

**MONTANA STATE UNIVERSITY - COLLEGE OF AGRICULTURE**

**Department of Land Resources & Environmental Sciences**

**Degree Requirements for a B.S. in Environmental Sciences/Environmental Biology Option**

**2012-2014 Catalog Curriculum: ESEB**

**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**

**Total Credits: 83-84**

Subject/#	Course Title	Credits	Semester	Year	Sub/TR/Comments
ENSC 110	Land Resources & Environmental 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		
ECNS 101IS	Econ Way of Thinking	3	F S		
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:

M 161Q	Survey of Calculus	4	F S Su		
M 165Q	Calculus for Technology I	3	F S		
M 171Q	Calculus I	4	F S Su		

**Students who anticipate graduate study or technical employment are strongly advised to complete a two-semester calculus sequence. M 165 - 166 or M 171-172**

ENSC 245IN	Soils	3	F		
PHSX 205	College Physics I	4	F S Su		

Take one of the following:

BIOB 318	Biometry	3	F		
STAT 216Q	Intro to Statistics	3	F S Su		

Take one of the following:

NRSM 240	Natural Resource Ecology	3	F		
BIOE 370	General Ecology	3	S		

WRIT 201	College Writing II	3	F S		
CHMY 211	Elements Organic Chem	5	F S		
BIOM 360	General Microbiology	5	F S		
BCH 380	Biochemistry	5	F S Su		
BIOB 375	General Genetics	3	F S		
ENSC 353	Environmental Biogeochemistry	3	F		
BIOB 420	Evolution	3	S		
BIOM 415	Microb Diversity, Ecology, & Evolution	3	S'ev		
BIOM 452	Soil & Environ Microbiology	3	S'od		
ENSC 465	Environmental Biophysics	3	S		
ENSC 468	Ecosystem Biogeochemistry/Global Change	3	S		
ENSC 499R	LRES Capstone	3	F		

ADVANCED ELECTIVE COURSES - CREDITS REQUIRED: 15					
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 together with a written statement justifying the courses selected for approval by the dept.					
Dept/#	Subject	Cr	Semester	Year	Sub/Transfer/Comments
<b>Environmental Microbiology:</b>					
BIOM 410	Microbial Genetics	3	S		
BIOM 423	Mycology	3	F'ev		
BIOM 430	Appld & Environ Micro	4	S		
BIOM 450	Microbial Physiology	3	F		
BIOM 455	Res Methods Microbiology	4	S		
<b>Environmental Macrobiology</b>					
BIOE 405	Behav & Evolution Ecol	3	S		
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		
<b>Natural Ecosystems</b>					
ENSC 444	Watershed Hydrology	3	F		
ENSC 445	Watershed Analysis	3	S		
BIOE 408	Rocky Mtn Vegetation	2	F		
BIOE 428	Freshwater Ecology	3	F		
<b>Applied Ecology</b>					
AGSC 401	Integrated Pest Mgmt	3	F		
GPHY 426	Remote Sensing Digital Image	3	F		
ENSC 407	Environmental Risk Assessment	3	F'od		
ENSC 443	Weed Ecology & Mgmt	3	F		
ENSC 448	Stream Restoration Ecology	3	F		
ENSC 461	Restoration Ecology	3	F		
NRSM 453	Habitat Inventory&Analys	3	F		
WILD 301	Prin Fish & Wildlife Mgmt	3	S		
WILD 438	Wildlife Habitat Ecology	3	S		
<b>Policy &amp; Planning</b>					
NRSM 421	Holistic Thought & Mgmt	4	S		
NRSM 430	Natural Resource Law	3	S		
ECNS 332	Econ of Natural Res	3	F		

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

Core 2.0 Requirements (Must be a grade C- or better)	
Seminar (US)	
College Writing (W)	
Quantitative Reasoning (Q)	
Diversity (D)	
Contemporary Issues in Science (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)	

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;  
 EARTH 101; ENSC 245; GEO 103, 205, 211;  
 NRSM 240;  
 PHSX 205, 207, 220, 222, 224, 240, 242;

Student Signature \_\_\_\_\_ Date \_\_\_\_\_

Total Credits: \_\_\_\_\_ Upper Division: \_\_\_\_\_

4/3/13

Advisor Signature \_\_\_\_\_ Date \_\_\_\_\_

Dept. Certifying Officer Signature \_\_\_\_\_ Date \_\_\_\_\_