



# ANSC 3313

## Equine Lameness and Rehabilitation

Fall 2022

**Instructor:** Dr. Laura Patterson Rosa  
Office: RAS 105  
E-mail: laura.patterson@sulross.edu  
Phone: (432) 837-8465

**Office Hours:** By appointment

**Lectures:** Tuesday & Thursday 11:00 am – 12:15 pm RAS 132

**Course Description:** This course is designed to provide students with an understanding of the common causes of lameness in sport horses. Fundamentals and advanced principles of conformation, biomechanics, injury prevention and physical rehabilitation will be discussed. Emphasis will be placed on current research in the subject area.

### Student Learning Objectives (SLO):

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Upon completion of this course, students should be able to:

1. Students will demonstrate basic knowledge of what constitutes normal locomotion, the causes of lameness, including common injuries, conformation and management techniques.
2. Students will understand the integration of conformation, biomechanics, training and the development of injury.
3. Students will understand the applications of modern rehabilitative methods.
4. Students will learn to critically evaluate emerging research in the field of equine sports medicine.

### Animal Science Marketable Skills:

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- Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal) for consumption, including storage/handling techniques.
- Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.
- Understanding the implications of new information for both current and future problem solving and decision-making.
- Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. Communicating finding in both oral and written form at a level appropriate for the needs of the audience.

### Animal Science Learning Outcomes (ANSLO):

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- Demonstrate the basic skills of interpreting research data gathered in an agricultural context.
- Apply critical thinking skills to mitigate potential challenges in diverse animal sciences and related agricultural industries.
- Demonstrate the ability to communicate through written, spoken, and graphical methods.

## Accommodations:

Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Alpine students seeking accessibility/accommodations services must contact Mary Schwartze Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email [mschwartze@sulross.edu](mailto:mschwartze@sulross.edu) Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

## Academic Integrity:

The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of their classroom. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. For more information visit: <https://www.sulross.edu/catalog/undergraduate-academic-regulations/>

## SRSU Library Services:

The Sul Ross Library - Bryan Wildenthal Memorial Library in Alpine offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, [library.sulross.edu](http://library.sulross.edu). Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email ([srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu)), or phone (432-837-8123).

## Attendance:

Students MUST arrive promptly to class. If over 25 minutes late to class then student will be considered absent for that day. Documentation of approved absences (personal illness, family emergency etc.) must be presented within 5 days for arrangements to be made to make-up quizzes and assignments. University approved absences for sports and student organizations must be disclosed at least two weeks in advance. Unexcused late assignments will be penalized 25% for the first 24 hours beyond the due date, 50% for 24-48hrs late and will not be accepted thereafter.

## Assessments & Grading:

- First Quiz: 10 points – Demographics and interests. Students must answer quiz to receive the points!
- Quizzes: 12 total, best 10 grades will be considered @ 5 points each = 50 points
- Group Project Presentation: 100 points
- Written Midterm: 120 points
- Written Final: 120 points
- Attendance: Minus 5 points for every absence

Total = 400 points

Percentage	Letter Grade	Meaning	Points
90% - 100%	A	Excellent	4
80% - 89%	B	Good	3
70% - 79%	C	Average	2
60% - 69%	D	Poor	1
Below 60%	F	Failure	0

For additional information on current Sul Ross State University policies for assigning grade points, please refer to <https://www.sulross.edu/registrar/catalog-and-policies/>

## Recommended text:

Back, W., & Clayton, H. M. (2013). Equine locomotion. Elsevier Health Sciences. 2<sup>nd</sup> edition

Stashak, T. S. (2020). Adams and Stashak's Lameness in Horses. Wiley-Blackwell; 7<sup>th</sup> edition (June 30, 2020).

