

Department of Rangeland and Wildlife Sciences

Contact Information

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Department curriculum is designed to provide students with foundation knowledge in basic and applied Rangeland and Wildlife Management (RWSC). The department emphasizes development of creative thinking and communication skills that are crucial for success. Upon successful completion of the department-recommended curriculum, RWSC majors can qualify as an Associate Wildlife Biologist by The Wildlife Society, and as a Rangeland Specialist by the Society for Range Management.

The curriculum balances presentation of theory in the classroom with hands-on experience in the field. Wildlife majors have the opportunity to work and study on the South Pasture Wildlife Research Area, a facility dedicated to wildlife management and research just south of Kingsville, Texas. The faculty are involved in research that keeps them abreast of current thinking in the range and wildlife sciences to provide students with up-to-date information.

The department assesses its program by administering comprehensive examinations to undergraduates when they enter the program and during their last semester before graduation. Also, the department chair interviews graduating seniors to determine their impressions on strengths, weaknesses and needs of the program. Results from these activities are used to continually update and improve undergraduate education.

Students majoring in Rangeland and Wildlife Science (RWSC) must have a minimum GPA of 2.5 within the College of Agriculture and Natural Resources, in order to graduate with a Bachelor of Science degree. Satisfaction of prerequisite courses are required before a student can enroll in the next level course.

Graduates from the department find employment with state and federal agencies or with ranches and other private businesses. The undergraduate curriculum also prepares students for continued education at the master of science level.

University Teaching and Research Facilities

The University Teaching and Research Facilities include the South Pasture Wildlife Research Area (SPWRA), which is a 254-acre tract of native brush and grasslands that is located approximately 6 miles south of TAMUK campus. The property borders the King Ranch to the west and host a diversity of wildlife species found in southern Texas. The facility houses an outdoor laboratory where students will gain hands-on experiences in their courses. Wildlife surveys and captures, telemetry, prescribed fires, and habitat manipulations are commonly performed at SPWRA. Undergraduate and graduate students have the opportunity to conduct independent research on SPWRA. The TAMUK Wildlife Society holds several meetings at the facility. The Tio and Janell Kleberg Wildlife Research Park is named after long-time supporters of the Caesar Kleberg Wildlife Research Institute, Tio and Janell Kleberg, and contains five facilities. These include the Buddy Temple Wildlife Pathology and Diagnostic Lab, the Albert and Margaret Alkek Ungulate Research Facility, the Duane M. Leach Research Aviary, the South Texas Natives Research Facility and the Caesar Kleberg Wildlife Center, a South Texas-style conference center and botanical garden on the edge of the main campus.

Range and Wildlife Management (RWSC)

RWSC 1110 Wildlife Sciences Profession 1 SCH (1-0)

Elementary studies introducing the wildlife profession. Emphasis on departmental requirements, certification and careers, and species identification and taxonomy of North American Wildlife.

RWSC 2330 Range and Wildlife Mgmt 3 SCH (3-0)

Introduction to the history of the range and wildlife professions. The role of habitat, harvest theory, human dimensions, livestock interactions, exotic species, ecology to range land management, endangered species and non-game species as they relate to wildlife management. Emphasis on plant-soil-animal relationships. Prerequisite: RWSC 1110. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 2331 Range and Wildlife Ecology 3 SCH (3-0)

General overview of basic range and wildlife ecological concepts including natural selection, food webs, trophic levels, competition, predation, niche theory, life-history patterns and succession. Prerequisite: RWSC 2330. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 3310 Wildlife Mgmt Techniques 3 SCH (2-2)

Field and laboratory techniques used in wildlife management and research: aging, sexing, marking, capture, monitoring, disease surveys, food habitats and nutrition analyses, habitat assessment and population estimation. Prerequisites: BIOL 1107, BIOL 1307, and RWSC 2330, and junior standing, or instructor consent. Non-RWSC majors and minors require approval from Department Chair.

