

**COURSE NAME; NUMBER; SEMESTER; MEETING DAYS, TIMES, AND PLACE.**

Equine Exercise Physiology

11:067:401 Fall, 2020

Monday and Wednesday, 3:55-5:15 PM

**CONTACT INFORMATION:**

Instructor(s): Kenneth Harrington McKeever, Ph.D., FACSM, FAPS and Karyn Malinowski, Ph.D.

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Office Hours: By Arrangement

**COURSE WEBSITE, RESOURCES AND MATERIALS:**

- Recommended Text: Hodgson D, McKeever, K.H. and C. McGowan The Athletic Horse, Principles and Practice of Equine Sports Medicine, 2<sup>nd</sup> Edition, Elsevier, St. Louis, 2014.
- Journal articles on specific topics that the instructor will post on SAKAI.
- Notes taken by the student in class.
- Real time discussion and critique of primary source research articles in class.
- For this course, it is recommended that you meet the technical requirements below.
  - A computer (desktop/laptop) or mobile device (smartphone/tablet) that is less than 5 years old.
  - Speakers/headphones/earbuds for listening to audio or videos.
  - Webcam for interacting in course activities (Zoom, Webex), video test proctoring (Proctor Track), or other third-party tools.
  - A stable Internet connection. A speed at or above 25 Mbps is recommended for smooth video stream and conferencing.

**COURSE DESCRIPTION:**

This course covers the current concepts regarding the physiological and environmental factors associated with exercise in the horse. This class teaches the students the basics of scientific method using lectures and discussions to compare and contrast articles from the current Equine Sports Science literature. By the end of the semester students will be able to critique studies like journal referees pointing out the good and bad aspects of various papers including the professor's. By the end of this course students will learn to actively participate in the exchange of new ideas and concepts related to equine sport and exercise science. They will also become acquainted with current concepts and research literature related to equine exercise physiology as well as develop critical evaluation skills.

**LEARNING GOALS:**

Students will become acquainted with current concepts and research literature related to the topic of equine exercise physiology (PLG1, PLG2, PLG3, PLG7).

Students will develop skills for critical evaluation and recognition of problems with the current concepts in the field of equine exercise physiology (PLG5).

Students will learn to participate in the exchange of new ideas and concepts related to the physiology of equine performance (PLG6).

**ASSIGNMENTS/RESPONSIBILITIES, GRADING & ASSESSMENT:**

**A. Assessment:**

Attendance (2 unexcused absences =1 letter grade)	200 points
Participation in discussions and assignments	200 points
Midterm	200 points
Term Paper	200 points
Final Exam	<u>200 points</u>
Total	1000 points

**B. Grading:**

A= 90 to 100  
B = 80 to 89  
C = 70 to 79  
D = 60 to 69  
F = 0 to 59

**C. Other Important assessment related information:**

1. Students **must come prepared for class** by reading the material ahead of time.
2. Pop/take home quizzes, take home assignments, and in class participation will be counted towards the participation grade.
3. Term paper:
  - Must be on a timely topic related to Equine Science
  - More details to be provided in class
  - 15-20 pages minimum, at least 10-20 references
  - Traditional or alternative format
  - Must present the topic in a five-minute overview to the whole class using a Power Point presentation or other format.

**ACCOMODATIONS FOR STUDENTS WITH DISABILITIES**

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

**ABSENCE POLICY**

Students are expected to attend class. If you expect to miss class then you must use the University absence reporting website <https://sims.rutgers.edu/ssra> to indicate the date and reason for your absence. If you miss class without notification, then you must present a valid written excuse. Failure to attend or notify properly will result in a one letter grade decrease for every two (2) absences without a written excuse).

**COURSE SCHEDULE (subject to change):**

<u>Discussion Topic</u>	<u>Date</u>	<u>Discussion Leader</u>
Orientation and Introduction to the Scientific Method	9/2	McKeever
History of Equine Exercise Physiology and Horses in Biomedical Research	9/8	McKeever
Equine Welfare: New World for the Equine Athlete	9/9	Malinowski
Oxygen Uptake and Lactate	9/14	McKeever
Discussion of Papers	9/16	McKeever/Malinowski
Biosecurity on Horse Farms and at Equestrian Events	9/21	Seraphin/Malinowski
Discussion of Biosecurity Papers and Plan for Rutgers Farm	9/23	Malinowski
Challenges Facing the Horse Racing Industry	9/28	Malinowski
Challenges Facing Horse Racing/Drugs, Medications	9/30	McKeever
Exercise Induced Pulmonary Hemorrhage and Therapies	10/5	McKeever
Discuss Papers	10/7	McKeever
<b>Take Home Midterm Exam Assigned</b>	10/7	
<b>Due in class on 10/21</b>		
Use of Alternative Therapies for Horses – Acupuncture	10/12	
		Coloquhoun/Malinowski
Discuss Papers	10/14	McKeever/Malinowski
Equine Microbiome	10/19	Biddle/McKeever
Body Composition/Clenbuterol	10/21	McKeever
Exercise and Pregnancy	10/26	McKeever
Discuss Papers	10/28	McKeever
Thermoregulation and Countermeasures	11/2	McKeever
Discuss Papers	11/4	McKeever/Malinowski
Physiology of Aging in Horses -Equine Growth Hormone	11/9	McKeever/Malinowski
<b>Take Home Final Assigned in Class</b>	<b>11/9</b>	
Discuss Papers	11/11	McKeever/Malinowski
Death, Euthanasia, and Palliative Care	11/16	Taylor/Malinowski
Bureau of Land Management and Unwanted Horse	11/18	Malinowski
Nutraceuticals	11/23	McKeever
Discuss Papers	11/25	McKeever
Gastric Ulcer Therapy	11/30	McKeever
Training and Appetite	12/2	McKeever
Student Paper Presentations	12/7	
Student Paper Presentations	12/9	

**Term Papers due 12/09 in class**

**FINAL EXAM/PAPER DATE AND TIME**

**Take Home Final Due**

12/9

Online Final exam Schedule: <http://finalexams.rutgers.edu/>

**ACADEMIC INTEGRITY**

My expectation is that students enrolled in my class will not lie, cheat, or tolerate those that do and therefore they must follow the university's policy on academic integrity.

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

**STUDENT WELLNESS SERVICES**

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ [www.rhscaps.rutgers.edu/](http://www.rhscaps.rutgers.edu/)

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

#### Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / [www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

#### Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

#### Scarlet Listeners

(732) 247-5555 / <https://rutgers.campuslabs.com/engage/organization/scarletlisteners>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.