

COURSE INFORMATION:

Name: Equine Exercise Physiology
Prerequisites:
Meeting time:
Lectures: Mon and Wed 10:30-11:20 am
Labs:

Code: AGSC 375
Credits: 3 credits
Locations:
MG 1094
MG 2026

INSTRUCTOR:

Dr. Abdorrahman (Abdo) S. Alghamdi.

Office: 3084 MG Building

E-mail: abdo@truman.edu

Office hours: Open-door. Stop by for small matters, but make an appointment if you need a longer time.

My teaching schedule will be posted by the door so you know when to catch me between classes/labs.

Availability: Office hours, before and after class, by appointment or by email.

OBJECTIVES:

By the end of the course, you should be able comprehend how different body systems are involved in exercise and be able to identify and recall the different components of these system. You also should be able to identify, recall and understand the cellular and biochemical mechanisms affecting these systems and how training and exercise affect these mechanisms. Finally, you should develop a broad understanding of the applications of these "exercise physiology" principles and be aware of the different methods for field testing.

EXPECTATIONS:

To do well in this course:

- 1- Attend and participate in classes and group activities, and read designated materials
 - 2- Take good notes in class and make sure you understand the concepts presented and seek clarification for unclear or confusing concepts.
 - 3- Complete assignments in a timely manner and follow directions. It is not acceptable to ignore directions and readings and ask for special treatments for make up. If you miss a deadline for an assignment (without pre-approval), you lose 10% of the grade for that assignment for ever day late (10 days late = 0 points). It is your responsibility to remember those guidelines and I do not have to keep reminding you of deadlines.
 - 4- Be responsible for making up missed work (exams, quizzes, home work...etc) due to authorized absence (Missed work due to unauthorized absence will be given ZERO points)
- I will not take attendance, but you are solely responsible for all missed classes, announcements, and assignments.
- Authorized reasons (proof required): Sickness, injury, death in the family or natural disasters.

CLASS STRUCTURE:

- 1- Lectures: All Power Point slides will be handed out for each class, but **YOU MUST NOTE** that active note taking is paramount for doing well in the class.
- 2- Lab: Will include anatomical, histological, and physiological exercises depending on availability of raw materials, equipments, and supplies.

TEXTBOOK:

Required: None

Optional reading/references:

- 1- Marlin, D. & Nankervis, K. 2002. Equine exercise physiology, Blackwell Publishing.

- 2- Hinchcliff KW et al. 2008. Equine exercise physiology; the science of exercise in the athletic horse; by Saunders. This book is more advanced and contains terms and vocabulary that can be more challenging.
- 3- Another potential source is: Hinchcliff, K., Kaneps, A., and Raymond G. 2004. Equine Sports Medicine and Surgery. Very advanced, huge and very expensive.

DISABILITY DISCLAIMER:

Students with disabilities who require special accommodation should contact the instructor as soon as possible. They can also contact disability services at the university (Website <http://disabilityservices.truman.edu/>). All discussions will remain confidential.

ACADEMIC DISHONESTY:

Cheating in any shape or form will result in severe consequences including punitive grade (F) for the assignment, test, or whole class, or even being suspended or expelled from the university. The university's policy on academic dishonesty is well detailed and can be found at <http://conduct.truman.edu/docs/AcademicIntegrity.pdf>. It includes definitions of the different types of academic dishonesty, the reasons for enforcement, and the consequences of such action. Ignorance of such policy is not an acceptable excuse.

GRADING:

First exam:	20%
Second exam:	25%
Final Exam:	25%
Lab:	30%
Total	100

Cumulative Points	Grade
90 or higher	A
80-89	B
70-79	C
60-69	D
Less than 60	F

Lab portion of the grade:

To my discretion, I may give you lab quizzes, group problems, final lab exam, or a combination of all of the above. Should I request a lab report from any lab, it will weigh equal points to quizzes and problems.

HIGHLIGHTS OF SOME TOPICS (TENTATIVE):

Principles of exercise physiology
 The horse as an athlete
 Field testing
 The cell function/biology
 Exercise and energy
 Principles of muscle cell contractions
 Anatomy, histology & physiology of the horse
 Exercise response
 Thermoregulation
 Application

Tentative schedule

Week	Day	Topic	Labs	Notes
1	Tue 1/13	Intro of syllabus and class expectation and survey on background		
	Thu 1/15	Response to survey Intro and 10 principles of exercise physiology	Review your past notes	
2	Tue 1/20	The horse as an athlete		
	Thu 1/22	Field testing	Cell biology review	
3	Tue 1/27	Exercise and energy		
	Thu 1/29	Anatomy, histology & physiology 1	Anatomy 1 Skull	
4	Tue 2/3	Anatomy, histology & physiology 2		
	Thu 2/5	Anatomy, histology & physiology 3	Anatomy 2 live horse	
5	Tue 2/10	Anatomy, histology & physiology 4		
	Thu 2/12	Anatomy, histology & physiology 5	Anatomy of legs 1	
6	Tue 2/17			Individual exam
	Thu 2/19	Anatomy, histology & physiology 6	Anatomy of legs 2	
7	Tue 2/24	Exercise response 1		
	Thu 2/26	Exercise response 2	Anatomy of legs 3	
8	Tue 3/3	Exercise response 3		
	Thu 3/5	Exercise response 4	Heart	
9	Tue 3/10	No class (midterm break)		
	Thu 3/12	No class (midterm break)	No lab	
10	Tue 3/17	Exercise response 5		
	Thu 3/19	Exercise response 6	Histology	
11	Tue 3/24	Exercise response 7		
	Thu 3/26			
12	Tue 3/31	Application 1		
	Thu 4/2	Application 2	Blood 1	

13	Tue 4/7	Application 3		
	Thu 4/9	Application 4	Blood 2	
14	Tue 4/14	Spring break (no class)		
	Thu 4/16	Application 5	Lactate	
15	Tue 4/21	Application 6		
	Thu 4/23	Application 7	Field/overflow	
16	Tue 4/28	Overflow for modifications (otherwise will use as study session)		
	Thu 4/30	No class → Final lab exam	Final Lab exam	Individual exam then in groups
17	Tue 5/5			
	Thu 5/7			