## Group Project:

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As a group, choose a type of injury leading to lameness in sport horses, explain what the injuries are, what anatomical structures these injuries affect, the severity of these injuries, and why they are common in a given discipline (i.e. what movements are associated with these types of injuries) as well as how would you proceed with treatment and rehabilitation. You must use scientific sources outside of the lecture notes/textbook and these must be cited appropriately. See rubric for details. This project will be presented in the classroom to your peers and scored based on the rubric.

## Important Dates to Remember:

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- September 5 – Labor Day – NO CLASS
- October 18 – MIDTERM
- November 14 - Last day to withdraw from the 16-week course/term with a grade of 'W'. Drops must be processed and in the university registrar's office by 4 p.m.
- November 23-25 – Thanksgiving Holiday – NO CLASS
- November 29 – Project Presentations
- December 5 – FINAL EXAM

## Course Schedule (subject to adjustments)

Date	Topic	Pre-lecture/quiz Reading	Quiz
August 23	NO CLASS	<b>NONE – Demographics Quiz</b>	1
August 25	A history of locomotion analysis a	Back and Clayton, pg 85-93	2
August 30	The “normal” biomechanics of locomotion	Back and Clayton, pg 85-93	—
September 1	Understanding Lameness	Adam’s and Stashak, pg 67-71	—
September 6	Conformation and function 1	Adam’s and Stashak, pg 72-74	3
September 8	Conformation and function 2	Adam’s and Stashak, pg 71-91	—
September 13	Assessing lameness – Subjective Assessment	Davidson E. J. (2018). Lameness Evaluation of the Athletic Horse.	4
September 15	Assessing lameness – Palpation and Manipulation	Brown, M.P. Passive Musculoskeletal Examination of the Horse	—
September 20	Assessing lameness – Palpation and Manipulation	Adam’s and Stashak, pg 115-122	—
September 22	Assessing lameness – Objective Assessment	Adam’s and Stashak, pg 139-141	5
September 27	Gait adaptation in lameness	Back and Clayton, pg 175-186	—
September 29	Gait adaptation in lameness	Back and Clayton, pg 175-186	6
October 4	The Poorly Performing Horse	Adam’s and Stashak, pg 1161-1165	—
October 6	Common conditions of the Western Performance Horse	Adam’s and Stashak, pg 980-985	7
October 11	Common conditions of the Western Performance Horse	Adam’s and Stashak, pg 980-985	—
October 13	Common conditions of the Western Pleasure Horse	Adam’s and Stashak, pg 1006-1009	8
October 18	<b>MIDTERM EXAM</b>	<b>NONE</b>	—
October 20	Common conditions of the Racing Quarter Horse	Adam’s and Stashak, pg 972-975	—
October 25	Common conditions of the Racing Thoroughbred	Adam’s and Stashak, pg 949-950	9
October 27	Common conditions of the English Performance Horse	Adam’s and Stashak, pg 986-997	—
November 1	Common conditions of the English Performance Horse	Adam’s and Stashak, pg 986-997	10
November 3	Common conditions of the Draft Horse	Adam’s and Stashak, pg 1026-1031	—
November 8	Common conditions of the Gaited Horses	Adam’s and Stashak, pg 1020-1021	11
November 10	Concepts of rehabilitation & therapeutic options	Paulekas, P. and Haussler, K.K. (2009)	—
November 15	Proper saddle fitting	Adam’s and Stashak, pg 1166-1169	12
November 17	Local or Topical Therapy	Adam’s and Stashak, pg 881-885	—
November 19	Oral or Nutritional Therapy	Adam’s and Stashak, pg 900-910	—
November 22	Rehabilitation and Physical Therapy	Adam’s and Stashak, pg 929-930	13
November 24	NO CLASS: THANKSGIVING	<b>NONE</b>	—
November 29	Group Presentations – Injuries in Sport Horses	<b>NONE</b>	—
December 1	NO CLASS: DEAD DAY	<b>NONE</b>	—
December 5	<b>FINAL EXAM 10:15am – 12:15pm</b>	<b>NONE</b>	—