

MONTANA STATE UNIVERSITY - COLLEGE OF AGRICULTURE

Department of Land Resources & Environmental Sciences

Degree Requirements for a B.S. in Environmental Sciences/Soil & Water Science Option

2012-2014 Catalog Curriculum: ESSW

Name: ID#: Date: Graduating Semester:

Total semester credits must equal a minimum of 120 credits; Total upper division must equal a minimum of 42 credits

ALL DEPARTMENTAL REQUIREMENTS & THEIR PREREQUISITES MUST BE A GRADE OF C- OR BETTER

APPLICATIONS FOR BACCALAUREATE ARE DUE ONE YEAR BEFORE GRADUATION!

DEPARTMENTAL REQUIREMENTS

Subject/#	Course Title	Credits	Sem	Year	Sub/Transfer/Comments
ENSC 110	Land Resources & Environ Sci	3	F		
BIOB 170IN	Prin Biological Diversity	4	F S		
BIOB 160	Prin of Living Systems	4	F S		
CHMY 141	College Chemistry I	4	F S Su		
CHMY 143	College Chemistry II	4	F S Su		
ERTH 101IN	Earth System Science	4	F S		
Take one of the following two semester Math Sequences:					
M 165Q & M 166Q	Calculus for Technology I	3	F S		
M 166Q	Calculus for Technology II	3	F S		
OR					
M 171Q & M 172Q	Calculus I	4	F S Su		
M 172Q	Calculus II	4	F S Su		
WRIT 101W	College Writing I	3	F S Su		
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.					
Take one of the following:					
NRSM 240	Natural Res Ecology	3	F		
BIOE 370	General Ecology	3	S		
CHMY 211	Elements Organic Chemistry	5	FS		
ENSC 245IN	Soils	3	F		
PHSX 205	College Physics I	4	F S Su		
WRIT 201	College Writing II	3	F S		
Take one of the following:					
BIOB 318	Biometry	3	F		
STAT 216Q	Intro to Statistics	3	F S Su		
ENSC 353	Environmental Biogeochemistry	3	F		
BIOM 452	Soil & Environ Microbiology	3	S'od		
BIOE 428	Freshwater Ecology	3	F		
ENSC 444	Watershed Hydrology	3	F		
ENSC 445	Watershed Analysis	3	S		
ENSC 448	Stream Restoration Ecology	3	F		
ENSC 454	Landscape Pedology	3	F		
ENSC 465	Environmental Biophysics	3	S		
ENSC 468	Ecosystem Biogeochemistry/Global Change	3	S		
ENSC 499R	Capstone	3	F		

ADVANCED ELECTIVE COURSES - CREDITS REQUIRED: 18

Students must work with their advisor to develop a list of advanced courses based on academic and professional goals. Before their Senior year, and before taking any of the proposed credits, students must submit this list with a written statement justifying the courses selected for approval by the dept.

Subject/#	Course Title	Cr	Semester	Year	Sub/Transfer/Comments
GPHY 357	GPS Fund & App in Mapping	3	F		
BIOM 415	Microbial Diversity Ecol Evol	3	S'ev		
GPHY 426	Remote Sensing Digital Image	3	F		
ENSC 460	Soil Remediation	3	S		
ENSC 461	Restoration Ecology	3	F		
Take one of the following:					
NRSM 421	Holistic Thought & Management	4	S		
NRSM 430	Natural Resource Law	3	S		
PSCI 362	Natural Resource Policy	3	S'ev		
Take one of the following:					
ERTH 432R	Surface-Water Resource	3	F'od		
GEO 420	Hydrogeology	3	F'ev		
BIOO 433	Plant Physiology	4	S		
EENV 441	Natural Treatment Syst	3	S		
ENSC 407	Environmental Risk Assessment	3	F'od		
ENSC 410R	Biodiversity: Methods	3	F		
ERTH 307	Principles of Geomorphology	4	F		
CHMY 311	Analy Chem-Quant Analys	4	S		
GPHY 429R	Applied Remote Sensing	3	S		
GPHY 284	Intro GIS & Cartography	3	F S		
GPHY 384	Adv GIS & Spatial Analysis	3	F S		
GPHY 484R	Appl GIS & Spatial Analysis	3	S		

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

Core 2.0 Requirements (Must be a grade C- or better)	
University Seminar (US)	
College Writing (W)	
Quantitative Reasoning (Q)	
Diversity (D)	
Contemp Issues in Science (CS)	
Arts (IA, RA)	
Humanities (IH, RH)	
Natural Sciences (IN, RN)	
Social Sciences (IS or RS)	
Research (R, RA, RH, RN, RS)	

Completion of UH 202 satisfies the IH requirement.

Completion of at least two of the following courses satisfies both the CS and the IN requirements:

- BIOB 110, 160, 170, 256, 258, 260;
- BIOH 201 211; BIOM 210, 250; BIOO 220;
- CHMY 121, 123, 141, 143, 151, 153, 211;
- ERTH 101; ENSC 245; GEO 103, 205, 211;
- NRSM 240;
- PHSX 205, 207, 220, 222, 224, 240, 242;

Total Credits:	Upper Division:
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Student Signature Date

Advisor Signature Date

Certifying Officer Signature Date