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

Bloomsburg LOCK HAVEN MANSFIELD
COMMONWEALTH UNIVERSITY

ECOLOGY AND ENVIRONMENTAL CONSERVATION

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
General Education Course	3	STAT 141 Introduction to Statistics	3
FYS 100 First Year Seminar	3	WRIT 103 Foundations in Composition	3
		General Education Course	3
Semester Total	14	Semester Total	17

Second Year

Fall Courses	Credits	Spring Courses	Credits
BIOL 211 Cell Biology	4	BIOL 209 Genetics	4
BIOL 201 Introduction to Biological Research	3	Biology Elective	3
CHEM 231 Condensed Organic Chemistry	4	General Education	3
MATH 150 Essentials of Calculus	3	General Education	3
General Education	2	General Education	3
Semester Total	16	Semester Total	16

Third Year

Fall Courses	Credits	Spring Courses	Credits
BIOL 301 Ecology (FALL ONLY)	4	Biology Elective	3
EGGS 120 Physical Geology	4	Biology Elective	3
PHYS 208 Introduction to Physics 1	4	General Education	3
General Education	3	General Education	3
		General Education	3
Semester Total	15	Semester Total	15

Fourth Year

Fall Courses	Credits	Spring Courses	Credits
Biology Elective	3	Biology elective	3
Biology Elective	3	Biology elective	3
Biology Elective	3	Biology elective	1
Free Elective	3	Free Elective	3
Free Elective	3	Free Elective	2
Semester Total	15	Semester Total	12

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.

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Curriculum Checklist

Biology Core Requirements (33 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)*

Related Core Requirements (26 credits)

___ CHEM 121 General Chemistry 1 (4)^
___ CHEM 122 General Chemistry 2 (4)*
___ CHEM 231 Condensed Organic Chem OR Chem 281 Organic Chem 1 (4)*
___ PHYS 208 Intro to Physics 1 (4)^
___ STAT 141 Intro to Statistics (3)
___ MATH 150 Essentials of Calculus (3)^
___ EGGS 120 Physical Geology (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.

Electives (28 credits)

3cr from courses in skill development in environmental fields (Block A); 3cr from courses demonstrating practical application of knowledge (Block B), 6crs of organismal courses (Block C); 3crs from courses related to ecology/evolution (Block D); 3crs from courses related to conservation/biodiversity (Block E); 10crs from any category (Blocks A, B, C, D, E, and F). At least 9cr must have a field component # - Designates course with a field component.

BLOCK A Skill Development

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

BLOCK B Practical Application

___ BIOL 493 Undergrad Res in Bio (1-6cr)*
___ BIOL 498 Internship in Biology (3-6cr)*

BLOCK C Organismal Courses

___ 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 (3)*
___ 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, Animals, Nat, His, of PA (3)#*
___ BIOL 473 Environmental Physiology (3)*
___ BIOL 477 Plant Physiology (3)*

BLOCK D Ecology/Evolution

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

BLOCK E Conservation/Biodiversity

___ 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)*

BLOCK F Free Electives (10crs)

Any course in Blocks A, B, C, D, and E

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

OR choose any suggested course below:

___ BIOL 208 Human Genetics (3)*
___ BIOL 210 Genetics Lab (3)*
___ BIOL 252 Watershed Ecology Techniques (3)
___ BIOL 337 Basic Virology (3)*
___ BIOL 442 Advanced Virology (3)*
___ BIOL 448 Advanced Parasitology (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; STAT 141 (3)
- Interconnections (9 credits)
- Citizenship & Responsibility
  (6 credits from at least two goals)
- 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)

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.

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