

BIOMEDICAL SCIENCES (PRE-PHYSICAL THERAPY)

Bachelor of Science (BS)

This degree map is based on the 2023-24 Academic Catalog and is subject to change. Students should meet with their academic advisor each semester and use Degree Works to monitor their individual progress toward degree completion. The time it takes to earn a degree will vary based on several factors including summer/winter enrollment, dual enrollment and number of courses successfully completed each semester. We recommend taking a minimum of 15 credits each fall and spring semester.

Sample 4-Year Plan

First Year			
Fall Courses	Credits	Spring Courses	Credits
BIOL 110 Principles of Biology 1	4	BIOL 180 Anatomy & Physiology 1	4
Math 118 College Algebra	3	CHEM 121 General Chemistry 1	4
FYS	3	STAT 141 Introduction to Statistics	3
Gen Ed	3	Gen Ed	3
Gen Ed	3		
Semester Total	16	Semester Total	14

Second Year			
Fall Courses	Credits	Spring Courses	Credits
BIOL 181 Anatomy & Physiology 2	4	BIOL 211 Cell Biology	4
CHEM 122 General Chemistry 2	4	BIOL 108 Medical Terminology (Biology)	3
PSYC 100 Introduction to Psychology	3	PSYC 212 Life Span Psychology	3
Gen Ed	3	Gen Ed	3
		Free Elective	3
Semester Total	14	Semester Total	16

Third Year			
Fall Courses	Credits	Spring Courses	Credits
BIOL 340 Microbiology	4	BIOL 474 Human Physiology or any BIOL 4XX Physiology course	3
BIOL 208 Human Genetics	3	BIOL 310 Biomedical Sciences Seminar	1
Free Elective	3	Biomedical Sciences Elective	3
Biomedical Sciences Elective	3	Biomedical Sciences Elective	3
Gen Ed	3	Free Elective	3
		Free Elective	3
Semester Total	16	Semester Total	16

Fourth Year			
Fall Courses	Credits	Spring Courses	Credits
PHYS 208 Intro to Physics 1	4	PHYS 209 Intro to Physics 2	4
Biomedical Sciences Elective	3	Biomedical Sciences Elective	3
Biomedical Sciences Elective	3	Biomedical Sciences Elective	3
Gen Ed	3	Biomedical Sciences Elective	2
Gen Ed	3		
Semester Total	16	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 (30 credits)

- ___ BIOL 110 Principles of Biology 1 (4)
- ___ BIOL 108 Medical Terminology (3)
- ___ BIOL 180 Anatomy and Physiology 1 (4)
- ___ BIOL 181 Anatomy and Physiology 2 (4)
- ___ BIOL 208 Human Genetics (3)
- ___ BIOL 211 Cell Biology (4)
- ___ BIOL 310 Biomedical Sci Seminar (1)
- ___ BIOL 340 Microbiology (4)
- ___ BIOL 474* Human Physiology (3)

*can substitute: BIOL 473; 475; BIOL 476; BIOL 477; OR BIOL 479

Related Core Requirements (28 credits)

- ___ CHEM 121 General Chemistry 1 (4)
- ___ CHEM 122 General Chemistry 2 (4)
- ___ PHYS 208 Intro to Physics 1 (4)
- ___ PHYS 209 Intro to Physics 2 (4)
- ___ MATH 118 College Algebra (3) OR MATH 120 Math for the Health Sciences (3) OR MATH 140 Pre-Calculus (3) OR MATH 150 Essentials of Calculus (3)
- ___ STAT 141 Introduction to Statistics (3)
- ___ PSYC 100 Introduction to Psychology (3)
- ___ PSYC 212 Lifespan Development (3)

Electives (17 credits)

At least 15 credits must be 300-level or above; BIOL 111 is only 100-level course allowed. If BIOL 474, 475, 476, 477, OR 479 are used to fulfill the core they cannot be used to fulfill an elective.

