

MONTANA STATE UNIVERSITY - COLLEGE OF AGRICULTURE
Department of Land Resources & Environmental Sciences
B.S. in Land Resource Sciences/Land Resources Analysis & Management

		<u>2004-2006</u>		<u>LANR/LRAM</u>
Name of Student	GID #	Catalog		Curriculum/Option

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

DEPARTMENTAL REQUIREMENTS

Dept/#	Subject	Sem	Yr	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
ESCI 111IN	Physical Geology	F,S,Su		4
ESCI 112CS	Physical Geography	F,S		4
ECON 101IS	Economic Way of Thinking	F,S,Su		3
ENGL 121W	College Writing I	F,S,Su		3

ENGL 121W is waived with an ACT English Score of 27 or higher, SAT Verbal Score of 640 or higher.

Choose 1:	MATH 170Q Survey of Calc	F,S,Su		4
	MATH 175Q Calc Tech I	F,S		3
	MATH 181Q Calc&An Geom I	F,S,Su		4

Students who anticipate graduate study or technical employment are strongly advised to complete a two-semester calculus sequence. (175-176 or 181-182)

LRES 201	Soil Resource	F		3
PHYS 205	College Physics I	F,S,Su		4
Choose 1:	ENGL 221 College Writing II	F,S		3
	ENGL 223 Technical Writing	F,S		3
Choose 1:	PS 318 Biometry	F		3
	STAT 216Q Elem Statistics	F,S,Su		3
Choose 1:	ARNR 240 Nat Res Ecol	F		3
	BIOL 303 Prin of Ecology	S		3
GEOG 305	Geog Info Systems (GIS)	F,S		3
POLS 350	Natural Resource Policy	S'ev		3
LRES 310	Professional Preparation	S		1
LRES 440	Field Applications in LRES	F		4
LRES 444	Watershed Hydrology	F		3

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

- LRES 470 (Individual Problems) or*
- LRES 476 (Internship) or*
- LRES 489/490 (Undergrad Research/Research Instruction)*

SUBSTITUTIONS FOR REQUIRED COURSES

Dept/#	Subject	Cr	for	Dept/#	Cr

CORE 2.0 REQUIREMENTS

ALL CORE 2.0 REQUIREMENTS MUST BE A GRADE OF C- OR BETTER

See Page 55 of the 04-06 MSU Catalog for permitted substitutions for CS and IN requirements. *Note that some of the required courses for this major will count toward completion of the CORE requirements.*

Dept/#	Subject	Sem	Yr	Cr
Seminar (US) (1 course)				
Quantitative Reasoning (Q) (1 Course)				
Writing (W) (1 Course)				
Inquiry-Arts (IA) 1 Course				
Inquiry-Humanities (IH) (1 Course)				
Inquiry-Social Sciences (IS) (1 Course)				
Inquiry-Natural Science (IN) (1 Course)				
Diversity (D) (1 Course)				
Research & Creative Experience (R) (3 Credits)				
Contemporary Issues in Science (CS) (1 Course)				

Total Credits 146 Upper Division 52

Student Signature _____ Date _____

Advisor Signature _____ Date _____

Dept. Certifying Officer Signature _____ Date _____

SEE REVERSE SIDE FOR REQUIRED
ADVANCED ELECTIVES COURSES

Complete a minimum of 35 Credits of listed electives below, which shall include:

- A. At least two courses from each of the Ecology, Soil & Water, and Landscape Analysis electives (note that individual courses cannot be used to fill more than one elective requirement, e.g. LRES 454 can be counted EITHER as a Soil & Water elective OR a Landscape Analysis Elective.)
- B. No more than six credits of Human Systems Electives
- C. At least 15 credits of 400 level course; and
- D. At least 10 credits of LRES courses

Ecology Electives (at least two courses):

ARNR 345	Riparian Ecology & Management	S	3
BIOL 404	Limnology	F	3
BIOL 427*	Aquatic Ecology (Biol 404/Concurrent)	F	2
BIOL 406	Rocky Mtn Ecosystems	F	2
BIOL 407	Alpine Ecology	Su	3
BIOL 439	Stream Ecology	F	3
LRES 415*	Microbial Div, Ecol & Evolution	S'ev	3
LRES 428*	Cropping Systems	S'od	3
LRES 443*	Weed Ecology & Mgmt	F	3
LRES 461	Restoration Ecology	F	3

Soil & Water Electives (at least two courses):

ESCI 307	Prin Geomorphology	F	4
ESCI 432R	Surface-Water Resources	F	3
ESCI 440	Ground-Water Resources	S	3
LRES 351	Nutrient Cycling	S	3
LRES 355*	Soil & Environ Chemistry	S'od	3
LRES 451	Soils Field Course	F	2
LRES 452*	Soil & Environ Microbiology	S'od	3
LRES 453	Soil & Environ Physics	F'od	3
LRES 454	Landscape Pedology	F	3
LRES 460	Soil Remediation	S	3

Human Systems Electives (no more than six credits):

ARNR 456*	Conflict Resolution in Nat Res Mgmt	F	1
BREN 330	Water Resource Law	S'ev	2
ECON 332*	Econ Natrl Resources	F	3
GEOG 201D	Human Geography	F,Su	3
HUM 205	Nature & Culture	F'od	3
LRES 421	Holistic Thought & Mgmt	S	4
SOC 328*	Environmental Sociology	S'ev	3

Landscape Analysis Electives (at least two courses);

CE 463	Photogrammetry	F'od	2
ESCI 310	Aerial Photo Interp	F	4
GEOG 210	Weather & Climate	F	3
GEOG 211*	Map Skills	F	3
GEOG 411	Adv Geog Info Syst (GIS)	S'ev	3
LRES 325IN	Remote Sensing	F	3
LRES 357*	GPS Fund & App in Mapping	F,S	3
LRES 425	Remote Sensing	S	3
LRES 454	Landscape Pedology	F	3

* Note: Prerequisite(s) may not be met by courses in this curriculum.