Tarleton State University Policies Part of Syllabus

Americans with Disabilities Act (ADA)

Tarleton State University is committed to complying with the Americans with Disabilities Act (www.ada.gov) and other applicable laws. If you are a student with a disability seeking an accommodation for this course, please contact Disability Resources and Testing at 254.968.9400 or visit https://www.tarleton.edu/drt/

Academic Integrity Statement and Policy

Tarleton State University's core values are integrity, leadership, tradition, civility, excellence, and service. Central to these values in integrity, which is maintaining a high standard of personal and scholarly conduct. Academic integrity represents the choice to uphold ethical responsibility for one's learning within the academic community, regardless of audience or situation.

Academic Civility Statement

Students are expected to interact with professors and peers in a respectful manner that enhances the learning environment. Professors may require a student who deviates from this expectation to leave the face-to-face (or virtual) classroom learning environment for that particular class session (and potentially subsequent class sessions) for a specific amount of time. In addition, the professor might consider the university disciplinary process (for Academic Affairs/Student Life) for egregious or continued disruptive behavior.

Academic Excellence Statement

Tarleton holds high expectations for students to assume responsibility for their own individual learning. Students are also expected to achieve academic excellence by:

- Honoring Tarleton's core values
- Upholding high standards of habit and behavior
- Maintaining excellence through class attendance and punctuality
- Preparing for active participation in all learning experiences
- Putting forth their best individual effort
- Continually improving as independent learners
- Engaging in extracurricular opportunities that encourage personal and academic growth
- Reflecting critically upon feedback and applying these lessons to meet future challenges

Academic Affairs Service Statement

Tarleton faculty, staff, and students are expected to model responsible citizenship through service activities that promote personal and academic growth while enhancing the university, local, regional, national, and global communities. These activities will foster a culture of academic/public engagement that contributes to the achievement of the university's mission and core values.

Type of F

Tarleton utilizes a refined grading system as it relates to failing grades in a course based upon the student's attendance, as follows: A student who never attended receives a grade 'F0'; a student

who stopped attending at some point of the semester receives an 'FX' grade; and a student that who attended the entire semester receives an 'F' grade.

University Policy

Students are responsible for knowing and abiding by the policies and information contained in the Tarleton Student Handbook. [See the Student Handbook]

Academic Conduct

Any student guilty of academic dishonesty, cheating, or plagiarism in academic work shall be subject to disciplinary action. [See the Student Handbook] The instructor may initiate disciplinary action in and case of academic misconduct.

Academic Honesty Statement

Tarleton State University expects its students to maintain high standards of personal and scholarly

conduct. Students guilty of academic dishonesty are subject to disciplinary action. Academic dishonesty includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. The faculty member is responsible for initiating action for each case of academic dishonesty that occurs in his or her class.

RNRM 4312.-0\D

RANGE IMPROVEMENT **AND** DEVELOPMENT

Qredits: 3

Meets:

Place: [redacted]es and Human Services
Time:: 8-8:50 Monday Wednesday; Lecture
3-4:50 Monday Laboratory

Instructor: Randy E. **Rosiere**
PhD. New **Mexico** State University
Office: 208 Agriculture; Phone 968-9218
Office Hours: See accompanying handout.

Course Description: Principles and practices in development of ranges and refui6Il1tation of deteriorated rangeland. Concepts and **advances** in noXiQUS plant control, range reseeding, fart1lizat ion, **soil** and water oonaervat1an and grazing management technology. Economic and political feasibility of range development and improvements.

a::ourse Objectives:

- 1.Give students a thorough understanding of the principles and practices of range improvements at the professional level and present state of the art.

2. Impart a. detailed knowledge of development, development techniques and costs-benefits thereof for ranges and related resources.

1. Present the fundamental concepts and specific applications of science and technology for reclamation and rehabilitati0n of devasted land (emphasis on mined and quarried ranges and forests).

4, Illustrate integration of improvement, devel9pment and reclamation with ranch planning and management, including economic analysis for both private and public range.

Student Learning Outcomes:

Range Improvement & Development Learning Outcomes:

Knowledge Outcomes: Students will learn traditional as well as current methods and practices of improving sucessional status of natural and naturalized grazing lands. Students should learn mechanical, chemical, biological and pyric management (prevention, control, and eradication) of noxious plants (weeds and brush); range restoration through range reseeding and replanting, workable practices for reclamation of drastically altered range such as mined land; control of animal (invertebrate and vertebrate) pests; amendments of range soils, land surface modifications; and developments such as watering systems and fences. Students should learn the history, economics, and cultural traditions, including agricultural policies, as well as the physical-chemical and biological basis to range betterment and use.

Skill Outcomes: students will learn numerous applications of improvement and development practices such as arithmetic calculation of herbicide (and other pesticide) formulations and application rates, targeted grazing/browsing, planning and execution of prescribed fire, trapping and deterrence methods for animal pest management, mechanics, calibration, and operation of sprayers and planters, basic erection and repair of windmills, and methods of fence construction. Students will learn to derive values for machine horsepower. Over the semester and for a final term project students will develop a range improvement or a ranch management plan.

Value Outcomes: Students will develop their individual views of land husbandry and what it means to

leave the land better than you found it.

Text (required):

Vallentine, J. F. 19819. Range Development and Improvements. Brigham Young University Press, Pr0vo, Utah.

References:

See accompanying sheet.

Field Trip:

Required (see schedule for date).

Grading:

Item	% of Grade	Points
Two one-hour exams	50	200
Final exam	25	100
Range improvement plan	25	100

There is no fixed formula for affixing course grade, but generally a percentage score of 90, 80, 70, and 60 is the minimum for earning grades *A, B,* C, and D, respectively.

