

## BIOLOGY MAJOR – Pre Medicine & Molecular Biology (BIOLPM.BS)

<u>Required Courses</u>	<u>Hrs.</u>	<u>Prereq.</u>	<u>Rec.Yr.</u>	
BIOL 115	Intro to Biology Profession	1	Coreq BIOL 163 or BIOL 164	Fr
BIOL 163	Principles of Molecular Biology	4		Fr
BIOL 164	Principles of Organismal Biology	4	C- or better in BIOL 163	Fr
BIOL 215	Biostatistics	4	100 level math placement or completion of DEVL 070; C- or better in BIOL 164	Soph
BIOL 250	Genetics	4	C- or better in BIOL 163,164 for Bio maj; C- or better in BIOL 163 for Biochem maj; CHEM 221, 223L highly recommended	Soph
BIOL 252	Physiology	4	C- or better in BIOL 163, 164	Soph
BIOL 254	Research Methods in Biology	4	C- or better in BIOL 163, 164, 215, 252 for Bio Maj; C- or better in MATH 115, ENVS 130 for Env Sci	Soph
BIOL 310	Ecology	4	BIOL 254, CHEM 161, 163L	Jr/Sr
BIOL 3**	Biology elective,	4		Soph-Sr
<b><u>One Biodiversity course selected from:</u></b>				
BIOL 315	Botany	4	BIOL 215, 254	Jr
BIOL 316	Vertebrate Zoology	4	BIOL 254	Jr
BIOL 317	Invertebrate Zoology	4	BIOL 163, 164	Jr
BIOL 322	Mammalogy	4	BIOL 215, 254	Jr
<b><u>One Integrative course selected from:</u></b>				
BIOL 305	Toxicology	3	BIOL 151, 152	Jr
BIOL 320	Animal Behavior	4	BIOL 254	Jr
BIOL 344	Evolution	3	BIOL 250	Jr
BIOL 360	Principles of Microbiology	4	BIOL 250; CHEM 221, 223L	Jr
<b><u>One Molecular course selected from:</u></b>				
BIOL 325	Molecular Embryology	3	BIOL 250	Jr/Sr
BIOL 354	Molecular Cell Biology	4	BIOL 250, CHEM 221, 223L	Jr/Sr
BIOL 374	Immunology	3	BIOL/CHEBI/CHEM/EXSC major; CHEM 221, 223L	Jr
BIOL 395	Biology Internship	1	BIOL 254	Jr
	<u>OR</u>			
BIOL 398/498	Biology Research	1-2	BIOL 254; CHEM 221, 223L	Jr/Sr
^BIOL 497	Seminar	2	Sr Stand or P/Faculty	Sr
CHEM 161	Accel Gen Chem for Sci Majors	3	HS Chemistry and placement or CHEM 105, 107L; Coreq CHE 163L	Fr/Soph
CHEM 163L	Accel Gen Chem for Sci Majors Lab	1	HS Chemistry and placement or CHEM 105, 107L; Coreq CHEM 161	Fr/Soph
	<u>OR</u>			
CHEM 131	General Chemistry Sci Maj I	3	Coreq CHEM 133L	Fr/Soph
<i>*Prerequisite: Must have passed at least one year of high school chemistry or one semester of college chemistry equivalent to CHEM 105/107L or above AND at least one of the following: MATH ACT score of 20, MATH SAT score of 500, grade of C or better in one of the classes: MATH 103, 110, 112, 115, 130, 161.</i>				
	<u>AND</u>			
CHEM 133L	General Chemistry Sci Maj I Lab	1	Coreq CHEM 131	
CHEM 132	General Chemistry Sci Maj II	3	C- or better in CHEM 131, 133L; Coreq CHEM 134L	Fr/Soph
CHEM 134L	General Chemistry Sci Maj II Lab	1	Coreq CHEM 132	
CHEM 221	Organic Chemistry I	3	C- or better in CHEM 161,163L or 131, 133L,132, 134L;Coreq CHEM 223L	Soph
CHEM 223L	Organic Chemistry Lab	1	C- or better in CHEM 161,163L or 131, 133L132, 134L; Coreq CHEM 221	
CHEM 222	Organic Chemistry II	3	C- or better in CHEM 221, 223L; Coreq CHEM 224L	Soph
CHEM 224L	Organic Chemistry II Lab	1	C- or better in CHEM 221, 223L; Coreq CHEM 222	Soph
<b><u>Two of the following lab courses:</u></b>				
BIOL 354	Molecular Cell Biology	4	BIOL 250, CHEM 222, 224L	Jr/Sr
BIOL 360	Principles of Microbiology	4	BIOL 250; CHEM 221, 223L	Jr
BIOL 388/488	Approved special topics w/lab	3-4		
CHEM 350/351L	Biochemistry I & Lab	4	C- or better CHEM 222, 224L or BIOL 354	Jr/Sr
CHEM 352/353L	Biochemistry II & Lab	4	C- or better CHEM 350, 351L; Coreq CHEM-353L	Jr/Sr
CHEM 388/488	Approved special topics w/lab	3-4		
PHYS 151/161	General Physics/Gen Phys. w/Calc	4		
PHYS 152/162	General Physics II/Gen Phys. w/Calc.	4		
<b><u>One of the following courses:</u></b>				
BIOL 325	Molecular Embryology	3	BIOL 215, 254	Jr
BIOL 335	Germes, Outbreaks, Pandem. & People	3		
BIOL 374	Immunology	3	BIOL/BIOCHEM/CHEM/EXSC maj; CHEM 221, 223L	Jr/Sr
BIOL 388/488	Approved special topics non-lab	3		
CHEM 388/488	Approved special topics non-lab	3		Jr/Sr
EXSC 240	Fund. Of Human Nutrition	3		
EXSC 303	Org. & Adm. Health Professions	3		
HSCI 210	Intro. To Epidemiology	3		

