MONTANA STATE UNIVERSITY - DEPARTMENT OF LAND RESOURCES & ENVIRONMENTAL SCIENCES
Degree Requirements for a B. S. in Environmental Sciences - Environmental Biology Option
2021 - 2022 Catalog

Name: **GID#:** **Date:** **Graduating Semester:**

A minimum of 120 credits is required for graduation; at least 42 of these credits must be in courses numbered 300 and above.
ALL DEPARTMENTAL REQUIREMENTS & THEIR PREREQUISITES MUST BE A GRADE OF C- OR BETTER
GRADUATION WORKSHEETS ARE DUE ONE YEAR BEFORE GRADUATION

DEPARMENTAL REQUIREMENTS

Subject/#	Course Title	Credits	Semester	Year	EXCEPTIONS
Freshman Year					
ENSC 110	Land Resources & Environmental Sci	3	F		
BIOB 170IN	Principles of Biological Diversity	4	F S (F)		
CHMY 141 & CHMY 142	College Chemistry I & Lab	4	F S Su (F)		
BIOB 160	Principles of Living Systems	4	F S (S)		
CHMY 143 & CHMY 144	College Chemistry II & Lab	4	F S Su (S)		
M 161Q (or higher)	Survey of Calculus	4	F S Su (S)		
WRIT 101W	College Writing I	3	F S Su (F)		
WRIT 101W is waived with an ACT English Score of 28 or higher, an SAT Critical Writing score of 650 or higher, an MUS Writing Assessment of 5.5, or an ACT/SAT essay/writing subscore of 11.					
US Core	University Seminar	3	F S Su (S)		
Sophomore Year		**Credits**	**Semester**	**Year**	**EXCEPTIONS**
ENSC 245	Soils	3	F		
GPHY 284	Intro to GIS Science & Cartography	3	F S (F)		
PHSX 205	College Physics I	4	F S Su (F)		
STAT 216Q (or higher) or	Intro to Statistics	3	F S Su (F)		
BIOB 318	Biometry		F		
CHMY 211 & CHMY 212	Elements of Organic Chemistry & Lab	5	F S (S)		
BIOM 360	General Microbiology	5	F S (S)		
ENSC 210	Role of Plants in the Environment	3	S		
ENSC 260	Evolution for Environ Scientists	3	S		
Univ. Core		3			
Junior Year		**Credits**	**Semester**	**Year**	**EXCEPTIONS**
ENSC 353	Environmental Biogeochemistry	3	F		
NRSM 240 or	Natural Resource Ecology	3	F		
BIOE 370	General Ecology		F S (F)		
BCH 380	Biochemistry	5	F S Su (F)		
WRIT 201/HONR 202IH	College Writing II	3	F S Su (S)		
BIOM 452	Soil & Environmental Microbiology	3	S		
BIOE 422 or	Insect Ecology	3	S'od		
BIOM 415 or	Microbial Diversity, Ecology & Evolution	3	S'ev		
BIOE 455	Plant Ecology	3	S		
Univ. Core		9			
Senior Year		**Credits**	**Semester**	**Year**	**EXCEPTIONS**
ENSC 444	Watershed Hydrology	3	F		
ENSC 499R	LRES Capstone	3	F		
ENSC 464 or	Computational Techniques Envir Sci	1	S		Replace w/ ENSC 311- Spring
ENSC 465	Environmental Biophysics I	3	S		
ENSC 468	Ecosystem Biogeochemistry Global Change	3	S		
NRSM 430 or	Natural Resource Law	3	F		
PSCI 362	Natural Resource Policy		S		
Directed Electives		15-17			

Each student shall work closely with their faculty advisor to plan an integrated set of elective courses appropriate to their academic, professional and personal goals. Courses not on this list may be used IF considered appropriate to the student's goals AND approved by the faculty advisor as a curricular exception.

DIRECTED ELECTIVES - Choose 15-17 Credits from the following:

Subject/#	Course Title	Credits	Semester	Year	EXCEPTIONS
AGSC 401	Integrated Pest Management	3	F		
BIOB 375	General Genetics	3	F S Su		
BIOB 420	Evolution	3	S		
BIOE 375	Ecol Responses Climate Change	3	S		
BIOE 405	Behavioral & Evol Ecology	3	S		
BIOE 408	Rocky Mountain Vegetation	3	F		
BIOE 428	Freshwater Ecology	3	F		
BIOM 410	Microbial Genetics	3	S		
BIOM 423	Mycology	3	F'ev		
BIOM 430	Applied & Environ Microbiology	3	S		
BIOM 450	Microbial Physiology	3	F		
BIOM 455R	Research Methods in Microbiology	4	S		
BIOO 310	Comparative Vertebrate Anatomy	4	F		
BIOO 412	Animal Physiology	3	F		
BIOO 415	Ichthyology	3	S		
BIOO 433	Plant Physiology	3	S		
BIOO 470	Ornithology	3	S		
BIOO 475	Mammalogy	3	F		
ECNS 332	Econ of Natural Resources	3	F		
ENSC 407	Environmental Risk Assessment	3	F		
ENSC 410R	Biodiversity Methods	3	F		
ENSC 443	Weed Ecology and Manangement	3	F		
ENSC 445	Watershed Analysis	3	S		
ENSC 448	Stream Restoration Ecology	3	F		
ENSC 461	Restoration Ecology	3	F		
ENSC 466	Chemical Ecology	3	F		
GPHY 429R	Applied Remote Sensing	3	S		
NRSM 421	Holistic Thought/Mgmt	4	S		
NRSM 453	Habitat Inventory and Analysis	3	S		
WILD 301	Princ of Fish & Wildlife Mgmt	3	S		
WILD 438	Wildlife Habitat Ecology	3	S		

Because some courses are offered alternate years, the proposed scheduling of courses in junior and senior years may need to be modified. Work with your advisor for your individual schedule.

LRES Majors: ENSC 490 Undergrad Research, ENSC 492 Independent Study or ENSC 498 Internship is strongly recommended.

CORE 2.0 REQUIREMENTS - Must be a grade C- or better	Semester	Year	Course
Seminar (US)			
College Writing (W)*			
Quantitative Reasoning (Q)*			
Diversity (D)			
Contemporary Issues in Science (CS)* **2nd IN Course will apply to CS**			
Arts (IA or RA)			
Humanities (IH or RH)			
Social Sciences (IS or RS)			
Natural Science (IN or RN)*			
Research & Creative Experience (R, RA, RH, RN or RS)*			

*Satisfied by departmental requirements