

BIOLOGY, B.S. - OPTOMETRY OPTION

This affiliated Optometry degree program is for students interested in pursuing a medical profession focusing on eye/vision health. Students in this program complete the first three years of Pre-Optometry study at Millersville by following a broad, interdisciplinary approach to general biology studies. Those who meet the admissions standards of the Pennsylvania College of Optometry (PCO) are eligible to apply for admission. After completion of the first year of study at PCO, the successful Millersville student is awarded the BS in Biology. After completing the PCO four-year program of study students then are awarded the Doctor of Optometry degree from PCO.

Major in Biology, BS

Code	Title	Hours
CORE COURSES		16
Foundations of Biology - See Appendix 1		
BIOL 211	Concepts of Zoology	
BIOL 362	Cell and Developmental Biology	
BIOL 364	Foundations of Genetics & Molecular Biology	
Option in Pre-Optometry - See separate block		
Total Hours		16

Appendix 1. Foundations of Biology

Code	Title	Hours
Foundations of Biology C- or Higher		4
BIOL 101	Foundations of Biology	

Concentration in Pre-Optometry

Code	Title	Hours
REQUIRED PRE-OPTOMETRY COURSES		9
BIOL 375	Biometry	
BIOL 361	Microbiology	
BIOL 472	Seminar In Biology	
OPTOMETRY CLINICAL EDUCATION		23
Upon completion of one year at Pennsylvania College of Optometry, 23 credits will be credited toward the B.S. degree in Biology with the Optometry option.		
Total Hours		32

Req Related for Biology, BS

Code	Title	Hours
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For Biology Majors the G2 block of the Liberal Arts Core will be fulfilled by your required related coursework.

CHEMISTRY

A C- or higher in CHEM 111 and 112 is a pre-requisite for CHEM 235. A C- or higher in CHEM 231 is a pre-requisite for CHEM 232. Students interested in graduate or professional school should take CHEM 231 and 232.

CHEM 111	Introductory Chemistry 1	4
CHEM 112	Introductory Chemistry 2	4
Organic Chemistry I (C- minimum) and II		8
CHEM 231	Organic Chemistry 1	

CHEM 232	Organic Chemistry 2	
CHEM 326	Biochemistry 1	4
MATHEMATICS AND COMPUTER SCIENCE		
Calculus I or Honors Calculus - Choose 1 of the following:		4-5
MATH 161	Calculus 1	
MATH 163H	Honors Calculus 1	
Addl Mathematics or Computer Science Electives - Choose 1 class from:		
Any CSCI 140-599 course(s)		
Any MATH 160-599 course(s)		
Note: This requirement may not be satisfied with CSCI 101, CSCI 111, or CSCI 121.		
PHYSICS		
undefined - Choose 1 of the following options 1-2:		8-10
Option 1. Physics with Algebra		
PHYS 131	Physics 1 with Algebra	
PHYS 132	Physics 2 with Algebra	
Option 2. Physics with Calculus		
PHYS 231	Physics 1 with Calculus	
PHYS 232	Physics 2 with Calculus	
Total Hours		32-35