

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/students/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/>). 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 | | |
| WFS/ERM 450 | Wetland Science and Sustainability | |

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|---------|------------------------|
| 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.