

# Range Science (RNG)

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**RNG 194. Individual Study. 1-5 Credits.**

**RNG 196. Field Experience. 1-15 Credits.**

**RNG 213. Rangeland Sampling Techniques. 3 Credits.**

Introduction to rangeland aquatic, invertebrate, soil, and vegetation sampling techniques, and the proper procedures for basic data entry and interpretation. Prereq: RNG 336.

**RNG 225. Natural Resource & Agro-Ecosystems. 3 Credits.**

Introduction to scientific theories and their relation to natural resources and agriculture. Influence of these theories on current perspectives toward the environment. 3 lectures. Cross-listed with NRM 225.

**RNG 294. Individual Study. 1-5 Credits.**

**RNG 326. Modeling of Range and Agro-Ecosystems. 3 Credits.**

Introduction and applications of systems analysis and simulation modeling to agriculture, biology, range ecology, and natural resources management. 2 lectures, 1 two-hour laboratory. (even years).

**RNG 336. Introduction to Range Management. 3 Credits.**

Principles of range management which include plant identification, range evaluation, and range improvement. 3 lectures. F.

**RNG 394. Individual Study. 1-5 Credits.**

**RNG 397. Fe/Coop Ed/Internship. 1-15 Credits.**

**RNG 450. Range Plants. 3 Credits.**

Identification, distribution, and forage value of important U.S. range plants. 1 lecture, 2 two-hour laboratories. Prereq: BOT 314. Cross-listed with BOT 450. F {Also offered for graduate credit - see RNG 650.}.

**RNG 452. Geographic Information Systems in Range Survey. 3 Credits.**

Analysis of methods for determining range composition, condition, and productivity. Emphasis will be given to the use of Geographic Information Systems. 3 lectures. Prereq: RNG 336. F (odd years) {Also offered for graduate credit - see RNG 652.}.

**RNG 453. Rangeland Resources Watershed Management. 3 Credits.**

Study of the management of physical/biological settings and processes along with human activities on water and watersheds considering preventative and restorative strategies in a rangeland setting. Prereq: RNG 336 or NRM 225. Cross-listed with NRM 453. {Also offered for graduate credit - see RNG 653.}.

**RNG 454. Wetland Resources Management. 3 Credits.**

Principles of wetland systems, wetland management, wetland functions, wetland delineation, wetland assessment, and wetland improvement. Prereq: SOIL 210. Cross-listed with NRM 454 and SOIL 454. F (even years) {Also offered for graduate credit - see RNG 654.}.

**RNG 456. Range Habitat Management. 3 Credits.**

Study of specific techniques and systems approaches to maintenance and improvement of rangeland ecosystems. 3 lectures. Prereq: RNG 336. S (odd years) {Also offered for graduate credit - see RNG 656.}.

**RNG 458. Grazing Ecology. 3 Credits.**

Grazing processes and systems and their effects on plants and herbivores. 3 lectures. Prereq: RNG 336. S (even years) {Also offered for graduate credit - see RNG 658.}.

**RNG 460. Plant Ecology. 3 Credits.**

Ecological structure, processes, and patterns observed with plant communities and populations as influenced by environmental conditions. Illustrations provided with local fieldwork. Prereq: BIOL 151, BIOL 151L. Cross-listed with BOT 460. {Also offered for graduate credit - see RNG 660.}.

**RNG 462. Natural Resource and Rangeland Planning. 3 Credits.**

Capstone experience for School of Natural Resources Sciences majors: students use advanced planning tools and different management strategies to demonstrate integrated knowledge in managing public and private natural resources. Prereq: at least senior standing and must be a Natural Resources Management, Range Science or Soil Science major. Cross-listed with NRM and SOIL. {Also offered for graduate credit - see RNG 662.}.

**RNG 491. Seminar. 1-5 Credits.**

**RNG 492. Study Abroad. 1-15 Credits.**

**RNG 494. Individual Study. 1-5 Credits.**

**RNG 496. Field Experience. 1-15 Credits.**

**RNG 650. Range Plants. 3 Credits.**

Identification, distribution, and forage value of important U.S. range plants. 1 lecture, 2 two-hour laboratories. Cross-listed with BOT 650. F {Also offered for undergraduate credit - see RNG 450.}.

**RNG 652. Geographic Information Systems in Range Survey. 3 Credits.**

Analysis of methods for determining range composition, condition, and productivity. Emphasis will be given to the use of Geographic Information Systems. 3 lectures. F (odd years) {Also offered for undergraduate credit - see RNG 452.}.

**RNG 653. Rangeland Resources Watershed Management. 3 Credits.**

Study of the management of physical/biological settings and processes along with human activities on water and watersheds considering preventative and restorative strategies in a rangeland setting. Cross-listed with NRM 653. {Also offered for undergraduate credit - see RNG 453.}.

**RNG 654. Wetland Resources Management. 3 Credits.**

Principles of wetland systems, wetland management, wetland functions, wetland assessment, and wetland improvement. {Also offered for undergraduate credit - see RNG 454.}.

**RNG 656. Range Habitat Management. 3 Credits.**

Study of specific techniques and systems approaches to maintenance and improvement of rangeland ecosystems. 3 lectures. S (odd years) {Also offered for undergraduate credit - see RNG 456.}.

**RNG 658. Grazing Ecology. 3 Credits.**

Grazing processes and systems and their effects on plants and herbivores. 3 lectures. S (even years) {Also offered for undergraduate credit - see RNG 458.}.

**RNG 660. Plant Ecology. 3 Credits.**

Ecological structure, processes, and patterns observed with plant communities and populations as influenced by environmental conditions. Illustrations provided with local fieldwork. Cross-listed with BOT 660. {Also offered for undergraduate credit - see RNG 460.}.

**RNG 662. Natural Resources and Rangeland Planning. 3 Credits.**

Capstone experience for School of Natural Resources Sciences majors: students use advanced planning tools and different management strategies to demonstrate integrated knowledge in managing public and private natural resources. Cross-listed with NRM and SOIL. {Also offered for undergraduate credit - see RNG 462.}.

**RNG 716. Agrostology. 3 Credits.**

Identification and description of U.S. grasses and grass-like plants. 2 lectures, 2 two-hour laboratories. Cross-listed with BOT 716. F (even years).

**RNG 717. Aquatic Vascular Plants. 2 Credits.**

Identification and description of aquatic vascular plants. 1 lecture, 2 two-hour laboratories. Cross-listed with BOT 717. F (odd years).

**RNG 765. Analysis Of Ecosystems. 3 Credits.**

Introduction to advanced statistical techniques to evaluate plant communities, plant-animal interactions, and plant-soil relationships. Emphasis on multivariate analysis. 2 lectures, 1 two-hour laboratory. S (even years).

**RNG 790. Graduate Seminar. 1-5 Credits.**

**RNG 791. Temporary/Trial Topics. 1-5 Credits.**

**RNG 793. Individual Study/Tutorial. 1-5 Credits.**

**RNG 794. Practicum/Internship. 1-8 Credits.**

**RNG 795. Field Experience. 1-15 Credits.**

**RNG 796. Special Topics. 1-5 Credits.**

**RNG 797. Master's Paper. 1-3 Credits.**

**RNG 798. Master's Thesis. 1-10 Credits.**

**RNG 899. Doctoral Dissertation. 1-15 Credits.**