FOREST, RANGELAND, AND FIRE SCIENCES

1. Change the curricular requirements of Fire Ecology and Management (B.S.Fire.Ecol.Mgmt.)

Students pursuing a B.S. degree in fire ecology and management must receive a grade of C or better in the following indicator courses to register for upper-division courses in the fire core and to graduate with a B.S.Fire.Ecol.Mgmt.: Math 143, Stat 251, REM 144, either For 274 or REM 411, and either For 221 or REM 221. Students must also have a minimum cumulative grade-point average of 2.00 in Forest Resource and Rangeland Ecology and Management courses to qualify for the B.S. degree in Fire Ecology and Management.

Required course work includes the university requirements (see regulation J-3) and:

Biol 115 Cells and the Evolution of Life (4 cr)
CSS 383 Natural Resource and Ecosystem Service Economics (3 cr)
Econ 202 Principles of Microeconomics (3 cr)
For 235 Society and Natural Resources (3 cr)
For 274 Forest Measurement and Inventory (3 cr)
For 326 Fire Ecology and Management (3 cr)
For 330 Forest Soil and Canopy Processes (4 cr)
For 375 Introduction to Spatial Analysis for Natural Resource Management (3 cr)
For 427 Prescribed Burning Lab (3 cr)
For 433 Fire and Fuel Modeling (2 cr)
For 435 or For 535 Remote Sensing of Fire (3 cr)
For 450 Fire Behavior (2 cr)
For 484 Forest Policy and Administration (2 cr)
Geog 301 Meteorology (3 cr)
NR 101 Exploring Natural Resources (1 cr)
NRS 125 Introduction to Conservation and Natural Resources (3 cr)
Phys 100, Phys 100L Fundamentals of Physics and Lab (4 cr)
REM 144 Wildland Fire Management (2 cr)
Rem 407 GIS Applications in Fire Ecology and Management (2 cr)
Rem 429 Landscape Ecology (3 cr)
REM 459 Rangeland Ecology (2 cr)
Soil 205 The Soil Ecosystem (3 cr)
Soil 206 The Soil Ecosystem Lab (1 cr)
Stat 251 Statistical Methods (3 cr)
PISc 205 General Botany (4 cr)

One of the following (4 cr):
Biol 114 Organisms and Environments (4 cr)
Biol 115 Cells and the Evolution of Life (4 cr)
PISc 205 General Botany (4 cr)

One of the following (4 cr):
Chem 101 Introduction to Chemistry I (4 cr)
Chem 111 Principles of Chemistry I (4 cr)

One of the following (3 cr):
Engl 313 Business Writing (3 cr)
Engl 317 Technical Writing (3 cr)

One of the following (3 cr):
For 221 Ecology (3 cr)
REM 221 Ecology (3 cr)

One of the following (3 cr)
Geog 301 Meteorology (3 cr)
Geog 313 Global Climate Change (3 cr)

One of the following groups of courses (3:4 cr):
Group A:
Math 143 Pre-calculus Algebra and Analytic Geometry (3 cr)
Math 144 Analytic Trigonometry (1 cr)

or
Group B:
Math 160 Survey of Calculus (4 cr)

One of the following courses (3-4 cr):
For 320 Dendrology (4 cr)
REM 252 Wildland Plant Identification Field Studies (3 cr)
REM 341 Systematic Botany (3 cr)

Ecology (5-6 cr):
Ent 469 Introduction to Forest Insects (2 cr)
REM 429 Landscape Ecology (3 cr)
REM 440 Wildland Restoration Ecology (3 cr)
REM 450 Global Environmental Change (3 cr)
WLF 314 Wildlife Ecology I (3 cr)
WLF 440 Conservation Biology (3 cr)

Applied Tools and Technology (3-4 cr):
Geog 385 GIS Primer (3 cr)
Geog 401 Climatology (3 cr)
REM 411 Ecological Monitoring and Analysis (2 cr)

Natural Resources Management, Planning and Policy (6 cr):
CSS 385 Conservation Management and Planning I (4 cr)
CSS 490 Wilderness and Protected Area Management (3 cr)
For 324 Forest Regeneration (3 cr)
For 424 Forest Dynamics and Management (4 cr)
For 430 Forest Operations (3 cr)
For 454 or For 554 Air Quality, Pollution, and Smoke (3 cr)
For 462 Watershed Science and Management (3 cr)
REM 456 Integrated Rangeland Management (3 cr)

Complete 13 credits of Advisor Approved Electives OR one of the following Minors:
Rangeland Ecology and Management
Forest Resources
Climate Change
Natural Resources Economics
Conservation Social Sciences
Fishery Resources
Wildlife Resources

Courses to total 120 credits for this degree

**Distance Education Availability:** More than 50% of the curricular requirements cannot be completed via distance.

**Geographical Area Availability:** Moscow

**Rationale:** Following program and curricula review by an employer's summit and other stakeholder meetings, we are seeking to make the BS degree in Fire Ecology and Management more accessible to students seeking a holistic understanding of fire's role in the environment.

