

# 2009-2010 Course Catalog

The University Of Montana

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## Wildland Restoration

### Bachelor of Science in Wildland Restoration

In addition to special degree requirements listed previously, the students selecting the Bachelor of Science in Wildland Restoration must complete the following required courses or their equivalent, if transferred from another college or university. Transference and equivalency will be determined by the University and College of Forestry and Conservation. Electives may be taken at any time, keeping in mind these requirements as well as the University's General Education requirements for graduation.

#### Wildland Restoration (Aquatic Option)

First Year		Credits
WRIT 101 (ENEX 101) Composition	3	
BIOL 110 Principles of Biology	4	
GEO 101/102 (GEOS 100N/101N) General Geology/Lab	3	
COMM 111A Intro to Public Speaking	3	
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3	
CHMY 123 (CHEM 152N) Introduction to Organic and Biological Chemistry	3	
M 171 (MATH 152) Calculus I	4	
FOR/RECM/WBIO 180 Careers in Natural Resources	2	
FOR 200 Natural Resources Measurements Camp	2	
Electives and General Education	3	
Second Year		Credits
M 172 (MATH 153) Calculus II	4	
FOR 201 Forest Biometrics or WBIO 240 Intro to Biostatistics or STAT 216 (MATH 241) Statistics	3	
FOR 265 Elements of Ecological Restoration	3	
WRIT 222 (FOR 220) Technical Approaches to Writing	2	
PHYS 121N Fundamentals of Physics with Calculus or PHYS 221N Fundamentals of Physics	5	
BIOL 221 Cell and Molecular Biology	4	

BIOL 223 Genetics and Evolution	4	
Electives and General Education	5	
Third and Fourth Year		Credits
FOR 385 Watershed Hydrology	3	
BIOL 366 Freshwater Ecology	5	
FOR 365 Foundation of Restoration Ecology	3	
FOR 445 Ecological Restoration Practicum	3-6	
FOR 422 Natural Resource Policy & Administration	3	
FOR 444 Integrative Ecology Restoration	3	
FOR 494 Seminar in Ecological Restoration I	3	
Rest/Aquatic Electives - At least nine credits must be completed from the following:		Credits
BIOL 308 Biology and Management of Fishes	4	
FOR 455 Riparian Ecology and Management	3	
FOR 485 Watershed Management	3	
GEOS 460 Process Geomorphology	4	
GEOS 431 Environmental Geochemistry	3	
FOR 250 GIS Practicum	2	
FOR 210N Soils	3	
GEO 250 River Systems	3	
GEO 420 Hydrogeology	3	
Rest/Aquatic Electives - At least nine credits must be completed from the following:		Credits
ECNS 433 Environmental Economics	3	
FOR 320 Forest Environmental Economics	3	
FOR 379 Collaboration in Natural Resource Decisions	3	
FOR 475 Sociology of Environment and Development	3	
FOR/RSCN 449 Climate Change Ethics and Policy	3	
<b>Wild Land Restoration (Terrestrial Option)</b>		
First Year		Credits

WRIT 101 (ENEX 101) Composition	3	
BIOL 110 Principles of Biology	4	
BIOL 120 General Botany	3	
COMM 111A Intro to Public Speaking	3	
CHMY 121N (CHEM 151N) Introduction to General and Inorganic Chemistry	3	
CHMY 123 (CHEM 152N) Introduction to Organic and Biological Chemistry	3	
M 162 (MATH 150) Calculus	4	
FOR/RECM/WBIO 180 Careers in Natural Resources	2	
FOR 200 Natural Resources Measurements Camp	2	
Electives and General Education	6	
Second Year		Credits
FOR 201 Forest Biometrics or WBIO 240 Intro to Biostatistics or STAT 216 (MATH 241) Statistics	3	
FOR 295 Elements of Ecological Restoration	3	
WRIT 222 (FOR 220) Technical Approaches to Writing	2	
FOR 210N Introductory Soils	3	
FOR 230 Forest Fire Management	3	
PHYS 111N/113N Fundamentals of Physics I & Fundamentals of Physics Lab I or PHYS 211N/213N Fundamentals of Physics with Calculus I & Physic Lab I with Calculus	5	
BIOL 221 Cell and Molecular Biology	4	
BIOL 223 Genetics and Evolution	4	
Electives and General Education	4-5	
Third and Fourth Year		Credits
FOR 330 Forest Ecology or BIOL 340 Ecology	3	
FOR 385 Watershed Hydrology	3	
FOR 445 Ecological Restoration Practicum	3-6	
FOR 444 Integrative Ecology Restoration	3	
FOR 422 Natural Resource Policy & Administration	3	
FOR 365 Foundation of Restoration Ecology	3	
FOR 494 Seminar in Ecological Restoration	1	

BIOL 350 Rocky Mountain Flora	3
Rest/Terrestrial Electives: At least nine credits must be completed from:	
BIOL 316 Plant Form & Function	3
FOR 335 Environmental Entomology	3
FOR 250 GIS Practicum	2
FOR 331 Fuels Management	3
FOR 415 Environmental Soil Science	3
FOR 485 Watershed Management	3
FOR 360 Range Management	3
FOR 462 Range Ecology	3
BIOL 444 Plant Physiology	3
BIOL 448 Terrestrial Plant Ecology	3
WBIO 370 Wildlife Habitat Conservation and Management	3
WBIO 470 Conservation of Wildlife Populations	3
MCB 423 Microbial Ecology: Applications	3
Electives and General Education	26
Rest/Social-Science Electives: At least three credits must be completed from:	
ECNS 433 Environmental Economics	3
FOR 320 Forest Economics	3
FOR 379 Collaboration in Natural Resource Decisions	3
FOR 475 Sociology of Environment and Development	3
FOR/RSCN 449 Climate Change Ethics and Policy	3

### **Wild Land Restoration Minor**

To earn a minor in Wild Land Restoration, students must fulfill the course requirements listed below.

Minor in Wildland Restoration (new requirements as of Autumn 2009)	
FOR 265 Elements of Ecological Restoration	3
FOR 365 Foundations of Restoration Ecology	3
FOR 330 Forest Ecology or BIOL 340 Ecology or BIOL 366 Fresh Water Ecology	3

FOR 201 forest Biometrics or WBIO 3-4  
 240 Introduction to Biostatistics or  
 STAT 216 (MATH 241) Statistics  
 FOR 210N Introductory Soils 3  
 BIOL 350 Rocky Mountain Flora or FOR 3  
 385 Watershed Hydrology

Three credits from the following Natural Science Electives:

BIOL 308 Biology & Management of 3  
 Fishes  
 BIOL 350 Rocky Mountain Flora 3  
 BIOL 448 Terrestrial Plant Ecology 3  
 WBIO 370 Wildfire Habitat 3  
 Conservation  
 WBIO 470 Conservation of Wildlife 3  
 Populations  
 FOR 331 Wildland Fuel Management 3  
 FOR 335 Environmental Entomology 3  
 FOR 347 Silviculture 3  
 FOR 360 Range Management 3  
 FOR 385 Watershed Hydrology 3

**Three credits from the following Social  
 Science Electives: (If one of the proposed  
 social science electives also is required  
 for the students major degree, a second  
 social science elective must be taken)**

FOR 422 Natural Resource Policy & 3  
 Administration  
 FOR 489E Ethics & Management of 3  
 Public Lands  
 FOR 379 Collaboration in Natural 3  
 Resource Decisions  
 FOR 475 Sociology of Environment & 3  
 Development  
 FOR/RSCN 449 Climate Change Ethics 3  
 & Policy  
 FOR 482 Wilderness & Protected Areas 3  
 Management