

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
<u>One Biodiversity course selected from:</u>			
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
<u>One Integrative course selected from:</u>			
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
<u>One Molecular course selected from:</u>			
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
OR			
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
OR			
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>			
AND			
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
<u>Two of the following lab courses:</u>			
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		
<u>One of the following courses:</u>			
BIOL 325 Molecular Embryology	3	BIOL 215, 254	Jr
BIOL 335 Germs, 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

**B.S. Degree: Biology Major (for students entering in Fall 2023/Spring 2024)
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.

General Education	
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 [3 hrs]
_____	Foundational Scientific Inquiry [3-4 hrs]
_____	Foundational Quantitative Analysis [3-4 hrs]
<i>No more than two lens courses may come from same departmental prefix and one lens must be taken at 300 level or above.</i>	
_____	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]
_____	36 - 42 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]
_____	<u>OR</u>
_____	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.