Sul Ross State University
ANSC 4307
Ultrasound & Repro Tech
Fall 2026

Instructor: Rush Carter
Office: RAS
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Office hours: by appointment
Class Period: MW 1-3:30 pm
Location: RAS 132

Course description:

ANSC 4307 Ultrasonography and Reproductive Techniques
Evaluation and application of various techniques to control and determine reproductive functions in livestock. Ultrasonography an assisted reproductive techniques to eliminate infertility and achieve pregnancy in domestic animals.

Recommended Text: Reproduction in farm animals by B. Hafez, animals 2000, Lippincott Williams & Wilkins in English - 7th ed.

Purpose of the course: This course is designed to reinforce and expand student knowledge of basic reproduction in farm animal species. The course will cover technologies utilized in the reproductive management of farm animals with an emphasis on ultrasound.

Student learning outcomes: Students will learn the fundamentals of reproductive physiology and be able knowledgeably operate ultrasound equipment in a field setting. Students will learn industry accepted animal breeding techniques.

Departmental Projected Learning Outcomes:

a) Comprehend the estrous cycle, gestation and parturition in farm animals.
b) Comprehend the role of hormones in the reproductive cycle.
c) Understand the processes involved in pregnancy diagnoses utilizing palpation and ultrasound.
d) Understand breeding techniques and procedures.

Assessment measures: Students will demonstrate a satisfactory level of competency, critical thinking, and knowledge of reproductive physiology of mammals, by achieving a score of 60% or higher on examinations, writing assignments, and homework.

Recommendations for Success: Attend class and participate in all practical exercise activities. I am also available outside of class if you have further questions in person or via email.

Methods of instruction: This course consists of lecture sessions to provide the basic concepts related to animal reproduction and laboratory sessions to apply practical skills and knowledge.

Attendance policy: It is your responsibility to attend class sessions.

Accommodations: Students who believe that they may need accommodation in this course are encouraged to contact the Counseling and Accessibility Services Office: Ferguson Hall 112 (432-837-8203) as soon as possible to ensure that such accommodations are implemented in a timely fashion.

Academic integrity: Students are expected to submit original work without unauthorized assistance. Academic dishonesty, which includes cheating, unauthorized collaboration, plagiarism, fabrication, multiple submissions, and aiding and abetting, will result in a grade of 0 on the work in question. Subsequent instances of academic dishonesty may result in more serious sanctions.

Examinations and grading: You own your grade.

Exams and Quizzes: There will be four exams administered throughout the semester. The first three exams will be given in class and the dates for these are noted on the daily schedule. The fourth exam is the final exam. There will be four announced quizzes administered throughout the semester.

Practical Exercises: These are hands on practical exercises in the classroom and the field. You must be here to get credit. These account for more than half of your grade.

Other Considerations: Exams may include multiple choice, fill in the blank, short answer, and matching questions. Cell phones and programmable calculators are not permitted during exams or quizzes. Due dates for all assignments will be announced in class.

Points available:

4 exams (100 points each)	400 points
4 Quizzes (10 points each)	40 points
Practical Exercises	560 points
Total	**1,000 points**

* I reserve the right to give an unannounced quiz at any time during the semester.

Grading scale:

A = 90-100%
B = 80-89.99%
C = 70-79.99%
D = 60-69.99%
F = 59.99% or below

Schedule of class sessions: This information should be treated as an outline. There may be some alterations in the sequence of topics.

DATE	Lecture	Practical Exercises
Monday, August 24, 2026	Introduction	Dairy cow preg check
Wednesday, August 26, 2026	Bovine	Repro-scan ultrasound familiarization
Monday, August 31, 2026	Bovine	Palpation, ultrasound, breeding techniques
Wednesday, September 2, 2026	Bovine*	Palpation, ultrasound, breeding techniques
Monday, September 7, 2026	Bovine	Palpation, ultrasound, breeding techniques
Wednesday, September 9, 2026	Bovine**	Palpation, ultrasound, breeding techniques
Monday, September 14, 2026	Equine	Palpation, ultrasound, breeding techniques
Wednesday, September 16, 2026	Equine	Palpation, ultrasound, breeding techniques
Monday, September 21, 2026	Equine*	Palpation, ultrasound, breeding techniques
Wednesday, September 23, 2026	Equine	Palpation, ultrasound, breeding techniques
Monday, September 28, 2026	Equine**	Palpation, ultrasound, breeding techniques
Wednesday, September 30, 2026	Sheep and Goats	Palpation, ultrasound, breeding techniques
Monday, October 5, 2026	Sheep and Goats	Palpation, ultrasound, breeding techniques
Wednesday, October 7, 2026	Sheep and Goats*	Palpation, ultrasound, breeding techniques
Monday, October 12, 2026	Sheep and Goats	Palpation, ultrasound, breeding techniques
Wednesday, October 14, 2026	Final**	

Quizzes will be given on dates marked with an *. Test are marked **

Instructor's bibliography: Reproduction in farm animals by B. Hafez, animals 2000, Lippincott Williams & Wilkins in English - 7th ed.