Fee: \$25.00

RWSC 3328 Rangeland Plants 3 SCH (2-2)

Basic rangeland plant physiology and morphology, plant community function and structure, and plant community response to disturbance. Identification and taxonomy of range grasses, forbs and shrubs; areas of adaptation, utilization and economic importance. Emphasis on the range plants of Texas. Prerequisites: RWSC 2331 and junior standing. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 3350 Art Desn Wildlife Photo 3 SCH (2-4)

This is the first of six courses in the Wildlife Photography Program. Learn about powerful image making from cave paintings through the American Civil War to the moon landing and beyond. The art perspective will be applied by the study to visually document wildlife and their ecology in the field and the laboratory. Emphasis on DSLR cameras, lenses, choosing and using perspective, lighting and related aspects of photographic skills, camera controls to enhance creativity, and learning how to incorporate compositional elements. Prerequisite: None. Course does not count toward RWSC major or minor. Successful completion of this course and RWSC 3352 and RWSC 3354 can earn a student a Certificate in Wildlife Photography. Completion of all six courses will qualify for a Minor in Wildlife Photography. Fee \$25.00

Fee: \$25.00

RWSC 3351 Adv. Digital Wildlife Photo 3 SCH (2-4)

This is the second of six courses in the Wildlife Photography Program. Emphasis on the development of improved technical, creative, and compositional wildlife photographic skills. Topics include use of lenses for creativity and the effects of light, color, and design in detail. Principles of creativity, craftsmanship, and applied photographic theory will be used to support technical applications. Prerequisite: RWSC 3350 or approval by faculty. Course does not count toward RWSC major or minor. Completion of all six courses will qualify for a Minor in Wildlife Photography. Fee \$25.00

Fee: \$25.00

RWSC 3352 Macro Wildlife Photo 3 SCH (2-4)

This is one of six courses in the Wildlife Photography Program. Topics covered include technology, equipment, techniques, and the art of close-up and macro photography. It will illustrate the procedures and equipment to make images at-or near life size or larger of various subjects from small plants, animals, and habitats. Prerequisite: None. Course does not count toward RWSC major or minor. Successful completion of this course, RWSC 3350, and RWSC 3354 can earn a student a Certificate in Wildlife Photography. Completion of all six courses will qualify for a Minor in Wildlife Photography. Fee \$25.00

Fee: \$25.00

RWSC 3353 Wildlife Photographic Tech. 3 SCH (2-4)

This is one of six courses in the Wildlife Photography Program. Examines the technology, equipment, techniques, and the art of remote, flash, and alternative light sources for digital photography in the field and the lab. Students will learn more about the business of photography as applied to wildlife science, conservation and ecotourism. Prerequisite: RWSC 3350 or approval by faculty. Course does not count toward RWSC major or minor. Completion of all six courses will qualify for a Minor in Wildlife Photography. Fee \$25.00

Fee: \$25.00

RWSC 3354 Comm Publ Wildlife Photo 3 SCH (2-4)

This is one of six courses in the Wildlife Photography Program. Learn how to better manage your photographs for publication and tell your wildlife or environmental story to the masses. Students will learn the use of computer software processing to improve digital wildlife images and to better prepare images for printing, publication and further distribution of their images. Students will learn how to use software packages of Lightroom and Photoshop. Prerequisite: None. Course does not count towards RWSC major and minor. Successful completion of this course, RWSC 3350, and RWSC 3352 can earn a student a Certificate in Wildlife Photography. Completion of all six courses will qualify for a Minor in Wildlife Photography. Fee \$25.00

Fee: \$25.00

RWSC 3355 Wildlife Photographic Tech II 3 SCH (2-4)

This is the final of six courses in the Wildlife Photography Program. This course will combine many cumulative studied wildlife photography skills and methods useful into a faculty-monitored, independent study project. Students will design their project and, with the approval of faculty, explore various subjects in each of the various assignments designed to develop methods to reveal a subject's characteristics in various scientific applications. The course will expose students to the processes required to produce scientific research as well as scientific posters. The final objective will be to produce a peer-reviewed wildlife photographic article and presentation at the end of the semester. Prerequisites: RSWC 3350, RWSC 3351, RWSC 3352, RWSC 3353, and RWSC 3354. Course does not count toward RWSC major or minor. Completion of all six courses will qualify for a Minor in Wildlife Photography. Fee \$25.00

RWSC 3380 Rangeland Improvements 3 SCH (3-0)

Range improvement techniques, practices and expected results in various situations. Improvements in plant genetics, morphology, and physiology using various range techniques will be emphasized. Desirability, including economics, of selected range improvements. Prerequisite: RWSC 2331. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 3385 Wildlife Policy Law & PR (WI) 3 SCH (2-2)

Legislation, administration, public relations and biopolitics as they relate to range and wildlife management. Prerequisite: RWSC 2331. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 3390 Spec Tops in Range and Nat Res 3 SCH (2-2)

Selected topics not currently available in existing courses. May be repeated once under different topic. Prerequisites: RWSC 2331 and junior standing. Non-RWSC majors and minors require approval of Department Chair.