^Satisfies advanced writing requirement

69-76 total hours

NAME: \_\_\_\_\_

**B.S. Degree: Biology Major (for students entering in Fall 2024/Spring 2025)  
Pre-Med & Molecular Biology Concentration**

In the "WHAT" column, enter the specific course number when applicable--e.g. HIST 121. In the "WHEN" column, enter the term and year in which the requirement is satisfied--e.g., sp '20.

Liberal Arts Core	
WHAT	WHEN
_____	ENGL 101* w/ C (2.0) [3 hrs]
_____	ENGL 110 w/ C (2.0)* [3 hrs]
_____	COMM 211 w/ C (2.0) [3 hrs]
_____	Dept senior seminar/writing course
_____	Met by: _____ BIOL 497 [2 hrs]
_____	FYEX 101 [3 hrs]
_____	FYEX 102 [1 hr]
_____	FYEX 103/104/105/106/107 [1 hr]
_____	FYEX 103/104/105/106/107 [1 hr]
_____	FYEX 401 [1 hr]
_____	Foundational Scientific Inquiry [3-4 hrs]
_____	Foundational Quantitative Analysis [3-4 hrs]

*No more than two lens courses may come from same departmental prefix and one lens must be taken at 300 level or above.*

_____	_____	Ethical/Spiritual Explor Lens (ETSP) [3 hrs]
_____	_____	Aesthetic Expression Lens (AEXP) [3 hrs]
_____	_____	Per & Soc Well Being Lens (PSWB) [3 hrs]
_____	_____	Cultural Perspectives Lens (CEXP) [3 hrs]
_____	_____	Experimental Inquiry Lens (EXIN) [3 hrs]

37 – 39 Total semester hours

\_\_\_\_\_ 120 semester hours required for graduation

\*Enter NA (not applicable) if waived upon admission

➤Except in specifically approved majors, a maximum of 52 hours in an academic discipline may count toward graduation. Three hours over the limit may count to accommodate an internship in the discipline.

Biology Major – Pre-Med & Molecular Biology	
WHAT	WHEN
_____	BIOL 115 [1 hr]
_____	BIOL 163 [4 hrs]
_____	BIOL 164 [4 hrs]
_____	BIOL 215 [4 hrs]
_____	BIOL 250 [4 hrs]
_____	BIOL 252 [4 hrs]
_____	BIOL 254 [4 hrs]
_____	BIOL 310 [4 hrs]
_____	BIOL elective, 300 level or above [4 hrs]
_____	BIOL 325/354/374 [3-4 hrs]
_____	BIOL 315/316/317/322 [4 hrs]
_____	BIOL 305/320/344/360 [3-4 hrs]
_____	BIOL 395/398/498 w/C (2.0) [1-2 hrs]
_____	BIOL 497 [2 hrs]

\_\_\_\_\_ CHEM 161 [3 hrs]  
\_\_\_\_\_ CHEM 163L [1 hr]

OR

\_\_\_\_\_ CHEM 131 [3 hrs]  
\_\_\_\_\_ CHEM 133L [1 hr]  
\_\_\_\_\_ CHEM 132 [3 hrs]  
\_\_\_\_\_ CHEM 134L [1 hr]

\_\_\_\_\_ CHEM 221 [3 hrs]  
\_\_\_\_\_ CHEM 223L [1 hr]  
\_\_\_\_\_ CHEM 222 [3 hrs]  
\_\_\_\_\_ CHEM 224L [1 hr]

\_\_\_\_\_ BIOL 354/360//388 w/lab/488 w/lab/  
CHEM 350+351L/CHEM 352+353L/388 w/lab /488 w/lab/  
PHYS 151/ 161/152/162 [4hrs]

\_\_\_\_\_ BIOL 354/360//388 w/lab/488 w/lab/  
CHEM 350+351L/CHEM 352+353L/388 w/lab /488 w/lab/  
PHYS 151/ 161/152/162 [4hrs]

\_\_\_\_\_ BIOL 305/325/335/54//374/388/488/  
CHEM 388/488/EXSC 240/303/HSCI 210 [3 hrs]

\_\_\_\_\_ 69 – 76 semester hours

➤Only six hours of any minor may overlap with the required credit hours of a student's chosen major. The overlap constraint is not applicable to courses that majors or minors MUST take in others departments.

➤Students may not receive credit for BIOL 111 & 112 and BIOL-163 and 164.