

MARINE SCIENCES, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Requirements

Requirement	Credits
Requirements for the Minor	19

Courses offered by other institutions may be substituted for any of the required courses listed below, if accepted for transfer by the student's major department and approved by the Marine Sciences Committee. This includes up to 16 transfer credits from SOC. Upon completion of the requirements and no later than the tenth week of the semester in which the student is to graduate, he or she must verify in the Marine Sciences program office that the requirements have been met.

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10>). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
GEOSC 40	The Sea Around Us	3
Supporting Courses and Related Areas		
<i>Supporting Courses and Related Areas: Require a grade of C or better</i>		
Select at least 6 credits of field studies of the following: ¹		6
BIOL 450W	Experimental Field Biology	
BIOL 483	Coastal Biology Travel Experience	
BIOL 499A	Tropical Field Ecology	
EARTH 240	Coral Reef Systems	
EMSC 440	Science Diving	
EMSC 441	Advanced Science Diving	
ERM 496	Independent Studies	
GEOSC 410 or BIOL 496	Marine Biogeochemistry Independent Studies	
GEOSC 496	Independent Studies	
METEO 496	Independent Studies ²	
Select 10 credits from the following list:		10
BIOL 406	Symbiosis	
BIOL 417	Invertebrate Zoology	
BIOL 482	Coastal Biology	
GEOSC 419	The Organic Geochemistry of Natural Waters and Sediments	
GEOSC 440	Marine Geology	
METEO 451	Introduction to Physical Oceanography	
WFS/ERM 435	Limnology	
WFS/ERM 436	Limnological Methods	
WFS/ERM 450	Wetland Science and Sustainability	

WFS 452	Ichthyology
WFS 453	Ichthyology Laboratory

- ¹ Students may also wish to transfer 6 credits of field-oriented course work from another institution with prior approval of the chair of the Marine Sciences minor.
- ² Students may select METEO 496 with consent of instructor and Marine Sciences minor.