

**MONTANA STATE UNIVERSITY - COLLEGE OF AGRICULTURE**  
**Department of Land Resources & Environmental Sciences**  
**Degree Requirements for a B.S. in Land Rehabilitation**  
**2008-2010 Catalog Curriculum: LAND**

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 112CS	Physical Geography	F S		4
<i>Take one of the following:</i>				
MATH 170Q	Survey of Calculus	F S Su		4
MATH 175Q	Calculus Technology I	F S		3
MATH 181Q	Calculus Analytical Geometry	F S Su		4
<i>Students who anticipate graduate study or technical employment are strongly advised to complete a two-semester calculus sequence 175 - 176 or 181 - 182</i>				
<i>Take one of the following:</i>				
ARNR 240	Natural Res Ecology	F		3
BIOL 303	Principles of Ecology	S		3
BIOL 230	ID of Seed Plants	S		4
ENGL 221	College Writing II	F S		3
GEOG 211	Intro Geographic Info Science	F S		3
LRES 201N	Soil Resource	F		3
LRES 244CS	Intro Water Resource	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 355	Soil & Environ Chemistry	S'od		3
ARNR 453	Habitat Inventory & Analysis	F		3
<i>Take one of the following:</i>				
BIOL 424	Freshwater Ecology	F		3
BIOL 436	Plant Systematics	F'ev		3
<i>Take one of the following:</i>				
ESCI 432R	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 443	Weed Ecology & Mgmt	F		3
LRES 444	Watershed Hydrology	F		3
LRES 453	Soil & Environ Physics	F'od		3
LRES 454	Landscape Pedology	F		3
LRES 460	Soil Remediation	S		3
LRES 461	Restoration Ecology	F		3

ADVANCED ELECTIVE COURSES				
Students must work with their advisor to develop a list of advanced 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. Select a focal area and take 15 credits from the following electives.				
Dept/#	Subject	Sem	Year	Cr
Microbial/Bioremediation Focus				
These 13 credits plus 2 from either Soil & Water focus, Plant/Revegetation focus or Additional Courses list.				
LRES 452	Soil & Environ Microbiology	S'od		3
CHEM 215	Elem Organic Chemistry	F S		5
MB 301	General Microbiology	F S		5

Soil & Water Sciences Focus				
These 9 credits plus 6 from either Microbial/Bioremediation focus, Plant/Revegetation focus or Additional Courses list.				
LRES 344	Water Quality	S		3
LRES 351	Nutrient Cycling	S		3
LRES 445	Watershed Analysis	S		3

Plant/Revegetation Focus				
These 10 credits plus 5 from either microbial/Bioremediation focus, Soil & Water Focus or Additional Courses list.				
BIOL 455	Plant Ecology	S		3
BIOL 430	Plant Physiology	S		3
ARNR 350	Vegetation Western Wildlands	S		3

Additional Courses				
LRES 357	GPS Fund Apps in Mapping	FS		3
LRES 421	Holistic Thought & Mgmt	S		4
ARNR 351	Biomes of Western Wildlands	S		2
F&WL 301	Principles of F&WL Mgmt	S		3
GEOG 305	Adv GIS	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**