**Biol 114, Biol 115:** The FEM faculty believes that only content from one of Biol 114 OR Biol 155 in addition to PLSC 205 is needed for students in this degree.

**FOR 320, REM 241, REM 341:** Following external stakeholder input, the faculty concur that species identification is an essential skill for any natural resources degree and thus seek to add such a course to the FEM degree.

**GEOG 301, GEOG 313:** We request this change to accommodate that GEOG 301 is not offered each year and GEOG 313 has complementary materials.

**FOR 435:** The faculty feels the topic of this course is too narrow for a required course.

**FOR/REM 429:** The faculty feels that understanding of the spatial dynamics of landscapes is essential to the understanding of fire's role in the environment.

**REM 407:** The faculty feels that a general introduction of GIS applications in fire is a critical tool for students to have.

**CSS 287:** Following external program review and input from the employer's submit, the faculty concurs that a course in leadership would be of great value to the students within the FEM degree. Requiring this course effectively removes the bin of various communication courses making the degree easier to navigate.

**MATH 144:** The faculty feels that just a basic algebra course is needed for this major.

**Elective Bins:** Replacement of the elective bins with advisor approved restrictive electives or pre-defined set minors will make advising and scheduling easier while also making it easier to demonstrate to students potential career paths.

We envision that these changes will streamline faculty workloads by making the degree easier to advise.

**NATURAL RESOURCES AND SOCIETY**

1. Change the following subject prefix

   **CSS — Conservation Social Sciences to NRS — Natural Resources and Society**
2. Add the following courses

**NRS 125 Introduction to Conservation and Natural Resources (3 cr)**
Short title: INTRO CONS AND NAT RESOURCES
Overview of conservation and natural resources from a political, economic, behavioral, and land use perspective: philosophical, theoretical, and historical foundations of conservation as linked to social trends.

*Available via distance: No*
*Geographic Area Availability: Moscow*
*Rationale: This course (formerly CSS 287) is being repositioned to reach freshmen as part of a larger NRS effort to promote active engagement with first year students and further retention goals identified in our strategic plan. Currently, NRS offers no introductory level class and this course will be repurposed to provide a foundation that better serves students interested in conservation practices, management, and policymaking. Current assessment metrics will be redesigned to a modified set of learning objectives. The course has been approved by UCGE as a general education social science core course.*

No additional workload for faculty or staff.

**NRS 250 Environmental Problem Solving (3 cr)**
Short title: ENV PROBLEM SOLVING
Integrated problem solving though simulations of environmental protection challenges and issues. Utilizing team-building approaches students identify environmental problems, analyze data, and develop strategies for solutions.

*Available via distance: No*
*Geographic Area Availability: Moscow*
*Rationale: As part of a larger department effort to reorganize and rebuild, this course is proposed to reflect a new focus on environmental and conservation decision making skills. This course will represent no new additional workload because the faculty teaching this course has dropped another course (CSS 489 and CSS492). Assessment and learning objectives are under development.*

**NRS 390 Environmental Decision Making (3 cr)**
Short title: ENV DECISION MAKING
Integrated, interdisciplinary approaches to explaining and understanding the importance of major environmental protection laws, with special emphasis on the National Environmental Policy Act, the Endangered Species Act, and the Clean Water Act.

*Available via distance: No*
*Geographical Area Availability: Moscow*
*Rationale: As part of a larger department effort to reorganize and rebuild, this course is being proposed as replacement that more accurately reflects a new focus on environmental and conservation decision making skills. This course will represent no new additional workload on current faculty because a new hire is anticipated. Assessment and learning objectives are under development.*
NRS 564 Teaching Environmental Education in a Winter Environment (2 cr)
Address basic principles of ecology during winter. Emphasis will be placed on field experiences including principles of teaching in a winter environment, winter weather, and organism adaptation to winter. (Spring only)

Available via distance: No
Geographical Area Availability: McCall Field Campus
Rationale: The focus of this course has shifted from an emphasis on teaching winter ecology in a field environment to the actual study of ecology in the winter and spring, in support of preparing environmental educators to teach these subjects.

CSS 564 was dropped in 2013. NRS 564 replaces it.

NRS 558 Science Communication (3 cr)
Examines the flow of scientific information between experts and non-experts, with emphasis on educational settings. Project-based and includes practice in digital storytelling, documentary film, blogs, podcasts, public talks, and field experiences. McCall Field Campus. (Spring Only)

Available via distance: No
Geographical Area Availability: McCall Field Campus
Rationale: Science communication was originally included as a component of Advanced Field Ecology Course Design (CSS566) which is being dropped. Over time, the course design aspect of this class has diminished while the science communication component has become more prominent. We plan to break the course into two components – a natural history / winter ecology component and a science communication component. The ecology components will be moved to CSS 564, proposed to be renamed to NRS 564 Place-based Ecology II.

These changes do not require additional work for faculty or staff.