Grades are not "curved", so there is no limit on the number of students who can receive any letter grade.

Academic Integrity: In keeping with ethics of the American Association of University Professors •t.to foster honest academic conduct and to assure that the evaluation of students reflects their true merit", this professor pledges to uphold the social contract between pupil and professor. Grades and grading will be based strictly on scholarship, without regard to personality, background, race, sec., religion, nationality, etc. In turn, students are expected to do honest work in assuring their air evaluation. Anyone caught in dishonest conduct, whether cheating on tests, plagiarizing reports or papers, removing reading or test materials from the library, or other such juvenile and unethical behavior, will be immediately expelled from the class and receive an automatic F in the course.

Attendance: Regular class attendance is regarded by the University and this instructor as a critical part of the scholastic success of the student. Roll will be taken routinely and action consistent with University procedures taken when irregular attendance is jeopardizing student learning Textual material is frequently handed out in class and it is the responsability of students who were absent at that time to obtain this material. Students are encouraged to explain their absence, preferably beforehand, to the instructor and to discuss the subject covered in the missed portion.

Policy on Make-up Exams: Students having excused absences (tho.se due to illness"; deaths in family, extracurricular activities, accidents, etc.) may make up examinations by one or two options:

1. Taking an oral examination which covers only the material tested for the missed portion of the course. This exam must be taken within 10 school days·(2 academic weeks) after a student[1]s return to classes following his absence.
2. Taking a written examination at end of semester which covers all

material presented during the course (ie. one comprehensive make• up test for all students choosing this option).

R. E. Rosiere, PhD

Range Improvement and Development

Range & Ranch Management 4312

COURSE SYLLABUS (ACTUAL SCHEDULE)

Topic	Text Reading Assignment
Part 1	
Intrcduction- What is range improvement and range development? Why, where, where?	Chapter 1
Part 2 (Range Improvements)	
Noxious Plants- Brief review of the brush-weed problem; kinds and levels of manage-ment.	Chapter 2
Mechanical Control I- Manual.	Chapter 4 (pages 88-90)
Mechanical Control Il- Machine.	Chapter 4 (pages 91-124)
Biological Control	Chapter 3
Chemical Control I- Kinds and physiological effects of herbicides; methods of application.	Chapter 5 (pages 125-154)
Chemical Control II- Prescriptions for specific species and range types (compound, quantity and timing of application).	Chapter 5 (pages 154-167)
Pyric Control (Fire 1)- Use of fire for reduction of noxious plants.	Chapter 6 (pages 168-192)
Fire II- Fire as a range improvement tool for other than brush control (improved distribution, browse rejuvenation, etc.).	Chapter 6 (pages 192-214)
Artificial Revegetation I- Deciding and planning range seeding.	Chapter 7
Artificial Revagetation II- Establishment and maintenance of grasses, legumes and shrubs; interseeding; tree planting.	Chapter 8 & Chapter 9 (pages 322-331)

	Outside Reading*
Grazing Management Technology I- Summary of concepts; specialized grazing management.	
Grazing Management Technology II- Grazing systems per se (deferred-and rest rotation; cell grazing systems).	Outside Reading!
Soil & Water Conservation Practices- Waterapreading, pitting, chiseling, ate.	Chapter 9 (pages 335-354)
Range Fertilization- Rationale for and against; recommentations (examples for specific range sites).	Chapter 10
Management of Animal Posts- Control of rodents- lagomorphs, predators and insects; an economic and ecological assessment.	Chapter 11
Part 3 (Range Development)	
Water Facilities- Impondments, springs, wells and windmills, guzzlers, hauling, water tanks.	Chapter 12 (pages 413-453)
Fencing and Corrals- Types, materials, costs and construction; cattleguards, watergaps and pigtrails.	Chapter 12 (pages 432-453)
Part 4	
Reclamation & Rehabilitation- Legal requirements, social implications, current technology (examples from open surface mines, quarries and oil fields).	Outside Reading!! Chapter 9 (pages 354-358, 331-335)
Part 5 (Analysis of Improvements & Development)	
Economic Assessment- Benefit-cost analysis (private and public land); "need" vs. efficiency and effectiveness.	Workman, 1986 Outside Reading
Political Reality - Sometimes and maybe you can whup mesquite, sagebrush and cactus; reestablish climax vegetation; build purty dams; outfox	You won't find this in any textbook.

coyotes and gophers; build fences in rockpiles and git water in the desert-- but can you beat the Sierra Club or live with the Environmental Policy Act?

Public Relations- "College graduates are well-educated and properly trained for range management but know nothing about people management" (a universal quote from public agency administrators).

Lessons from the II school of hard knocksII with illustrations from cow culture, sociology, theology, psychology and political science.

*Heitschmidt, R.K. and J.W. Stuth. 1991. Grazing Management -An Ecological Approach. Timber Press, Portland, Oregon.

!Hodgson, J. and A.W. Illius. 1996. The Ecology and Management of Grazing Systems. CAB International, Wallingford, UK.

!Vallentine, J.F. 1990. Grazing Management. Academic Press, San Diego, California.

!!Bradshaw, A.D. and M.J. Chadwick. 1980. The Restorationof Land - The Ecology and Reclamation of Derelict and Degraded Land. University of California, Berkeley.

!!Cairns, J., Jr. 1995. Rehabilitating Damaged Ecosystems. Lewis Publishers, Boca Raton, Florida.

!!Law, D.L. 1984. Mined-Land Rehabilitation. Van Nostrand Reinhold Company, Inc., Wokingham, England.

!!Schaller, F.W. and P. Sutton. 1978. Reclamation of Drastically Disturbed Lands. Tri-Societies (Agronomy, Crop, Soil), Madison, Wisconsin.