

BIOLOGY (BIOL)
MAJOR REQUIREMENTS & COURSE SEQUENCE

COURSE SEQUENCE

FIRST YEAR - DECLARE MAJOR

Fall Semester			
Course #	Course name	Cr	YR
MATH 141 or 151	Calculus I	4	
BIOL 151	Biology I + Lab	4	
CHEM 151	Chemistry I + Lab	4	
Minimum Credit Total 12			

Spring Semester			
Course #	Course name	Cr	YR
*MATH 142 or 152	Calculus II	(4)	
BIOL 152	Biology II + Lab	4	
CHEM 152	Chemistry II + Lab	4	
Minimum Credit Total 8 / 12			

SECOND YEAR - DECLARE MAJOR (if needed)

Fall Semester			
Course #	Course name	Cr	YR
CHEM 211	Organic Chemistry I + Lab	4	
BIOL XXX	Biology MAJOR Course AND / OR Biology ELECTIVE Course	3/4	
Credit Total 7 / 8			

Spring Semester			
Course #	Course name	Cr	YR
CHEM 212	Organic Chemistry II + Lab	4	
BIOL XXX	Biology MAJOR Course AND / OR Biology ELECTIVE Course	3/4	
Credit Total 7 / 8			

THIRD YEAR

Fall Semester			
Course #	Course name	Cr	YR
PHYS 131 or 151	Physics I + Lab	4	
BIOL XXX	Biology MAJOR Course AND / OR Biology ELECTIVE Course	3-8	
Credit Total 7 / 8 / 10 / 11 / 12			

Spring Semester			
Course #	Course name	Cr	YR
PHYS 131 or 151	Physics II + Lab	4	
BIOL XXX	Biology MAJOR Course AND / OR Biology ELECTIVE Course	3-8	
Credit Total 7 / 8 / 10 / 11 / 12			

FOURTH YEAR

Fall Semester			
Course #	Course name	Cr	YR
BIOL XXX	Biology MAJOR Course AND / OR Biology ELECTIVE Course	3-8	
Credit Total 3 / 6 / 7 / 8			

Spring Semester			
Course #	Course name	Cr	YR
BIOL XXX	Biology MAJOR Course AND / OR Biology ELECTIVE Course	3-8	
Credit Total 3 / 6 / 7 / 8			

GRADUATION REQUIREMENTS	TOTAL CREDITS
Biology Major	71
BIOLOGY MAJOR CREDIT TOTAL	71
Holy Cross College Core Curriculum	49
MINIMUM CREDITS REQUIRED FOR GRADUATION	120

*MATH 142 or 152 – Recommended for students intending to pursue a field in Healthcare or Engineering/Computer Science.

MAJOR REQUIREMENTS**BIOLOGY (BIOL)**

The following worksheet lists courses needed to fulfill requirements to graduate with a **Biology** major.

Prerequisite courses must be met with a grade C or higher. In addition, students must complete the Holy Cross College Core Curriculum Requirements for graduation.

Course	Credits	Semesters Offered
*Courses can be applied to both- major and core requirements- number of credits are counted only once.		
Biology Major Courses		
* MATH 141 Elements of Calculus I – Life Science, Biology, Health field intended students	4	Fall
* MATH 151 Calculus I for Science - Engineering /Computer Science intended students		
MATH 142 Elements of Calculus II - Health field intended students	4	Spring
MATH 152 Calculus II for Science - Engineering /Computer Science intended students		
* BIOL 151 Principles of Biology I + Lab	4	Fall
BIOL 152 Principles of Biology II + Lab	4	Spring
BIOL 215 Biostatistics Prerequisite: Biol 152 and Math 141	4	Fall
BIOL 256 Comparative Physiology + Lab Prerequisite: Biol 152	4	Spring
BIOL 309 Genetics + Lab Prerequisite: Biol 152	4	Spring
BIOL 315 Ecology + Lab Prerequisite: Biol 152	4	Fall
BIOL 320 Cell Biology Prerequisite: Biol 152	3	Spring
* CHEM 151 Principles of Chemistry I + Lab Prerequisite: Biol 152	4	Fall
CHEM 152 Principles of Chemistry II + Lab	4	Spring
CHEM 211 Organic Chemistry I + Lab Prerequisite: Chem 152	4	Fall
CHEM 212 Organic Chemistry II + Lab	4	Spring
PHYS 131 Physics for Biology Majors I + Lab Prerequisite: Math 113+ level	4	Fall
PHYS 151 Physics for Science Majors I + Lab Prerequisite: Math 151		
PHYS 132 Physics for Biology Majors II + Lab PHYS 152 Physics for Science Majors II + Lab	4	Spring
Biology Elective Courses Choose minimum 16 credit hours of electives. Must include two 100-200 level and two 300-400 level courses. Other biology elective courses could be completed with advanced approval needed through the NICE Program, or at Notre Dame if a student has a 3.0 GPA or higher.		
BIOL 212 Microbiology + Lab Prerequisite: Biol 152	4	Fall
BIOL 230 Public Health Prerequisite: Biol 100+ level course	3	Spring
BIOL 235 Epidemiology Prerequisite: Biol 100+ level course	3	Spring
BIOL 255 Human Anatomy + Lab Prerequisite: Biol 152	4	Fall
BIOL 308 Molecular Biology Prerequisite: Biol 152	3	Fall
BIOL 311 Plant Physiology + Lab Prerequisite: Biol 152	4	Spring
BIOL 313 Medical Microbiology Prerequisite: Biol 212	3	Spring
BIOL 330 Biochemistry Prerequisite: Biol 152 and Chem 212	3	Spring
BIOL 409 Biology Research Approval of Biology program director	3	Fall/spring
BIOL 460 Molecular Biology Methods Approval of Biology program director	3	Fall/spring