EQUINE EXERCISE PHYSIOLOGY
Tu/Th, 9:40–11:05 am at the Horse Science Center
COURSE SYLLABUS – SPRING 2011

Description: This course will cover topics relevant to equine exercise physiology, including physical, physiological, metabolic and mental adaptation to athletic training, exercise metabolism, thermoregulation, biomechanics of movement and affects of surface and footing, common unsoundnesses observed during training and competition, exercising testing, and an overview of shoeing for performance.

Course objectives:
- Understand the science of anatomy, physiology and metabolic processes related to equine exercise physiology.
- Experience hands-on aspects of equine exercise training and performance, including conditioning programs, exercise testing and aspects of shoeing for performance.
- Develop the skills to design or critique conditioning programs for horses.

Instructor:
Dr. Rhonda M. Hoffman
Associate Professor, School of Agribusiness and Agriscience
E-mail: rhoffman@mtsu.edu  URL: http://www.mtsu.edu/~rhoffman
I divide my time between my offices at the Horse Science Center and the Stark Agribusiness and Agriscience building. Office hours will be posted on each door. If I have an open door policy, so if I am in and the door is open, please feel free to speak with me. If you need a guaranteed meeting time, please make an appointment.

Text:
The course will be supplemented with handouts provided by the instructor and on D2L, and literature from scientific publications. No text is required, but if you desire additional reading material, the following textbooks and proceedings are recommended:

Equine Exercise Physiology, Volumes I through VII. These are scientific proceedings from the International Conference on Equine Exercise Physiology (ICEEP). Volumes I through III are out of print but available in pdf at http://www.iceep.org. Volumes IV through VII are Supplements to the Equine Veterinary Journal. http://www.evj.co.uk/
Evaluation procedures:
- Three in-class Exams. 300 pts
- Ten Quizzes (eight for credit). The scores from the lowest two quizzes will be dropped from the average. 200 pts
- Homework / Laboratory Exercises. 150 pts
- Group project 150 pts
- Final Exam (cumulative). 200 pts
TOTAL 1000 pts

Grading scale:
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\begin{align*}
\geq 90\% &= A \\
86\% - 89\% &= B+ : 80\% - 85\% = B \\
76\% - 79\% &= C+: 70\% - 75\% = C \\
66\% - 69\% &= D+: 60\% - 65\% = D : < 60\% = F
\end{align*}
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Group project
Student groups will receive a topic statement that is related to equine exercise physiology. Groups should search the scientific literature to determine whether the statement is true or false. A minimum of three sources must be used to support the decision (although more sources could certainly add support). Groups will give an oral presentation where the topic will be introduced, the literature discussed, and the summary conclusion given.

Attendance policy:
Attendance for lecture will not be maintained; however, all exam information will be taken directly from lecture materials. If you miss class, it is your responsibility to obtain missed lecture handouts. I do not give my personal lecture notes to anyone. Any additional notes that may have been taken during class must be acquired from your peers.

Make-up Exams and Quizzes will not be allowed unless an absence is excused, such as in the case of family emergency, illness (with doctor’s note), university extracurricular activities, or other extenuating circumstances approved by the instructor on a case-by-case basis. Having worked my own way through college, I am well aware that you may have work commitments; however, your work schedule is not an excuse for missed classes, incomplete or poor quality work. Two quizzes dropped from the average allow some lenience for unexcused absences.

Make-up exams and quizzes must be completed in a timely manner. It is strongly suggested that you do everything you can to complete what you missed before I return the graded exam/quiz to the rest of the class. I do my best to return graded material to the class in a timely manner, usually by the next class period. If you do not complete the make-up in a timely manner, you may end up forfeiting the points or be required to take penalty points off of the total possible.
**Classroom policies:**
Assignments are due on time, during the class period in which they are due. Assignments turned in late will be accepted; however, a penalty of one letter grade will be added for each class day past the due date, with the first penalty beginning at the end of the class period in which the assignment is due.

During laboratory periods (announced in class), you are expected to wear appropriate clothing to ensure your comfort and safety when working around horses. Shoes should cover your feet completely and have a hard or sturdy covering over the toe (i.e. no open-toed or open-backed shoes, no light canvas or cloth shoes). The barn and arena may be quite cold during the winter season, so dress accordingly. Please note that the soil in the arena contains red clay that may stain white or light-colored shoes and clothing.

*Cell phones should be turned off prior to entering the classroom.*
Individual conversations and cell phone texting during lecture periods are disrespectful and disruptive to the rest of the class. Those who persistently talk during lecture will be penalized on their participation grade and may be asked to leave the classroom.

