanting to declare a major in Coastal & Marine Sciences will be required to apply for competitive admission to the program. Students should apply to the major program prior to the start of the spring semester of their sophomore year, with the intention of entering the major program in the fall semester of their junior year.

Students admitted to the Coastal & Marine Sciences major will be required to participate in our fall semester immersion experience at the W&M's Batten School & VIMS campus during their first semester in the major program (generally fall of junior year). The immersion semester provides majors with a fully engaged, cohort-based, learning environment which incorporates numerous field and laboratory experiences across their integrated courses.

Freshmen, sophomores, and transfer students are strongly encouraged to review the curriculum to ensure

1. the necessary marine science proficiency courses (those courses that are prerequisite courses for required immersion semester courses) will be completed prior to the start of their fall immersion semester experience, and
2. junior academic standing (54 earned credit hours) is attained prior to the start of the immersion semester.

Details on the major program admission process, including application deadlines, can be found on the Batten School & VIMS website: <https://www.vims.edu/academics/>

Contact our Undergraduate Program Director, Prof. Christopher Hein, for more information.

Coastal & Marine Sciences (BS in Coastal & Marine Sciences)

The major curriculum is designed to provide students with an understanding of the processes and functions of coastal, estuarine, and marine environments. Core coursework will educate students in the natural sciences subfields of geology, biology, chemistry, and physics as they relate to the interdisciplinary field of coastal and marine sciences. Students will also explore the effects of marine systems processes on human populations, economies, and societies, and learn how natural and anthropogenic factors shape coastal ecosystems. Courses for the Coastal & Marine Sciences major will be held in-person at the main W&M Williamsburg campus, with the exception of the required immersion semester experience. All immersion semester courses will be taken in-person at the nearby W&M's Batten School & VIMS Gloucester Point campus. Opportunities to participate in elective field courses at the VIMS Eastern Shore Laboratory campus and on international study abroad programs are also available.

Total Credit Hours for Major: 36 credits

Proficiency Courses: 18-20 credits (not counted toward the major)

Of the 120 credit hours required for a B.S. degree in Coastal & Marine Sciences, a minimum of 60 credit hours must be earned in a subject field offered outside the Batten School. A maximum of 6 credits of 300-level marine science research and 3 credits of advanced 400-level marine science research may count towards the major. A maximum of 3 credits of marine science internship may count toward the major elective requirement.

Core Requirements

Distributed as follows:

Code	Title	Hours
Required Courses		
MSCI 230	Introduction to Marine Science	3
Select one of the following Field Courses:		3
MSCI 331	Field Studies in Coastal Marine Environments	
MSCI 332	Coastal Environments in North Wales: Geology, Ecology, and Human Dimensions	
MSCI 333	Coastal Environments – Topics	
Other field courses of appropriate length and scope may be used to fulfill the field course requirement with permission from the Program Co-Directors.		
Elective Courses		
Select 12 credits from the following with at least one course of 3 or more credits (inclusive of any required recitation section) from the Physical category and one from the Biological category. ¹		12
Courses that will count for the Physical category include:		
MSCI 305	Coastal and Marine Geology	
MSCI 310	Motion of the Ocean	
MSCI 320	Coastal and Marine Chemistry	
GEOL 324	Paleoclimatology & Paleoceanography	
Courses that will count for the Biological category include:		
MSCI 315	Biological Oceanography	
MSCI 340	Marine Biology	

BIOL 404	Special Topics in Biology
BIOL 427	Wetland Ecosystems
BIOL 457	Marine Invertebrate Biology
BIOL 460	Advanced Seminar in Biology
BIOL 461	Marine Ecology and Conservation

Additional electives:

MSCI 201	Marine Science Mash-Up
MSCI 250	People, Society, and the Coast
MSCI 390	Research in Marine Science (Topics vary from year to year. Seminars can be repeated for credit if the topic is different.)
MSCI 404	Microbial Processes in a Changing Coastal Environment
MSCI 497	Prob: Marine Science
MSCI 498	Special Topics in Marine Science
GEOL 325	Paleontology

Total Hours **18**

¹ Existing courses that can be used to meet this requirement are listed below. Additional courses may be used to satisfy this requirement with approval from the Coastal & Marine Sciences Co-Directors, or in some cases, the full Coastal & Marine Sciences Minor Advisory Committee.