

BIOLOGY, B.S. - MEDICAL TECHNOLOGY OPTION

In this program, students study for three years at Millersville and then apply for admission to an accredited regional teaching hospital for one year of clinical training in medical technology. Then students are awarded a BS in Biology, Medical Technology Option. After completing the required work, students may sit for a national examination which, if successfully completed, confers board certification in medical technology.

Affiliated Faculty:

Beitz, Edwin; Program Director, Medical Laboratory Science Program, WellSpan/York Hospital
MT(HHS), 1988; B.S., Lycoming College, 1990; M.H.A., St. Francis University, 2001; MLS(ASCP), 2004

Hurt, Stanley D.; Medical Advisor, Medical Laboratory Science Program, WellSpan/York Hospital
B.A., University of Maryland, 1996; M.D., University of Pittsburgh School of Medicine, 2002; AP/CP, 2007

Kentzel, Ethan; Program Director, Medical Laboratory Science Program, Reading Hospital School of Health Sciences
MLS ASCP, B.S., Slippery Rock University, 2014, M.S., Drexel University, 2022

Miele, Mary Beth; Program Director, Medical Laboratory Science Program, Penn State Health
PhD, MLS(ASCP)CM, RM(NRCM)

Soost, Sherry; Program Director, Medical Laboratory Science Program, Pennsylvania College of Health Sciences
MSHS, MT(ASCP), CHO(NRCC)

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	
Option in Medical Technology - 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 Medical Technology

Code	Title	Hours
REQUIRED MEDICAL TECH COURSES		8
BIOL 257	Introduction to Allied Health Professions	
BIOL 454	Immunology	
BIOL 361	Microbiology	
ELECTIVES - Choose 8 hours from:		8
BIOL 254	Human Anatomy & Physiology I	

BIOL 255	Human Anatomy & Physiology II	
BIOL 318	Comparative Vertebrate Anatomy	
BIOL 352	Nutritional Science	
BIOL 356	Functional Human Anatomy	
BIOL 363	Medical Microbiology	
BIOL 375	Biometry	
BIOL 435	Animal Physiology	
BIOL 437	Endocrinology	
BIOL 438	Neurobiology	
BIOL 462	Molecular Biology	
BIOL 463	Virology	
BIOL 465	Developmental Biology	
BIOL 466	Molecular and Cell Techniques	
BIOL 356 or 254 255; and BIOL 375 are strongly recommended.		
CLINICAL LAB SCIENCE EDUCATION		30
Upon completion of one year of Clinical Laboratory Science education at an affiliated hospital site, 30 credit hours will be credited here.		
Total Hours		46

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 - Choose 1 of the following options 1-2:		4-8
Option 1. Organic Chemistry I and II		
CHEM 231	Organic Chemistry 1	
CHEM 232	Organic Chemistry 2	
Option 2. Short Course in Organic Chemistry		
CHEM 235	Organic Chemistry	
CHEM 326	Biochemistry 1	4

MATHEMATICS FOR MEDICAL TECH OR NUCLEAR MED		
Some clinical sites require a course in statistics such as MATH 130, MATH 235, or BIOL 375. Students interested in graduate or professional school should take MATH 161.		
Precalculus, Calculus I or Honors Calculus - Choose 1 of the following:		4-5
MATH 160	Precalculus	
MATH 161	Calculus 1	
MATH 163H	Honors Calculus 1	

PHYSICS		
Students interested in graduate or professional school should also take PHYS 132.		
PHYS 131	Physics 1 with Algebra	4
Total Hours		24-29