MONTANA STATE UNIVERSITY - DEPARTMENT OF LAND RESOURCES & ENVIRONMENTAL SCIENCES Degree Requirements for a B. S. in Environmental Sciences - Soil & Water Science 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

Subject/#	Course Title	Credits	Semester	Year	EXCEPTIONS
Freshman Year	Course ritte	Cicuits	Jeniester	rear	EXCEL HONS
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 (F)		
WRIT 101W	College Writing I	3	F S Su (F)	+	
	ved with an ACT English Score of 28 or higher, ar	_	, ,	re of 650 or	higher
	MUS Writing Assessment of 5.5, or an ACT/SAT		_	-	mgner,
Л 161Q (or higher)	Survey of Calculus	4	F S (S)	J 11.	
IOB 160	Principles of Living Systems	4	F S (S)		
CHMY 143 & CHMY 144	College Chemistry II & Lab	4	F S (S)		
JS Core	University Seminar	3	F S Su (S)	+	
Sophomore Year	Oniversity Seminal	Credits	Semester	Year	EXCEPTIONS
NSC 245IN	Soils	3	F	rear	EXCEI HONS
RTH 101IN	Earth System Sciences	4	F S Su (F)		
SPHY 284	Intro to GIS Science & Cartography	3	F S Su (F)	+	
BIOB 318 or	Biometry	+ -	F 3 3u (F)	+	
STAT 216Q (or higher)	Intro to Statistics	3	F S Su (F)	+	
Iniv. Core	intro to Statistics	3	F S Su (F)		
NSC 210	Role of Plants in the Environment	3	S S		
NSC 260	Evolution for Environmental Scientists	3	S		
HSX 205	College Physics I	4	F S Su (S)		
VRIT 201/HONR 202IH	College Writing II/Texts&Critics: Know/Imag	3	F S (S)		
Iniv. Core	College Writing II/ Texts&Critics. Know/imag	3	F S Su (S)	+	
Junior Year		Credits	Semester	Year	EXCEPTIONS
NSC 353	Environmental Biogeochemistry	3	F	rear	EXCEI HONS
RTH 307	Principles of Geomorphology	4	F		
NRSM 240 or	Natural Resource Ecology	-	F		
BIOE 370	General Ecology	3	F S (F)		
Iniv. Core & Directed Electives	General Ecology	6	F S Su (F)		
BIOM 452 or	Soil & Environmental Microbiology	+ -	S		
ENSC 460	Soil Remediation	3	S		
CHMY 211 & CHMY 212	Elements of Organics Chemistry & Lab	5	FS (S)		
NSC 468	Ecosystem Biogeochemistry	3	S (5)		
Jniv. Core	Leosystem biogeochemistry	3	F S Su (S)		
Senior Year			Semester	Year	EXCEPTIONS
NSC 444	Watershed Hydrology	3	F		LACE HORS
NSC 454	Landscape Pedology	3	F		
NSC 499R	LRES Capstone	3	F		
hoose one of the following:	ENES capstone	+ -	 		
BIOE 428	Freshwater Ecology		F		
ENSC 448	Stream Restoration Ecology	3	F		
ENSC 461	Restoration Ecology		F		
BIOE 455	Plant Ecology	1	S		
NRSM 430 or	Natural Resource Law		F		
PSCI 362	Natural Resource Policy	3	S		
ENSC 464 &	Computational Techniques Envir Sci		S		
ENSC 445		4	S	+	
or	Watershed Analysis		3		
UI		1			
ENSC 465	Environmental Biophysics I	3	S		

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 16-17 credits of the following:		Credits	Semester	Year	EXCEPTIONS
AGSC 454	Agrostology	3	F (odd)		
BIOE 375	Ecol Responses Climate Change	3	S		
BIOE 428	Freshwater Ecology (if not taken above)	3	F		
BIOE 455	Plant Ecology (if not taken above)	3	S		
BIOM 415	Microbial Diversity Ecolgy & Evolution	3	S (even)		
BIOM 452	Soil & Environmental Microbiology	3	S		
CHMY 311	Fundamental Analytical Chem	3	S		
EENV 441	Natural Treatment Systems	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 Ecol (if not taken above)	3	F		
ENSC 460	Soil Remediation	3	S		
ENSC 461	Restoration Ecology (if not taken above)	3	F		
ENSC 466	Chemical Ecology	3	F		
ERTH 432R	Surface Water Resources	3	On demand		
GEO 309	Sedimentation and Stratigraphy	4	S		
GPHY 357	GPS Fund/App in Mapping	3	F		
GPHY 384	Adv GIS and Spatial Analysis	3	F		
GPHY 426	Remote Sensing	3	S		
GPHY 429R	Applied Remote Sensing	3	S		
GPHY 484R	Applied GIS & Spatial Analysis	3	S		
NRSM 421	Holistic Thought/Mgmt	4	S		
NRSM 455	Riparian Ecology & Management	3	S		
STAT 411	Methods for Data Analysis I	3	FS		

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 490R 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)*					
*Met by departmental requirements					

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