

# RANGE SCIENCE (RNGE)

## RNGE 240 Forage Crop and Pasture Management

**Crosslisted with:** AGRO 240, GRAS 240

**Prerequisites:** AGRO/HORT 131 or BIOS 101 or LIFE 120

**Description:** Principles basic to the establishment, management, and utilization of forage crops and pastures. Plant identification and selection, seeding, fertilization, irrigation, forage quality and utilization, hay and silage preservation, and grazing management. The role of forages and ranges in developing a sustainable agriculture.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Format:** LEC

**Offered:** FALL/SPR

**Prerequisite for:** AGRO 340, RNGE 340, GRAS 340; AGRO 445, AGRO 845, ASCI 451, ASCI 851, RNGE 445

## RNGE 242 North American Wildland Plants

**Crosslisted with:** AGRO 242, HORT 242, GRAS 242

**Prerequisites:** Permission.

**Notes:** AGRO/RNGE 240 recommended.

**Description:** Identification and description of two-hundred important wildland plants of North America. Characteristics of these plants evaluated in terms of management implications.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 4

**Format:** LEC

**Offered:** FALL/SPR

## RNGE 295 Internship in Agronomy

**Crosslisted with:** AGRO 295, SOIL 295

**Prerequisites:** Sophomore standing and completion of internship approval form. The internship proposal is subject to approval by the department.

**Description:** Participation in agronomic applications and in agronomy-related areas of agribusiness; agronomic research in lab, greenhouse, or field; participation in farming practices other than those in which the student has had previous experience; or preparation of teaching materials.

**Credit Hours:** 1-3

**Min credits per semester:** 1

**Max credits per semester:** 3

**Max credits per degree:** 5

**Format:** FLD

## RNGE 340 Range Management and Improvement

**Crosslisted with:** AGRO 340, GRAS 340

**Prerequisites:** AGRO 240.

**Description:** The principles of range management within the ecosystem framework. Range improvement practices and grazing systems; plant control using biological, chemical and mechanical factors; prescribed burning; range seeding; range fertilization; and the integration of range with other forage resources.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Format:** LEC

**Offered:** SPRING

**Prerequisite for:** AGRO 445, AGRO 845, ASCI 451, ASCI 851, RNGE 445

## RNGE 440 Great Plains Ecosystem

**Crosslisted with:** AGRO 440, AGRO 840, NRES 840, NRES 440, GRAS 440

**Prerequisites:** Junior standing.

**Notes:** BIOS 101 and 101L, or equivalent, recommended.

**Description:** Characteristics of Great Plains ecosystems, interrelationships of ecological factors and processes, and their application in the management of grasslands. Interactions of fire, vegetation, grazing animals and wildlife.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Format:** LEC

**Offered:** SPRING

## RNGE 441 Perennial Plant Function, Growth, and Development

**Crosslisted with:** AGRO 441, AGRO 841, HORT 441, HORT 841, GRAS 441

**Prerequisites:** AGRO 325 or equivalent.

**Description:** Principles of crop physiology and developmental morphology in relation to function, growth, development, and survival of perennial forage, range, and turf plants. The relationship of physiology and morphological development on plant use and management.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Format:** LEC

**Offered:** SPRING

## RNGE 442 Wildland Plants

**Crosslisted with:** AGRO 442, AGRO 842, NRES 842, NRES 442, GRAS 442

**Prerequisites:** Junior standing.

**Notes:** BIOS 101 and 101L, or equivalent, recommended.

**Description:** Wildland plants that are important to grassland and shrubland ecosystem management and production. Distribution, utilization, classification, identification (including identification by vegetative parts), uses by Native Americans, and recognition of grasses, forbs, shrubs, exotic and wetland plants.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Format:** LEC

**Offered:** FALL

## RNGE 444 Ecosystem Monitoring and Assessment

**Crosslisted with:** AGRO 444, AGRO 844, NRES 844, NRES 444, GRAS 444

**Prerequisites:** Junior standing.

**Notes:** NRES 220 or equivalent, recommended.

**Description:** Measurement and monitoring of the important vegetation and environmental factors used to develop management guidelines in grasslands, savannas, woodlands, and wetlands. Emphasis on using ecosystem monitoring protocols for assessment of wildlife habitat, fuels management for wild-land fire, livestock production, and watershed function. Requires field sampling and travel to local field sites.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Format:** LEC

**Offered:** FALL

**RNGE 445 Livestock Management on Range and Pasture**

**Crosslisted with:** AGRO 445, AGRO 845, ASCI 451, ASCI 851

**Prerequisites:** ASCI 250 and AGRO 240 or 340.

**Notes:** AECN 201 recommended.

**Description:** Analyzing the plant and animal resources and economic aspects of pasturage. Management of pasture and range for continued high production emphasized.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Format:** LEC

**ACE:** ACE 10 Integrated Product

**RNGE 495 Grasslands Seminar**

**Crosslisted with:** AGRO 495, ENTO 495, GRAS 495, HORT 495, NRES 495, SOIL 495

**Prerequisites:** Junior standing.

**Description:** Topic varies and deals with different aspects of forage and/or range and/or livestock, turf and/or landscape grasses, natural habitats, and wetlands.

**Credit Hours:** 1-2

**Min credits per semester:** 1

**Max credits per semester:** 2

**Max credits per degree:** 4

**Format:** LEC

**RNGE 496 Independent Study**

**Crosslisted with:** AGRO 496, AGRO 896, SOIL 496

**Credit Hours:** 1-6

**Min credits per semester:** 1

**Max credits per semester:** 6

**Max credits per degree:** 12

**Format:** IND

**RNGE 499H Honors Thesis**

**Crosslisted with:** AGRO 499H, SOIL 499H

**Prerequisites:** Admission to the University Honors Program and permission.

**Notes:** AGRI 299H recommended.

**Description:** Conduct a scholarly research project and write a University Honors Program or undergraduate thesis.

**Credit Hours:** 3-6

**Min credits per semester:** 3

**Max credits per semester:** 6

**Max credits per degree:** 6

**Format:** IND