

BIOLOGY MAJOR Pre-Med Concentration

Required Courses		Hrs.	Prereq.	Rec.Yr.
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	BIOL 163 recommended	Fr
BIOL 215	Biostatistics	4	Rec enrollment in DEVL 070 if not 100 level placed	Soph
BIOL 250	Genetics	4	BIOL 164;163 for Biochem majors	Soph
BIOL 252	Physiology	4	BIOL 163, 164	Soph
BIOL 254	Research Methods in Biology	4	BIOL 163, 164, 215, 252 for Bio Majors; MATH 115, ENVS 130 for Env Sci	Soph
BIOL 310	Ecology	4	BIOL 254, CHEM 161, 163L	Jr/Sr
BIOL ***	Biology elective	4		Soph-Sr
One Biodiversity course selected from:				
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
One Integrative course selected from:				
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 254; CHEM 221, 223L	Jr
One Molecular course selected from:				
BIOL 325	Molecular Embryology	4	BIOL 250	Jr/Sr
BIOL 354	Molecular Cell Biology	4	BIOL 254, CHEM 221, 223L	Jr/Sr
BIOL 374	Immunology	4	BIOL/CHEBI/CHEM/EXSC major	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>				
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	

55-60 total hours

Pre-Med Concentration (15 hours)

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

Three courses beyond the core of which two must include a lab:

BIOL *305	Principles of Toxicology	3	BIOL 151, 152	Jr
BIOL 325	Molecular Embryology	4	BIOL 254	Jr
BIOL 354	Molecular Cell Biology	4	BIOL 254, CHEM 222, 224L	Jr/Sr
BIOL 360	Principles of Microbiology	4	BIOL 254; CHEM 221, 223L	Jr
BIOL 374	Immunology	3	BIOL or CHEM major	Jr/Sr
BIOL 388/488	Approved special topics	3		
CHEM 350/351L	Biochemistry I & Lab	3/1	C- or better CHEM 222, 224L or BIOL 354	Jr/Sr
CHEM 352/353L	Biochemistry II & Lab	3/1	C- or better CHEM 350, 351L; Coreq CHEM-353L	Jr/Sr
CHEM 388/488	Approved special topics	3		Jr/Sr

*no lab

- Biology majors are expected to take BIOL 163 164, 215, 250, 252 and 254 by the end of the sophomore year.
- Majors must take required Chemistry courses in their freshman or sophomore year.
- Be aware that most upper division courses are offered every other year.
- Graduate school candidates should check entrance requirements for several graduate schools.
- Completion of BIOL-395, 398 or 498 with a grade of C or better is required for graduation.

^Satisfies advanced writing requirement

NAME: _____

**B.S. Degree: Biology Major (for students entering in Fall 2021/Spring 2022)
Pre-Med 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]
_____	Foundational Scientific Inquiry [3-4 hrs]
_____	Foundational Quantitative Analysis [3-4 hrs]
_____	Ethical/Spiritual Explor Lens (ETSP) [3 hrs]
_____	Aesthetic Expression Lens (AEXP) [3 hrs]
_____	Per & Soc Well Being Lens (PSWB) [3 hrs]
_____	Cultural Expression Lens (CEXP) [3 hrs]
_____	Experimental Inquiry Lens (EXIN) [3 hrs]
_____	INDS 401 [1 hr]
_____	INDS 402 [1 hr]
_____	35 – 41 Total semester hours
_____	120 semester hours required for graduation

Biology Major – Pre-Med Concentration	
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 *** [4 hrs]
_____	BIOL 325/354/374 [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]
_____	55-60 semester hours
_____	CHEM 222 [3 hrs]
_____	CHEM 224L [1 hr]

Three courses from the following (2 must include a lab)

_____	_____	BIOL *305/325/354/360/374/388/488/ CHEM 350+351L/CHEM 352+353L/388/488 [3-4hrs]
_____	_____	BIOL 305/325/354/360/374/388/488/ CHEM 350+351L/CHEM 352+353L/388/488 [3-4hrs]
_____	_____	BIOL 305/325/354/360/374/388/488/ CHEM 350+351L/CHEM 352+353L/388/488 [3-4hrs]

*no lab

➤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.

➤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.

*Enter NA (not applicable) if waived upon admission