College of Health, Science and Technology
Department of Biological and Health Sciences

MARINE BIOLOGY

Bloomsburg LOCK HAVEN MANSFIELD
COMMONWEALTH UNIVERSITY

Bachelor of Science (BS) - Biology

This degree map is based on the current Academic Catalog and is subject to change. Please note that the degree map is designed to give you a sense of roughly how courses might be distributed over a 4-year degree. Your exact schedule will differ depending on a range of factors though we recommend taking a minimum of 15 credits each fall and spring semester. Regular consultation with your academic advisor is the best way to make sure that you are taking the courses you need in the right order to ensure efficient progress through your degree program.

Sample 4-Year Plan

First Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
BIOL 110 Principles of Biology 1	4	BIOL 111 Principles of Biology 2	4
CHEM 121 General Chemistry 1	4	CHEM 122 General Chemistry 2	4
FYS 100 First Year Seminar	3	WRIT 103 Foundations in Composition	3
General Education	3	General Education	3
Semester Total	14	Semester Total	14

Second Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
BIOL 211 Cell Biology	4	BIOL 209 Genetics	3
CHEM 231 Condensed Organic Chemistry	4	BIOL 201 Introduction to Biological Research	3
STAT 141 Introduction to Statistics	3	Biology Elective	3
General Education	3	MATH 150 Essentials of Calculus	3
General Education	3	General Education Course	3
Semester Total	17	Semester Total	15
		Summer courses - CBFS courses, 9 credits total* **	

*****At least one summer of Biology classes offered at Chincoteague Bay Field Station (CBFS) or other marine station (Minimum total of 9 SH for the degree) *****

Third Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
BIOL 301 Ecology (FALL ONLY)	4	Biology Elective	3
BIOL 321 Marine Biology or EGGS 259 Oceanography	3	Biology Elective	3
Biology elective	3	Biology Elective	3
PHYS 208 Introduction to Physics 1	4	General Education	3
		General Education	3
Semester Total	14	Semester Total	15

Fourth Year			
Fall Courses	**Credits**	**Spring Courses**	**Credits**
Biology Elective	3	Biology Elective	3
Biology Elective	3	Biology Elective	3
General Education	3	General Education	3
General Education	3	General Education	3
Free Elective	3	Free Elective	3
Free Elective	1		
Semester Total	16	Semester Total	15

Winter/Summer College - Optional

While not required, Winter and Summer sessions are offered each year and may help you stay on track or get ahead. You may take up to seven (7) credits during Winter College and up to 14 credits during Summer College.

Revised February 2025

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Curriculum Checklist

Biology Core Requirements (25 credits)

___ BIOL 110 Principles of Biology 1 (4)
___ BIOL 111 Principles of Biology 2 (4)
___ BIOL 201 Intro to Bio Research (3)*
___ BIOL 209 Genetics (3)*
___ BIOL 211 Cell Biology (4)*
___ BIOL 301 Ecology (4)*
___ BIOL 361 Marine Biology* OR EGGS 259 Oceanography (3)

Related Core Requirements (22 credits)

___ CHEM 121 General Chemistry 1 (4)
___ CHEM 122 General Chemistry 2 (4)*
___ CHEM 231 Condensed Organic Chem OR Chem 281 Organic Chemistry 1 (4)*
___ PHYS 208 Intro to Physics 1 (4)
___ STAT 141 Intro to Statistics (3)
___ MATH 150 Essentials of Calculus or MATH 160 Calculus 1 (3)

^ Enrollment in course is contingent on an ALEKS math placement score >61 or successful completion of MATH118 College Algebra with a grade of C or better. Note: Progression through the sequence of all chemistry courses requires achievement of a minimum grade of C in pre-requisite courses.

Elective Courses (28 credits)

Students must fulfill elective concentration requirements of Blocks A-E including 9crs total of MRSC coursework completed at the Chincoteaque Bay Field Station (MRSC courses will simultaneously fulfill Block A-E or G requirements); An additional 10crs of free elective from any category (Blocks A, B, C, D, E, F, G) are required. At least 9cr of all electives work must have a field component # - Designates course with a field component.