RWSC 3995 Internship 1-9 SCH (1-9)

Supervised and planned work experience under college guidelines in an agriculture enterprise or agency setting. Practical application of knowledge and skills of major subject area without classroom consultation, but with formal evaluation. May be repeated for a maximum of nine semester hours toward degree; may not count toward minor. Prerequisite: RWSC 2331; approval of department chair.

RWSC 4171 Wildlife Capstone Seminar 1 SCH (1-0)

Holistic knowledge of wildlife management principles and practices. Prerequisite: senior standing in graduating semester or department chair approval.

RWSC 4319 Methods in Rangeland Ecol 3 SCH (2-2)

Methods of vegetation sampling and community analysis, range condition and trend analysis, estimating stocking rates, wildlife habitat evaluation, use of expert systems. Prerequisites: RWSC 3328 and ANSC 4308 Non-RWSC majors and minors require approval of Department Chair.

Fee: \$30.00

RWSC 4320 Prescribed Burning 3 SCH (2-2)

Science and art of prescribed burning; review science and ecology concepts basic to prescribed burning and discuss management aspects such as firing techniques, fire weather, fireline safety and smoke management. Effects of fire on plant genetics, morphology, and physiology. Prerequisites: RWSC 2331 and RWSC 3310, and junior standing. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 4325 Grazing Management & Nutrition 3 SCH (3-0)

Physiological processes, morphological development, nutritional qualities and palatability of range plants as a basis for grazing management strategies for domestic and wild animals. Prerequisites: RWSC 3310, RWSC 3328, RWSC 3380 or RWSC 4320. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 4370 Ecology & Mgmt of Game Birds 3 SCH (2-2)

Life-history characteristics, population dynamics, population monitoring, harvest management and habitat management of North American game birds. Prerequisite: consent of instructor.

Fee: \$25.00

RWSC 4380 Waterfowl and Wetlands 3 SCH (3-0)

The ecology and management of North American waterfowl and wetlands. Topics include unique breeding ecology, migration strategies, and management of waterfowl; characteristics of wetlands, wetland classification, biological adaptations to wetlands, wetland management, the functional roles of wetlands and their importance to wildlife. Prerequisites: RWSC 2331, RWSC 3310, and junior standing. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 4382 Large Mammal Eco and Managemnt 3 SCH (2-2)

Methods and techniques of managing and evaluating the habitat and requirements of major North American large mammals. Weekend field trips. Prerequisites: RWSC 2331, RWSC 3310, junior standing. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 4383 Ecol of Arid and Semiarid Land 3 SCH (3-0)

Ecological principles of arid and semiarid land ecosystems are introduced. These principles are used to illustrate consequences of deliberate and unintentional human actions on arid and semiarid environments. Prerequisites: RWSC 2331 and RWSC 3310, and junior standing. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 4385 Human-Wildlife Conflict Resolution 3 SCH (3-0)

Beliefs, attitudes, and behaviors relative to wildlife and wildlife conflicts are examined in the context of natural resource planning, decision-making and actions. Introduction to theory and practice of assessing and controlling human-wildlife conflicts. Prerequisites: RWSC 2331 and junior standing. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 4387 Landscape Ecology 3 SCH (3-0)

Basic understanding and practical applications of landscape ecology. Relationships between spatial patterns and processes, and methods to evaluate the use of ecological, biological, and agricultural knowledge, understanding, and techniques that address landscape level processes. Prerequisites: GEOG 2472, RWSC 2331, and junior standing. Non-RWSC majors and minors require approval of Department Chair.

Fee: \$25.00

RWSC 4395 Wildlife Research & Sci. Comm. 1-3 SCH (1-3)

Literature review with a laboratory field problem. Communication with the scientific community in both oral and written forms, public speaking, and use of media. May be repeated for a total of 6 semester hours; only 3 hours may count toward a minor. Prerequisites: RWSC 2331 and approval of supervising professor and Department Chair.

Fee: \$25.00

Majors

- Agriculture - Range and Wildlife Management, B.S.

Minors

- Range and Wildlife Management, Minor
- Wildlife Photography, Minor

Certificates

- Wildlife Photography, Certificate