3. Change the following courses

CSS NRS 385 Conservation Management and Planning – I (4 cr)
Introduction to theory, processes, and techniques for the management and planning of conservation systems including conservation organizations, natural areas, and their uses; focuses on resource and user management decision making as well as conservation planning processes for natural sites and working landscapes. Two field trips, collaborative group projects, and a community Service-Learning project are required. (Fall only)
Theory and practice of decision-making for conservation planning and management, including protected areas, working landscapes, conservation organizations and the challenges facing natural resource managers in the 21st Century. Field trips and a collaborative group community Service-Learning project are required. (Fall only)

Available via distance: No
Geographical Area Availability: Moscow
Rationale: Allows us to better meet our learning objectives and outcomes. Meets employer and stakeholder needs thus making our students more employable. Minimizes overlap in the curriculum and better prepares students for CCS 475, which is the second course in our Conservation Management and Planning series.

No additional workload—description change only.
**CSS NRS 560 Community Ecology for Environmental Educators**

Cover plant and animal community ecology from both a qualitative and quantitative perspective. Topics will include: community interaction of plants and animals; community dynamics, succession, and disturbance; basic data collection and statistical analysis of habitat association data; and the effect of abiotic factors on community structure. (Fall only)

**Available via distance:** No  
**Geographical Area Availability:** McCall Field Campus  
**Rationale:** The focus of this course is the ecology of the local McCall environment.

4. Drop the following courses:

**CSS 287 Foundations of Conservation Leadership and Management (3 cr)**
Overview of conservation leadership and management from a political, economic, behavioral, and land use management perspective; philosophical, theoretical, historical, and managerial foundations of conservation as they relate to societal trends. Overview of applied communication methods necessary for the successful management of natural resources as well as an introduction to applied public involvement. Recommended Preparation: NRS 101. (Fall only)

**Rationale:** This course is being replaced by new NRS 125. See new course proposal.

**CSS 489 Personalities and Philosophies in Conservation (3 cr)**
Lives and thinking of people who have significantly influenced conservation practice including issues of communication, public involvement, environmental education and environmental interpretation. (Spring only)

**Rationale:** Course no longer offered, no plans to offer in future. Faculty who developed and taught the course has retired. The course is replaced by Hist424 taught by Dr. Sowards.

**CSS 492 Ecotourism Principles and Issues (3 cr)**
Critical examination of ecotourism emphasizing its ideology and conceptual foundations as well as major environmental and social issues affecting it. Recommended preparation: CSS 287 or equivalent. (Spring only)

**Rationale:** Course no longer offered, no plans to offer in future. Faculty retired.

**CSS 566 Adv. Field Ecology Course Design (5 cr)**
Address designing field ecology courses that include research, outdoor leadership, and natural history components. Students will design the following: a program to teach students about ecological information and engage them in the scientific process; an adventure-based curriculum for high school and middle school students; an investigation of a local ecological issue and the scientific and social components of that issue. (Summer only)

**Rationale:** Course has been replaced by new course NRS 565. See proposal.

5. Change the curricular requirement of the minor in **Conservation Social Sciences**

**Note:** This minor may not be earned by students in an existing degree program in the Department of Conservation Social Sciences.

**One of the following (3-4 cr):**
- CSS 235 or For 235 Society and Natural Resources (3 cr)  
- CSS 287 Foundations of Conservation Leadership and Management (3 cr)

**One of the following (3-4 cr):**
- CSS 304 Conservation Social Sciences Field Studies (3 cr)  
- CSS 310 Social Research Methods in Conservation (4 cr)
One of the following (3 cr):
CSS 364 Politics of the Environment (3 cr)
CSS 462 Natural Resource Policy (3 cr)

Electives from the following (9 cr)
CSS 383 Natural Resource and Ecosystem Service Economics (3 cr)
CSS 385 Conservation Management and Planning I (4 cr)
CSS 387 Environmental Communication Skills (3 cr)
CSS 475 Conservation Management and Planning II (4 cr)
CSS 481 Conservation Leadership (3 cr)
CSS 489 Personalities and Philosophies in Conservation (3 cr)

Courses to total 18 credits for this minor

Note: This minor may not be earned by students in an existing degree program in the Department of Natural Resources and Society.

One of the following (3 cr):
CSS 235 or For 235 Society and Natural Resources (3 cr)
CSS 287 Foundations of Conservation Leadership and Management (3 cr)

One of the following (3 cr):
CSS 364 Politics of the Environment (3 cr)
CSS 462 Natural Resource Policy (3 cr)

Electives from the following (12 cr)
CSS 383 Natural Resource and Ecosystem Service Economics (3 cr)
CSS 385 Conservation Management and Planning I (4 cr)
CSS 387 Environmental Communication Skills (3 cr)
CSS 475 Conservation Management and Planning II (4 cr)
CSS 486 Public Involvement in Natural Resource Management (3 cr)

Courses to total 18 credits for this minor

Distance Education Availability: More than 50% of this program cannot be completed via distance
Geographical Area Availability: Moscow
Rationale: Adapts to changes in the course offerings. Meets employer and stakeholder needs thus making our students more employable. Simplifies the structure from four bins to three. No added work load for faculty or staff.