

# MARINE SCIENCE, BS

Students pursuing a degree in marine science typically have interests in biodiversity, conservation, the environment, and/or graduate or professional programs. High school preparation should include a solid background in mathematics, introductory life sciences, and chemistry. To complete the degree, students will be required to take courses at a marine lab, providing experiential learning opportunities.

## Marine Science Requirements

Marine Science Required Courses	Hours
<b>Core Requirements</b>	
Select one of the following:	4
BSC 114 Principles Of Biology I & BSC 115 and Laboratory Biology I or BSC 118 Honors General Biology I	
Select one of the following:	4
BSC 116 Principles Biology II & BSC 117 and Laboratory Biology II or BSC 120 Honors Gen Biology II	
Select one of the following:	4
CH 101 or General Chemistry CH 117 Honors General Chemistry	
Select one of the following:	4
CH 102 or General Chemistry CH 118 Honors General Chemistry	
Select one of the following:	4
GEO 102 or The Earth Through Time GEO 105 Sustainable Earth	
<b>Other Required Courses</b>	7
GEO 101 The Dynamic Earth BSC 385 Ecology and Evolution	
<b>Marine Science Courses</b>	
MS 304 Marine Geology	4
MS 306 Marine Biology	4
MS 448 Intro Oceanography	4
Marine Science 300 or 400 level Electives	4
MS 408 Marine Invertebrate Zoology MS 419 Marine Ecology MS 433 Coastal Zone Management MS 452 Marine Vertebrate Zoology MS 453 Marine Botany MS 497 Special Topics	
Select one of the following:	3
ST 260 or Statistical Data Analysis BSC 380 Intro Stats Biology	
<b>Upper Division Electives in BSC or MS</b>	8
Select from the Elective Course List below.	
Credit Hours Subtotal:	54
<b>Required Ancillary Courses:</b>	

Grades in ancillary courses are not computed into the major GPA. The major in marine science requires the successful completion of the following courses outside the major:

Math - Select one of the following:	4
MATH 125 Calculus I or MATH 14 Honors Calculus I	
Physics I - Select one of the following:	4
PH 101 General Physics I PH 105 General Physics W/Calc I PH 125 Honors Gen Ph W/Calculus	
Physics II - Select one of the following:	4
PH 102 General Physics II PH 106 General Physics W/Calc II PH 126 Honors Gen Ph W/Calculus II	

**Total Hours** 66

**Elective Course List** Hours

### Biological Science Elective Options:

BSC 300 Cell Biology	3
BSC 301 Cell Biology Laboratory	3
BSC 303 Field Zoology	3
BSC 310 Microbiology	3
BSC 311 Microbiology II	3
BSC 312 Microbiology Lab	2
BSC 313 Gen Bacteriology Lab	3
BSC 315 Genetics	3
BSC 320 Freshwater Studies	4
BSC 340 Principles of Nat. Res. Cons.	3
BSC 360 Plant Biology	4
BSC 371 Biology of Lower Plants	4
BSC 373 Vertebrate Zoology	4
BSC 380 Intro Stats Biology	3
BSC 386 General Ecology Lab	3
BSC 390 Honors Thesis Research <sup>A</sup>	1 to 8
BSC 391 Tutorial In Biol Science <sup>A</sup>	1-2
BSC 393 Biology Outreach <sup>A</sup>	2
BSC 396 Resident Study <sup>A</sup>	1-6
BSC 398 Undergraduate Research <sup>A</sup>	1-4
BSC 399 Presentation of UG Research <sup>A</sup>	2
BSC 400 Vertebrate Funct Morphol	4
BSC 403 Intro To Bsc Instruction <sup>A</sup>	2
BSC 404 Honors Bsc Instruction <sup>A</sup>	2
BSC 407 Honors Seminar In Bsc <sup>A</sup>	1
BSC 411 Phage Discovery Laboratory	3
BSC 412 Limnology	3
BSC 415 Wetland Ecology	3
BSC 416 Disease Ecology	3
BSC 417 Environmental Modeling	3
BSC 420 Principles Of Systematics	4
BSC 426 Computational Biology Lab	3

BSC 428	Biology Of Fishes	4
BSC 439	Bch/Molecular Biology Lab	3
BSC 441	Developmental Biology	3
BSC 442	Integrated Genomics	4
BSC 444	General Virology	3
BSC 445	Honors Endocrinology	3
BSC 448	Animal Behavior	3
BSC 449	Endocrinology	3
BSC 450	Fundamentals of Biochemistry	3
BSC 451	Molecular Biology	3
BSC 453	Biochemistry Lab	3
BSC 455	Chemical Ecology	3
BSC 456	Microbial Ecology	3
BSC 458	Drug Discovery Laboratory	3
BSC 464	Biology Of Algae	4
BSC 465	Prin Of Toxicology	3
BSC 467	Honors Data Man. Vis. in R	3
BSC 469	Histology Of Vertebrates	4
BSC 470	Prin Pop Genetics	3
BSC 471	Plant Physiology	3
BSC 472	Mycology	4
BSC 473	Bioinformatics	3
BSC 475	General Entomology	4
BSC 476	Aquatic Insects	4
BSC 477	Invertebrate Zoology	4
BSC 478	Microbiomes Health & Disease	3
BSC 480	Plant Ecology	3
BSC 481	Foundations in Advanced Biostatistics with Applications to R	3
BSC 482	Conservation Biology	3
BSC 483	Evolution	3
BSC 484	Aquatic Biology Seminar	1
BSC 487	Biogeography	3
BSC 488	Research Seminars in Biology	1
BSC 497	Special Topics	1-4

### Footnotes

- A The department offers a number of courses designed to enrich the learning experience of students beyond the traditional classroom setting. Only 4 credit hours of these courses can be applied to the marine science major or minor.
- An additional four hours may be applied toward the requirement for 120 hours for the degree. BSC 409 Pre-Health Apprenticeship I and BSC 410 Pre-Health Apprenticeship II are not applicable to the major in marine science.
- A maximum of 12 hours of 100-level biology courses (BSC 108 Intro Biology Non Maj I, BSC 109 Intro Biology Non Maj II, BSC 114 Principles Of Biology I, BSC 115 Laboratory Biology I, BSC 116 Principles Biology II, BSC 117 Laboratory Biology II, BSC 118 Honors General Biology I or BSC 120 Honors Gen Biology II) may be applied to degree requirements.
- Students are responsible for ensuring that they have met all University, College, major and minor requirements. However, each student must meet with an adviser in the major department for academic planning and to be approved for registration each semester. College advisers are also available for additional assistance with minor, College, and University requirements.

### Grade Point Average

A 2.0 grade point average in the major is required for completion of the degree. Please see the Grades and Grade Points section of this catalog for an explanation on grade point average calculations.

### Required Minor

The marine science major does not require a minor.

### Prerequisites

Prerequisites for all BSC courses at the 300- and 400-level must be passed with a minimum grade of C-.

### Restrictions on Course Attempts

No undergraduate course offered by the Department of Biological Sciences may be attempted more than three times. Mid-semester withdrawal (any withdrawal that results in a final grade of W) is not considered an attempt. Students who, in three attempts, fail to pass a required course or fail to make a C- or better in a course that is a prerequisite for a required upper level course may no longer major in Marine Science.