

BIOLOGY MAJOR – Ecology & Env. Science (BIOLEN.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 majors; C- or better in BIOL 163 for Biochem maj; CHEM 221, 223L is 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 & ENV5 130 for ENV5 maj	Soph
BIOL 310	Ecology	4	MATH 115, ENV5 130 for Env Sci	Jr/Sr
BIOL ***	Biology elective	4	BIOL 254, CHEM 161, 163L	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
	<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>				
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	

54-61 hrs

NOTE: Two of the following three course requirements must have a lab

One additional 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

Two courses beyond the core requirements from the following:

BIOL 320	Animal Behavior	4	BIOL 254 or P/I	Jr/Sr
BIOL 344	Evolution	3	BIOL 250	Jr/Sr
BIOL 360	Principles of Microbiology	4	BIOL 250; CHEM 221, 223L	Jr/Sr
BIOL 388/488	Biology Topics	4		

****REMINDERS****

65-73 total hrs

- Biology majors are expected to take BIOL 163,164, 215, 250, 252 and 254 by the end of the sophomore year.
- Majors must take the 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 2024/Spring 2025)
Ecology & Environmental Science 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		Ecology & Environmental Science Concentration	
WHAT	WHEN	WHAT	WHEN
_____	ENGL 101* w/ C (2.0) [3 hrs]	_____	BIOL 115 [1 hr]
_____	ENGL 110 w/ C (2.0) [3 hrs]	_____	BIOL 163 [4 hrs]
_____	COMM 211 w/ C (2.0) [3 hrs]	_____	BIOL 164 [4 hrs]
_____	Dept senior seminar/writing course	_____	BIOL 215 [4 hrs]
_____	Met by: _____ BIOL 497 [2 hrs]	_____	BIOL 250 [4 hrs]
_____	FYEX 101 [3 hrs]	_____	BIOL 252 [4 hrs]
_____	FYEX 102 [1 hr]	_____	BIOL 254 [4 hrs]
_____	FYEX 103/104/105/106/107 [1 hr]	_____	BIOL 310 [4 hrs]
_____	FYEX 103/104/105/106/107 [1 hr]	_____	BIOL *** [4 hrs]
_____	FYEX 401 [1 hr]	_____	BIOL 325/354/374 [3-4 hrs]
_____	Foundational Scientific Inquiry [3-4 hrs]	_____	BIOL 315/316/317/322 [4 hrs]
_____	Foundational Quantitative Analysis [3-4 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	
_____	Ethical/Spiritual Explor Lens (ETSP) [3 hrs]	_____	CHEM 131 [3 hrs]
_____	Aesthetic Expression Lens (AEXP) [3 hrs]	_____	CHEM 133L [1 hr]
_____	Per & Soc Well Being Lens (PSWB) [3 hrs]	_____	CHEM 132 [3 hrs]
_____	Cultural Perspectives Lens (CEXP) [3 hrs]	_____	CHEM 134L [1 hr]
_____	Experimental Inquiry Lens (EXIN) [3 hrs]	_____	CHEM 221 [3 hrs]
		_____	CHEM 223L [1 hr]
	37 – 39 Total semester hours	NOTE: Two of the following three course requirements must have a lab	
_____	120 semester hours required for graduation	_____	One additional Biodiversity course selected from BIOL 315/316/317/322 [4 hrs]
		_____	BIOL 320/344/360/388/488[3-4 hrs]
		_____	BIOL 320/344/360/388/488[3-4 hrs]
		_____	65-73 semester hours

*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.

➤ 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.