

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. Most students opt to take their courses at the Dauphin Island Sea Lab, on Dauphin Island, AL, as the courses offered were developed to meet the degree requirements.

Marine Science Requirements

Marine Science Required Courses	Hours
Core Requirements	
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	
Other Required Courses	7
GEO 101 The Dynamic Earth BSC 385 Ecology and Evolution	
Marine Science Courses	
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	
Upper Division Electives in BSC or MS	8
Select from the Elective Course List below.	
Credit Hours Subtotal:	54

Required Ancillary Courses:

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 304 Field Botany	3
BSC 305 Introduction to Neuroscience	3
BSC 310 Microbiology	3
BSC 311 Microbiology II	3
BSC 312 Microbiology Lab	2
BSC 313 Gen Bacteriology Lab	3
BSC 314 Dendrology	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 ^A	1 to 8
BSC 391 Tutorial In Biol Science ^A	1-2
BSC 393 Biology Outreach ^A	2
BSC 396 Resident Study ^A	1-6
BSC 398 Undergraduate Research ^A	1-4
BSC 399 Presentation of UG Research ^A	2
BSC 400 Vertebrate Funct Morphol	4
BSC 401 Molecular Ecology	3
BSC 403 Intro To Bsc Instruction ^A	2
BSC 404 Honors Bsc Instruction ^A	2
BSC 407 Honors Seminar In Bsc ^A	1
BSC 411 Phage Discovery Laboratory	3
BSC 412 Limnology	3

BSC 413	Cave Biology	3	BSC 481	Adv Biostatistics with R	3
BSC 414	Marine Biogeography	3	BSC 482	Conservation Biology	3
BSC 415	Wetland Ecology	3	BSC 483	Evolution	3
BSC 416	Disease Ecology	3	BSC 484	Aquatic Biology Seminar	1
BSC 417	Environmental Modeling	3	BSC 485	Found Forest Res and Conserv	4
BSC 418	Comparative Neuroanatomy	3	BSC 487	Biogeography	3
BSC 419	Evolutionary Genomics	3	BSC 488	Research Seminars in Biology	1
BSC 420	Principles Of Systematics	4	BSC 490	Stream Ecology	4
BSC 421	Personalized and Gen Med	3	BSC 494	Honors Signal Trans Neuroby	3
BSC 422	Biology of Cancer	3	BSC 497	Special Topics	1-4
BSC 423	Honors Pers Gen Med	3	Marine Science Elective Options:		
BSC 424	Human Physiology	3	MS 408	Marine Invertebrate Zoology	4
BSC 425	Human Physiology Lab	2	MS 419	Marine Ecology	4
BSC 426	Computational Biology Lab	3	MS 433	Coastal Zone Management	2
BSC 427	Parasitology	3	MS 452	Marine Vertebrate Zoology	4
BSC 428	Biology Of Fishes	4	MS 453	Marine Botany	4
BSC 429	Neurophysiology	3	MS 497	Special Topics	1 to 4
BSC 430	Introduction to Pharmacology	3	Footnotes		
BSC 431	Pathogenic Microbiology	3	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.		
BSC 434	Plant Systematics	4	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.		
BSC 435	Immunology	4	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.		
BSC 437	Epidemiology of Pathogens	3	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.		
BSC 439	Bch/Molecular Biology Lab	3	Grade Point Average		
BSC 441	Developmental Biology	3	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.		
BSC 442	Integrated Genomics	4	Required Minor		
BSC 444	General Virology	3	The marine science major does not require a minor.		
BSC 445	Honors Endocrinology	3	Prerequisites		
BSC 446	Honors Animal Behavior	3	Prerequisites for all BSC courses at the 300- and 400-level must be passed with a minimum grade of C-.		
BSC 448	Animal Behavior	3	Restrictions on Course Attempts		
BSC 449	Endocrinology	3	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		
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 460	Human Developmental Biology	4			
BSC 461	Ecohydrology	3			
BSC 462	Biological Barriers	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			

prerequisite for a required upper level course may no longer major in Marine Science.