3+2 BACHELOR OF SCIENCE / MASTER OF SCIENCE in BIOLOGY: General Biology Option and Thesis Track

Department of Biological and Allied Health Sciences, College of Science and Technology
Effective Fall 2017

At Bloomsburg University qualified undergraduate students may participate in an Accelerated Bachelor's to Master's degree program or an Early/Dual Admission program to a professional Master's degree program.
The Accelerated Program permits qualified students with junior standing to take graduate coursework in order to get an early start on the Master's program. The total number of credits required for both the undergraduate and graduate degrees would be reduced by the number of graduate credits used to satisfy requirements for the undergraduate degree. For example, completing both an undergraduate degree program requiring 120 credits and a graduate degree program requiring 30 credits could be accomplished with a combined total of 138 credits. An example would be a Biology undergraduate interested in a Master's program in Biology (M.S.).
The Early/Dual Admission Program permits qualified undergraduate students to enter into a graduate program without first earning the Bachelor's degree with the intent of earning both Bachelor's and Master's degrees upon successful completion of the combined programs. Examples would include but not be limited to the Business Administration (M.B.A.) and Instructional Technology (M.S.) programs.

Concepts in Biology 1 (BIOLOGY.114) and Concepts in Biology 2 (BIOLOGY.115) should be taken during the freshman year; Microbiology (BIOLOGY.242) and Cell Biology (BIOLOGY.271) should be taken during the sophomore year. Students must complete ≥90 credit hours and maintain a ≥3.0 GPA in order to enroll in graduate courses in their 4th year. In addition to the specified courses listed on this page, the student selects 21 credit hours of approved graduate elective courses in biology and marine science.
Chemistry and mathematics courses should be scheduled as early as possible in the program of study. Basic Statistics (PSYCH.160) may be substituted for Introduction to Statistics (MATH 141).

Biology Core Requirements (29 credits):

BIOLOGY.114 Concepts in Biology I
BIOLOGY.115 Concepts in Biology II
BIOLOGY.242 Microbiology
BIOLOGY.271 Cell Biology
BIOLOGY.332 Genetics
BIOLOGY.351 Ecology
BIOLOGY.593 Master of Science Thesis

Physiology Requirement (4 credits)

Required lab course:
BIOLOGY.479 Integrated Physiology Laboratory
With one of the following lecture courses:
BIOLOGY.472 Animal Cell Physiology
BIOLOGY.474 Human Physiology
BIOLOGY.477 Plant Physiology
BIOLOGY.478 Microbial Physiology
BIOLOGY.480 Comparative Animal Physiology

Physics Requirement (8 credits – Select one pair)

PHYSICS.201 Introductory Physics 1 and PHYSICS.202 Introductory Physics 2
OR
PHYSICS.211 General Physics I and PHYSICS.212 General Physics II

Chemistry Requirement (16/20 credits)

CHEM.115 Chemistry for the Sciences I
CHEM.116 Chemistry for the Sciences II
CHEM.341 Biochemistry

CHEM.230 Fund of Organic Chemistry
OR
CHEM.231 Organic Chemistry I AND
CHEM.232 Organic Chemistry II

Mathematics Requirement (9 credits)

MATH.141 Introduction to Statistics
MATH.546 Biostatistics
MATH.123 Essentials of Calculus or MATH.125 Calculus I

Biology/Marine Science Elective Requirement (21 credits)

(21 cr hrs of biology and/or marine science graduate electives selected from the lists below. A total of 21 credits, which includes BIOLOGY.593 Master of Science Thesis and MATH.546 Biostatistics, must be taken at the 500 level.)

BIOLOGY.455 Environmental Microbiology
BIOLOGY.457 Entomology
BIOLOGY.472 Animal Cell Physiology
BIOLOGY.474 Human Physiology
BIOLOGY.477 Plant Physiology
BIOLOGY.520 Global Change Biology
BIOLOGY.521 Ecosystem Management
BIOLOGY.530 Evolution
BIOLOGY.531 Developmental Biology
BIOLOGY.532 Microbial & Molecular Genetics
BIOLOGY.535 Bioinformatics
BIOLOGY.542 Virology
BIOLOGY.551 Conservation Biology
BIOLOGY.552 Limnology
BIOLOGY.559 Ornithology
BIOLOGY.560 Population Biology
BIOLOGY.561 Animal Behavior
BIOLOGY.570 Medical Parasitology
BIOLOGY.571 Endocrinology
BIOLOGY.573 Cancer Biology
BIOLOGY.576 Neurophysiology
BIOLOGY.580 Comparative Animal Physiology
BIOLOGY.589 Current Topics in Biology
HLTHSCI.545 Pharmacology
MARSCI.431 Ecology Marin Plankton
MARSCI.432 Marine Evolutionary Ecology
MARSCI.441 Biology of Molluscs
MARSCI.464 Biological Oceanography
MARSCI.470 Research Diver Methods
MARSCI.471 SEM: Marine Applications
MARSCI.490 Marine Aquaculture
MARSCI.491 Coral Reef Ecology
MARSCI.492 Marine Mammals
MARSCI.500 Problems in Marine Science
MARSCI.533 Adv. Methods in Coastal Ecol.
MARSCI.540 Environ. Science Education
MARSCI.551 Coast Environ. Oceanography
MARSCI.570 Research Cruise
MARSCI.593 Behavioral Ecology

General Education Requirements

Goal 1	7 points: 3 departments	Goal 6	5 points: 2 departments
Goal 2	2 points: 1 departments	Goal 7	5 points: 2 departments
Goal 3	5 points: 2 departments	Goal 8	2 points: 1 departments
Goal 4	5 points: 2 departments	Goal 9	2 points: 1 departments
Goal 5	5 points: 2 departments	Goal 10	2 points: 1 departments

***Sum total of all courses must add up to 138 Credit Hours or more.**