

MONTANA STATE UNIVERSITY - COLLEGE OF AGRICULTURE
Department of Land Resources & Environmental Sciences
Degree Requirements for a B.S. in Environmental Sciences/Soil & Water Sciences
2008-2010 Catalog Curriculum: ESSW

Name of Student: _____ **ID#** _____ **DATE:** _____

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

DEPARTMENTAL REQUIREMENTS				
Dept/#	Subject	Sem	Year	Cr
LRES 110	Land Resources & Environ Sci	F		3
BIOL 101IN	Organismal Biology	F S		4
BIOL 102	Molecular & Cellular Biology	F S		4
CHEM 131	General Chemistry I	F S Su		4
CHEM 132	General Chemistry II	F S Su		4
ENGL 121W	College Writing I	F S Su		3
<i>ENGL 121W 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.</i>				
ESCI 111IN	Physical Geology	F S Su		4
ESCI 112CS	Physical Geography	F S		4
<i>Choose one option of two semester Math Sequence:</i>				
MATH 175Q &	Calculus for Technology I	F S		3
MATH 176Q	Calculus for Technology II	F S		3
<i>OR</i>				
MATH 181Q &	Calculus & Analytical Geom I	F S Su		4
MATH 182Q	Calculus & Analytical Geom II	F S Su		4
<i>Take one of the following:</i>				
ARNR 240	Natural Res Ecology	F		3
BIOL 303	Principles of Ecology	S		3
CHEM 215	Elements Organic Chemistry	F S		5
ENGL 221	College Writing II	F S		3
LRES 201IN	Soil Resource	F		3
LRES 244CS	Intro Water Resources	F		3
PHYS 205	College Physics I	F S Su		4
<i>Take one of the following:</i>				
PSPP 318	Biometry	F		3
STAT 216Q	Elementary Statistics	F S Su		3
LRES 310	Professional Preparation	S		1
LRES 351	Nutrient Cycling	S		3
LRES 344	Water Quality	S		3
LRES 355	Soil & Environ Chemistry	S'od		3
MB 301	General Microbiology	F S		5
<i>Take one of the following:</i>				
ESCI 432	Surface-Water Resource	F'od		3
ESCI 440	Ground-Water Resource	F'ev		3
LRES 441	Capstone 1 Field Applic LRES	S		1
LRES 442R	Capstone 2 Field Applic LRES	F		3
LRES 444	Watershed Hydrology	F		3
LRES 445	Watershed Analysis	S		3
LRES 452	Soil & Environ Microbiology	S'od		3
LRES 453	Soil & Environ Physics	F'od		3
LRES 454	Landscape Pedology	F		3

ADVANCED ELECTIVE COURSES				
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 department.				
Take 9 credits of the following:				
Dept/#	Course Title	Sem	Year	Cr
LRES 357	GPS Fund & App in Mapping	F S		3
LRES 415	Microbial Diversity Ecol Evol	S'ev		3
LRES 426	Remote Sensing Digital Image	F		3
LRES 460	Soil Remediation	S		3
LRES 461	Restoration Ecology	F		3
<i>Take one of the following:</i>				
LRES 421	Holistic Thought & Mgmt	S		4
POLS 450	Natural Resource Policy	S'ev		3
BIOL 424	Freshwater Ecology	F		3
BIOL 430	Plant Physiology	S		4
BREN 441	Natural Treatment Systems	S		3
CHEM 228	Fund Analytical Chemistry	S		4
ESCI 307	Principles of Geomorphology	F		4
GEOG 211	Intro Geographic Info Science	F S		3
GEOG 305	Adv Geographic Infor Science	F S		3
GEOG 411R	Applied GIS & Spatial Analysis	S		3

SUBSTITUTIONS FOR REQUIRED COURSES				
Dept/#	Subject	Cr	FOR Dept/#	Cr

An independent research project or internship is strongly recommended for LRES majors:

LRES 470 Independent Study; LRES 476 Internship; LRES 490 Undergrad Research

CORE 2.0 REQUIREMENTS				
All Core 2.0 requirements must be a grade of C- or better				
Dept/#	Course Title	Credits	Sem	Yr
FOUNDATION COURSES				
Seminar (US) 1 course				
Diversity (D) 1 course				
Writing (W) 1 course (met by departmental requirements)				
ENGL 121W	College Writing I	3		
Quantitative Reasoning (Q) 1 course (met by departmental requirements)				
Contemporary Issues in Science (CS) 1 course (met by departmental requirements)				
WAYS OF KNOWING: INQUIRY & RESEARCH & CREATIVE EXPERIENCE				
Arts (IA or RA) 1 course				
Humanities (IH or RH) 1 course				
Social Sciences (IS or RS) 1 course				
		3		
Natural Science (IN or RN) 1 course (met by departmental requirements)				
BIOL 101IN	Organismal Biology	4		
Research & Creative Experience (R,RA, RH, RN or RS) 3 credits (met by departmental requirements)				
(Courses designated RA, RH, RN, or RS double count. For example, a course designated as RA will satisfy both the Arts and the Research and				
LRES 441/442R	Capstone 1 & 2 Field Applic in LRES	4		

1. A grade of C- or better is required in all core courses.
2. Completion of UH 202 with a grade of C- or better satisfies the Humanities Inquiry requirement.
3. Completion of at least two of the following courses with a grade of C- or better satisfies both the CS and the IN requirements: ARNR 240; BCHM 122; BIOL 101, 102, 204, 207, 208, 213, 214, 215, 251; CHEM 121, 131, 132, 141, 142, 215; ESCI 111, 112; GEOL 102, 204, 210; LRES 201; MB 201; MBEH 210; PHYS 205, 206, 211, 212, 213, 221, 222; PSPP 102.

Total Credits: _____ **Upper Division:** _____

Student Signature **Date**

Advisor Signature **Date**

Dept. Certifying Officer Signature **Date**