## 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 (C- or higher required) | 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 |  |

## Total Hours

## Appendix 1. Foundations of Biology

| Code $\quad$ Title | Hours |
| :--- | :---: | ---: |
| Foundations of Biology C- or Higher | 4 |
| BIOL 101 $\quad$ 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 | 23 |
| OPTOMETRY CLINICAL EDUCATION |  |  |
| 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

## Req Related for Biology, BS

## Code

Title
Hours
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 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 |

