



Biology (Pre-Professional Medical Programs) B.S.

The Biology (Pre-Professional Medical Programs) B.S. This track is your steppingstone to medical, dental, or veterinary school. It provides a strong foundation in the biological sciences, ensuring you're well-prepared for the rigorous academic demands of professional healthcare programs. Our Molloy alumni have gone on to secure careers in all sectors of biological sciences and healthcare. Additionally, they have been accepted into prestigious Medical, Dental, and Veterinary programs.

Essential Skills:

Inquiry and analysis, Critical and creative thinking, Written and oral communication, Quantitative literacy, Information literacy, Teamwork and problem solving.

Honor Society: The Biology, Chemistry and Environmental Science Department at Molloy University offers eligible students membership in [Chi Beta Phi](#) Scientific Honor Society affiliated with The American Association for the Advancement of Science (AAAS) since 1935 and includes 17 chapters in nine states.

Employment Information:

Representative Job Titles Related to this Major Include:

Biological Technician, Biochemist, Health communication specialist, Biology teacher, pharmaceutical sales, agriculture and food scientist, microbiologist, environmental scientist, wildlife biologist, Science writer, conservation scientist, medical equipment sales, graduate programs in biology, physician assistant, occupational or physical therapy, and admission to medical, dental, or veterinary school.

Representative Employers to the Major Include:

Medical industry; hospitals, clinics, clinical labs, and biomedical research labs. Local, state, and national governments. Government agencies. Medical Sales. Entertainment and education. NGOs, non-profit, and for-profit organizations.

Further Resources:

See the following resources: [National Association of Colleges & Employers: Career Readiness Defined](#), [AAC&U](#), [What Can I Do with This Major?](#), and the [Molloy Undergraduate Catalog](#).

***Notice:**

This 8-semester plan is not a contract, either expressed or implied, between the University and the student, but represents a flexible program of the current curriculum which may be altered periodically to carry out the academic objectives of the University. The University specifically reserves the right to change, delete or add to any 8-semester plan at any time within the student's period of study at the University.

FIRST YEAR			
Fall Courses		Spring Courses	
BIO 1260: General Biology I	4	BIO 1270: General Biology II	4
CHE 1320: Inorganic Chemistry I	4	CHE 1330: Inorganic Chemistry II	5
GEN ED	6	*MAT 1180: Pre-Calculus	3
FST: The College Experience	1	GEN ED	3
Total Credits	15	Total Credits	15
SECOND YEAR			
Fall Courses		Spring Courses	
BIO 2220: Intermediate Physiology	3	BIO 2420: Genetics	4
CHE 2000 Organic Chemistry I	4	BIO 2450: Microbiology	4
MAT 2210: Calculus I	4	CHE 2010: Organic Chemistry II	5
GEN ED	3	BIO 4600: Field Experience in Biology	3
Total Credits	14	Total Credits	16
THIRD YEAR			
Fall Courses		Spring Courses	
BIO 2570: Scientific Research Techniques	2	BIO 3000 ELECTIVE**	3
BIO 3000 Elective**	4	BIO 4800: Research in Biology	3
PHY 2700: General Physics I	4	PHY 2710: General Physics II	4
GEN ED	6	SOC 1010: Intro to Sociology	3
Total Credits	15	Total Credits	14
FOURTH YEAR			
Fall Courses		Spring Courses	
BIO 4910: Research Thesis	2	BIO 3000 ELECTIVE**	3
MAT 1150A: Elementary Statistics	3	BIO 4900: Biology Seminar	2
PSY 1110: General Psychology	3	CHE 3200: Biochemistry	4
GEN ED	6	CORE	4
PED	1	GEN ED	3
Total Credits	15	Total Credits	16
Total Credits to Graduate			120

* Students must take MAT 1180 (Pre-Calculus) in the spring of their freshmen year if they did not take it in high school. It is a prerequisite for MAT 2210 (Calculus I) which students take in the fall of their sophomore year.

** Degree requires a minimum of 9 BIO 3000 elective credits.

BIO ELECTIVES OFFERED

BIO 2100: History of Biology
 BIO 2320: Biology of Forensics
 BIO 2400: Developmental Biology
 BIO 2470: Nutrition for Health
 BIO 3120: Biology of Aging
 BIO 3200: Genomics and Personalized Medicine
 BIO 3350: Histology and Micro Techniques
 BIO 3400: Comparative Anatomy
 BIO 3410: Embryology
 BIO 3420: Applications in Bioinformatics

BIO 3430: Cell Biology
 BIO 3485: Advanced Human Anatomy
 BIO 3500: Advanced Microbiology
 BIO 3520: Evolution
 BIO 3540: Human Origins
 BIO 3550: Signal Transduction
 BIO 3565: Hematology and Immunology
 BIO 3570: Neuropharmacology of the Brain
 BIO 3580: Endocrinology
 BIO 3590: Biology of Cancer
 BIO 3620: Forensic Analysis of DNA