- ___ BIOL 111 Principles of Biology 2 (4)
- ___ BIOL 206 Botany (3)
- ___ BIOL 207 Zoology (3)
- ___ BIOL 209 Genetics (3)
- ___ BIOL 210 Genetics Laboratory (1)
- ___ BIOL 213 Intro to Parasitology (3)
- ___ BIOL 215 Investigation in Genetics and Molecular Biology (2)
- ___ BIOL 301 Ecology (4)
- ___ BIOL 314 Comparative Bio of Inverts (3)
- ___ BIOL 315 Comparative Vert. Anat. (3)
- ___ BIOL 316 Vertebrate Histology (3)
- ___ BIOL 337 Basic Virology (3)
- ___ BIOL 354 Medical Microbiology (3)
- ___ BIOL 350 Plant Pathology (3)
- ___ BIOL 400 Dendrology (3)
- ___ BIOL 401 Entomology (3)
- ___ BIOL 430 Evolution (3)
- ___ BIOL 431 Mycology (3)
- ___ BIOL 432 Ornithology (3)
- ___ BIOL 433 Ichthyology (3)
- ___ BIOL 434 Herpetology (3)
- ___ BIOL 435 Conservation Genetics (3)
- ___ BIOL 442 Advanced Virology (3)
- ___ BIOL 443 Molecular Biology (3)
- ___ BIOL 444 Molecular Biology lab (1)
- ___ BIOL 445 Pharmacology (3)
- ___ BIOL 446 Immunology (3)
- ___ BIOL 447 Immunology lab (1)
- ___ BIOL448 Advanced Parasitology (3)
- ___ BIOL 450 Developmental Biology (3)
- ___ BIOL 451 Conservation Biology (3)
- ___ BIOL 452 Freshwater Ecology (3)
- ___ BIOL 453 Freshwater Entomology (3)
- ___ BIOL 454 Algae of Freshwater Eco (3)
- ___ BIOL 455 Community Ecology (3)
- ___ BIOL 456 Enviro Toxicology (3)
- ___ BIOL 461 Animal Behavior (3)
- ___ BIOL 462 Cancer Biology (3)
- ___ BIOL 465 Medical Genomics (3)
- ___ BIOL 466 Bioinformatics (3)
- ___ BIOL 470 Tissue Culture (1)
- ___ BIOL 473 Environmental Physiology (3)
- ___ BIOL 474 Human Physiology (3)

Electives cont. (17 credits)

At least 15 credits must be 300-level or above; BIOL 111 is only 100-level course allowed. If BIOL 474, 475, 476, 477, OR 479 are used to fulfill the core they cannot be used to fulfill an elective.

- ___ BIOL 480 Integrated Physiology lab (1)
- ___ BIOL 485 Senior Seminar (1)
- ___ BIOL 486 Analysis & Comm of Bio Data (3)
- ___ BIOL 489 Special Topics in Biology (3)
- ___ BIOL 493 Independent Research (1-6 crs) (3)
- ___ BIOL 498 Internship in Biology (3-6 crs) (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)
 - STAT 141 Introduction to Statistics (3)
- Interconnections (9 credits)
- Citizenship & Responsibility (6 credits from at least two goals)
- Natural World & Technologies (9 credits)
 - BIOL110 Principles of Biology 1 (4)
 - BIOL 180 Anatomy and Physiology 1 (4)
 - CHEM 121 General Chemistry 1 (4)
- Creativity & Expression (6 credits)

Degree Requirements

All students must obtain a minimum of 120 credits, 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.

Campus Locations

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|-------------------|--|
| Bloomsburg | <input type="checkbox"/> Online; <input checked="" type="checkbox"/> In-person; <input type="checkbox"/> Blended |
| Lock Haven | <input type="checkbox"/> Online; <input checked="" type="checkbox"/> In-person; <input type="checkbox"/> Blended |
| Mansfield | <input type="checkbox"/> Online; <input checked="" type="checkbox"/> In-person; <input type="checkbox"/> Blended |
| Clearfield | <input type="checkbox"/> Online; <input type="checkbox"/> In-person; <input type="checkbox"/> Blended |

Revised April, 2023