

# NRSM - Natural Resource Sci & Mgmt

## **NRSM 101 Natural Resource Conservation: 3 Credits (3 Lec)**

(F) An overview of soils, water, rangelands and wildlife conservation from the global to the local level. Impacts of human population growth, economics, ethics and agriculture on the sustainability of natural resources will be examined using basic principles of ecology.

## **NRSM 102 Montana Range Plants: 1 Credits (2 Lab)**

(F) The laboratory exercises are designed to complement the lectures of NRSM 101. Rangeland inventory and classification methods will be reviewed. Sixty common native and introduced plants will be identified in the field and the classroom.

## **NRSM 235 Range and Pasture Monitoring: 1 Credits (2 Lab)**

PREREQUISITE: ANSC 100, NRSM 101, NRSM 102. (F) Methods which can be used by private operators as well as state and federal land managers to identify site potential, inventory forage resources, evaluate range and pasture condition, estimate stocking rates, and measure forage utilization by wildlife and livestock

## **NRSM 236 Small Pasture Management: 1 Credits (1 Lec)**

PREREQUISITE: ANSC 100, NRSM 101, NRSM 102 or consent of instructor. (Sp) Management of small acreages (< 50 acre) to produce forage for horses and non-commercial livestock. Topics include determination of site productivity, plant and animal response to grazing, forage production, protection of water quality and controlling invasive plants. Field trips include operations with successful grazing programs and problem areas

## **NRSM 240 Natural Resource Ecology: 3 Credits (2 Lec, 1 Lab)**

PREREQUISITE: NRSM 101 or consent of instructor. (F) Focus on the role of physical and biotic processes on ecosystem function, including natural and managed ecosystems. Emphasis on rangelands, wildlife habitat, watersheds, and disturbed environments

## **NRSM 290R Undergraduate Research: 1-6 Credits (1-6 Other)**

PREREQUISITE: Consent of instructor and approval of department head. (F, Sp, Su) Directed undergraduate research which may culminate in a written work or other creative project. Course will address responsible conduct of research. May be repeated  
Repeatable up to 99 credits.

## **NRSM 291 Special Topics: 1-3 Credits (1 Lec)**

PREREQUISITE: None required but some may be determined necessary by each offering department. Courses not required in any curriculum for which there is a particular one-time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number  
Repeatable up to 12 credits.

## **NRSM 292 Independent Study: 1-3 Credits (1 Other)**

PREREQUISITE: Consent of instructor and approval of department head. (F, Sp, Su) Directed research and study on an individual basis  
Repeatable up to 6 credits.

## **NRSM 330 Fire Ecology and Mgmt: 3 Credits (2 Lec, 1 Lab)**

PREREQUISITE: NRSM 101 or NRSM 240 or BIOE 370. (F) This course covers the wildlife patterns that shape and define western rangeland and forest ecosystems. Discussions on the historical role of fire will provide the background for using prescribed fire to accomplish a broad range of habitat management goals

## **NRSM 350 Vegetation of Western Wildlands: 3 Credits (2 Lec, 1 Lab)**

PREREQUISITE: NRSM 240, BIOO 230, and either AGSC 454 or BIOO 435

COREQUISITE: NRSM 351. (Sp) Identification of commonly occurring plants of western North American wildlands and rangelands. Important ecological and management relationships of the plants will be emphasized

## **NRSM 351 Biomes of Western Wildlands: 2 Credits (2 Lec)**

PREREQUISITE: NRSM 240

COREQUISITE: NRSM 350. (Sp) Climatic, physical, and biological interactions of natural biomes. The structure of western North American wildland and rangeland biomes will be considered in detail

## **NRSM 353 Grazing Ecology and Management: 3 Credits (2 Lec, 1 Lab)**

PREREQUISITE: NRSM 101, NRSM 102, and NRSM 240. (Sp)

Ecological perspectives of livestock grazing in the major rangeland biomes of the western United States and southern Canada. Impacts on soils, individual plants, plant communities, livestock, wildlife, and hydrology will be reviewed in the scientific literature. Offered spring

## **NRSM 421 Holistic Thought/Mgmt: 4 Credits (4 Lec)**

PREREQUISITE: Junior standing. Application of holism and systems thinking to natural and human resource management issues. Learn about the role of adaptability, resilience, and collaborative decision making for the long-term sustainability of socio-ecological systems. Use of real cases from the Greater Yellowstone Ecosystem and other locations

## **NRSM 430 Natural Resource Law: 3 Credits (3 Lec)**

PREREQUISITE: Junior standing and one of: WRIT 201, WRIT 221, or HONR 202IH; or consent of instructor. (F) Examines major natural resources laws, emphasizing the federal model. A modified case study approach is used to review legislation and related court cases governing natural resources, including water, minerals, timber, range, wildlife, recreation, and wilderness

## **NRSM 453 Habitat Inventory and Analysis: 3 Credits (2 Lec, 1 Lab)**

PREREQUISITE: NRSM 240 or BIOE 370, STAT 216 or BIOB 318, and Junior standing. (F) Focus on collecting, analyzing, and interpreting measures of rangeland resources including plant, animal, soil, and watershed components. Emphasis on sampling objectives, field procedures, monitoring, and evaluation

## **NRSM 455 Riparian Ecology & Management: 3 Credits (2 Lec, 1 Lab)**

PREREQUISITE: ENSC 245IN and NRSM 240 or ENSC 272CS or EARTH 303 or BIOE 370. (Sp) This course will provide an overview of one of the most ecologically diverse ecosystems in western North America. Students will have the opportunity to study the physical and biological processes which shape and maintain riparian ecosystems. A field laboratory will provide experience in biological and physical monitoring methodologies that are central to land management decisions

## **NRSM 490R Undergrad Research: 1-6 Credits (1 Other)**

PREREQUISITE: Consent of instructor and approval of department head. (F, Sp, Su) Directed undergraduate research which may culminate in a research paper, journal article, or undergraduate thesis  
Repeatable up to 12 credits.

## **NRSM 491 Special Topics: 1-4 Credits (0)**

PREREQUISITE: Course prerequisites as determined for each offering. Courses not required in any curriculum for which there is a particular one-time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number  
Repeatable up to 12 credits.

**NRSM 492 Independent Study: 1-3 Credits (1-3 Other)**

PREREQUISITE: Junior standing, consent of instructor and approval of department head. (F, Sp, Su) Directed research and study on an individual basis

Repeatable up to 6 credits.

**NRSM 494 Seminar: 1 Credits (1 Other)**

PREREQUISITE: Junior standing and as determined for each offering. () Offered as needed based on student demand. Topics offered at the upper division level which are not covered in regular courses. Students participate in preparing and presenting discussion material

Repeatable up to 4 credits.