**Academic misconduct:**
It is expected that all work you complete for this course is your own. The University policy for academic misconduct will be followed. Academic misconduct includes the following behaviors: plagiarism, cheating, fabrication, or facilitating any such act.

For purposes of this section, the following definitions apply:

1) **Plagiarism.** The adoption or reproduction of ideas, words, statements, images, or works of another person as one’s own without proper acknowledgment.

2) **Cheating.** Using or attempting to use unauthorized materials, information, or study aids in any academic exercise. The term academic exercise includes all forms of work submitted for credit or hours.

3) **Fabrication.** Unauthorized falsification or invention of any information or citation in an academic exercise.

4) **Facilitation.** Helping or attempting to help another to violate a provision of the institutional code of academic misconduct.

Any student suspected of committing academic misconduct may be asked to meet with me to discuss the situation. If you are found responsible for committing an act of academic misconduct, you will be given a failing grade for the semester and reported to the Director of ABAS and the Assistant Dean for Judicial Affairs and Mediation Services for disciplinary action.
Do you have a lottery scholarship?
To retain Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative TELS GPA of 2.75 after 24 and 48 attempted hours and a cumulative TELS GPA of 3.0 thereafter. You may qualify with a 2.75 cumulative GPA after 72 attempted hours (and subsequent semesters), if you are enrolled full-time and maintain a semester GPA of at least 3.0. A grade of C, D, F, or I in this class may negatively impact TELS eligibility. Dropping a class after 14 days may also impact eligibility; if you withdraw from this class and it results in an enrollment status of less than full time, you may lose eligibility for your lottery scholarship. Lottery recipients are eligible to receive the scholarship for a maximum of five years from the date of initial enrollment, or until a bachelor degree is earned. For additional Lottery rules, please refer to your Lottery Statement of Understanding form, review lottery requirements on the web at [http://scholarships.web.mtsu.edu/telsconteligibility.htm](http://scholarships.web.mtsu.edu/telsconteligibility.htm), or contact the Financial Aid Office at 898-2830.

Reasonable accommodations for students with disabilities:
If you have a disability that may require assistance or accommodation, or if you have questions related to any accommodations for testing, note takers, readers, etc, please speak with me as soon as possible. Students may also contact the Office of Disabled Students’ Services (898-2783) with questions about such services.

Important dates for Spring 2011:
January 13: Classes begin.
January 17: Martin Luther King Jr. holiday – no classes.
January 19: Deadline for students to add a class.
January 26: Deadline for students to drop a course without a grade.
March 7-13: Spring Break – no classes.
March 25: Last day for students to drop a course with a grade of “W”.
April 20: Deadline for students to withdraw from the University.
April 27: Last day of classes.
April 28: Study Day.
April 29–May 5: Final exams.
May 7: Commencement.
May 9: Deadline for faculty to submit final grades.

The Fine Print:
The instructor reserves the right to modify the information in this syllabus if deemed appropriate during the course of this class. Any modifications will be announced in class with a reasonable time frame considered for planning purposes.
TENTATIVE Course outline:

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
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<tbody>
<tr>
<td>Jan 13</td>
<td>Course introduction.</td>
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<td>Factors affecting athletic ability, overview of exercise physiology</td>
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<td>Exercise testing. Measuring fitness, humans versus horses</td>
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<td>Energy concepts, exercise metabolism</td>
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<td>Muscle fibers, tendons and ligaments</td>
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<td>Cardiovascular and respiratory systems</td>
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<td>Feb 22</td>
<td><strong>EXAM 1</strong></td>
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<td>Aspects of fatigue. Conditioning and overtraining.</td>
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<td>Thermoregulation, fluids and electrolytes</td>
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<td>Mar 8-13</td>
<td>Spring Break — No class.</td>
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<td>Skeletal responses to exercise</td>
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<td>Practical exercise training principles</td>
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<td>March 22</td>
<td><strong>EXAM 2</strong></td>
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<td>Understanding shoeing for performance</td>
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<td>Footing and training surfaces</td>
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<td>March 31</td>
<td>Group presentations</td>
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<td>Biomechanics of movement and performance</td>
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<td>Common unsoundnesses observed in equine athletes</td>
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<td>April 19</td>
<td><strong>EXAM 3</strong></td>
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<td>Transport and performance</td>
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<td>April 26</td>
<td>Last day.</td>
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<td>May 5</td>
<td><strong>Thursday, May 5, FINAL EXAM. 10:00 a.m. – noon</strong></td>
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**Quiz Dates:**

Jan 25    Feb 8    Mar 1    Mar 29    Apr 12
Feb 1*    Feb 15   Mar 15   Apr 5    Apr 26