

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 majors; 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; Soph C- or better in MATH 115 & ENVS 130 for ENVS maj 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 250; CHEM 221, 223L	Jr

One Molecular course selected from

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
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OR

BIOL 398/498	Biology Research	1-2	BIOL 254; CHEM 221, 223L	Jr/Sr
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^BIOL 497	Seminar	2	Sr Stand or P/Faculty	Sr
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CHEM 161	Accel Gen Chem for Sci Majors	3	HS Chemistry and placement or CHEM 105, 107L; Coreq CHE 163L	Fr/Soph
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CHEM 163L	Accel Gen Chem for Sci Majors Lab	1	HS Chemistry and placement or CHEM 105, 107L; Coreq CHEM 161	Fr/Soph
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OR

CHEM 131	General Chemistry Sci Maj I	3	Coreq CHEM 133L	Fr/Soph
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**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.*

CHEM 133L	General Chemistry Sci Maj I Lab	1	Coreq CHEM 131	
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CHEM 132	General Chemistry Sci Maj II	3	C- or better in CHEM 131, 133L; Coreq CHEM 134L	Fr/Soph
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CHEM 134L	General Chemistry Sci Maj II Lab	1	Coreq CHEM 132	
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CHEM 221	Organic Chemistry I	3	C- or better in CHEM 161,163L or 131, 133L,132, 134L; Coreq CHEM 223L	Soph
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CHEM 223L	Organic Chemistry Lab	1	C- or better in CHEM 161,163L or 131, 133L,132, 134L; Coreq CHEM 221	
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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

1. Biology majors are expected to take BIOL 163,164, 215, 250, 252 and 254 by the end of the sophomore year.
2. Majors must take the required Chemistry courses in their freshman or sophomore year.
3. Be aware that most upper division courses are offered every other year.
4. Graduate school candidates should check entrance requirements for several graduate schools.
5. 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 2023/Spring 2024)
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.

General Education		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]
_____		_____	BIOL 252 [4 hrs]
_____	FYEX 101 [3 hrs]	_____	BIOL 254 [4 hrs]
_____	FYEX 102 [1 hr]	_____	BIOL 310 [4 hrs]
_____	FYEX 103/104/105/106/107 [1 hr]	_____	BIOL *** [4 hrs]
_____	FYEX 103/104/105/106/107 [1 hr]	_____	BIOL 325/354/374 [3-4 hrs]
_____	FYEX 401 [3 hrs]	_____	BIOL 315/316/317/322 [4 hrs]
_____		_____	BIOL 305/320/344/360 [3-4 hrs]
_____	Foundational Scientific Inquiry [3-4 hrs]	_____	BIOL 395/398/498 w/C (2.0) [1-2 hrs]
_____	Foundational Quantitative Analysis [3-4 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]
36 - 42 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.