A. Block A Skill Development

Required (3 Credits)

___ BIOL 438 Environ. Policy & Reg (3)*
___ BIOL 439 Hum. Dim. Fisheries Mgt (3)*
___ BIOL 443 Molecular Biology (3)*
___ BIOL 444 Molecular Biology Lab (1)*
___ BIOL 446 Immunology (3)*
___ BIOL 486 Analy & Comm of Bio Data (3)*
___ BIOL 489 Special Topics in Biology (3)*

B. Block B Practical Application

Required (3 Credits)

___ BIOL 112 Aquaculture (3)
___ BIOL 113 Applied Aquaculture (3)
___ BIOL 493 Undergrad Res in Bio (1-6cr)*
___ BIOL 498 Internship in Bio (3-6cr)*

C. Block C Organismal Courses

Required (6 Credits)

___ BIOL 206 Botany (3)*
___ BIOL 207 Zoology (3)
___ BIOL 213 Intro to Parasitology (3)
___ BIOL 314 Comp. Bio of Invertebrates (3)*
___ BIOL 315 Comp. Vert. Anatomy (3)*
___ BIOL 340 Microbiology (4)*
___ BIOL 350 Plant Pathology (3)*
___ BIOL 400 Dendrology (3)*#
___ BIOL 401 Entomology (3)*#
___ BIOL 431 Mycology (3)*#
___ BIOL 432 Ornithology (3)*#
___ BIOL 433 Ichthyology (3)*#
___ BIOL 434 Herpetology (3)*#
___ BIOL 453 Freshwater Entomology (3)*#
___ BIOL 454 Algae of Freshwater Eco (3)*#
___ BIOL 460 Plants, An. Nat. His. of PA (3)*#
___ BIOL 473 Environmental Physiology (3)*
___ BIOL 477 Plant Physiology (3)*

D. Block D Ecology/Evolution

Required (3 Credits)

___ BIOL 430 Evolution (3)*
___ BIOL 450 Developmental Biology (3)*
___ BIOL 452 Freshwater Ecology (3)*#
___ BIOL 455 Community Ecology (3)*
___ BIOL 461 Animal Behavior (3)*#

E. Block E Conservation/Biodiversity

Required (3 Credits)

___ BIOL 263 Field Botany (3)#
___ BIOL 419 Ecosystems (3)*#
___ BIOL 420 Global Change Biology (3)*
___ BIOL 435 Conservation Genetics (3)*
___ BIOL 451 Conservation Biology (3)*
___ BIOL 456 Environmental Toxicology (3)*

F. Block F Chincoteague Bay Field Station

Required (9 Credits)

___MRSC# _____For Block: ___
___MRSC# _____For Block: ___
___MRSC# _____For Block: ___

G. Block G Free Electives

Required (10 Credits)

___ BIOL _____
___ BIOL _____
___ BIOL _____
___ BIOL _____

OR choose any of the courses below:

___ BIOL 208 Human Genetics (3)*
___ BIOL 210 Genetics Laboratory (1)*
___ BIOL 252 Watershed Ecology Techniques (3)
___ BIOL 337 Basic Virology (3)*
___ BIOL 361 Marine Biology (3)*
___ BIOL 442 Advanced Virology (3)*
___ BIOL 448 Advanced Parasitology (3)*
___ EGGS 259 Oceanography (3)

General Education Requirements (45 credits)

Note: Some requirements may be fulfilled by coursework in your major program including directed Gen Ed courses noted below

- Foundations (15 credits)
  - MATH 150; MATH 160; STAT 141 (3)
- Interconnections (9 credits)
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- Citizenship & Responsibility
  (6 credits from at least two goals)
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- Natural World & Technologies (9 credits)
  - BIOL110 Principles of Biology I (4)
  - CHEM 121 General Chemistry 1 (4)
  - PHYS208 Intro to Physics I (4)
- Creativity & Expression (6 credits)
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Degree Requirements

All students must obtain a minimum of 120 credits (A minimum of 42 credits must be advanced course work), complete all General Education requirements, and all requirements for the selected major. Meet with your advisor and consult Degree Works to monitor your progress and for all graduation requirements.

A minimum GPA of 2.0 in the major and overall are required.

*Denotes advanced coursework
Students must take a minimum of 42 credits of advanced coursework. Advanced coursework can be met in major courses, minor courses, free elective courses, and general education courses. Courses that meet this requirement are designated in Banner.