

**PHYSIOLOGY OF EXERCISE**  
**KINE 3311.001**  
**Fall Semester 2009, MWF 11:00 – 11:50, HPC 3055**

**COURSE SYLLABUS**

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**Instructor:** Scott A. Spier, Ph.D.  
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**Office hours:** MW 1:00 – 4:00 p.m., or by appointment (Drop-ins welcome)

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**COURSE DESCRIPTION:** Study of functional responses to acute and chronic exercise.

**REQUIRED TEXT:** Powers, S.K. and E.T. Howley. Exercise Physiology: Theory and Application to Fitness and Performance (McGraw-Hill, 7th edition, 2009, ISBN-13: 978-0-07-337647-9).

**PREREQUISITE:** Credit in Anatomy & Physiology or consent of the instructor.

**COREQUISITE:** KINE 3112 – Exercise Physiology Laboratory

**COURSE OBJECTIVES:** In general, students who complete this course will be able to:

1. apply kinesiological principles to assessment of physical fitness.
2. apply kinesiological principles to promotion of physical fitness.
3. explain the relationships among regular physical activity, physical fitness, and wellness.

More specifically, students who complete this course will be able to:

1. explain the anatomical and physiological bases of physical conditioning.
2. summarize how the body physiologically reacts to a single (acute) bout of exercise.
3. explain how the body adapts physiologically to chronic bouts of exercise.
4. discuss the physiological bases for establishing training programs for the development of strength, power, muscular endurance, and cardiovascular endurance.
5. describe how heat, humidity, cold, and altitude affect athletic performance.
6. explain the effect that age and gender have on physiological responses to acute and chronic exercise.

**INSTRUCTIONAL METHODS:** This class will be offered in a hybrid format this semester, which is different than a traditional lecture class. A hybrid format is one in which part of the instruction is given on-line (e.g., Blackboard). Each student will be expected to prepare for in-class lectures using pre-recorded lectures, reading assignments, homework assignments, and/or quizzes on Blackboard.

In-class instructional methods will include short lectures, question-answer sessions, classroom and small group discussions, and small group problem solving. Students are expected to have read the assigned reading(s) and to have completed the associated assignments prior to class. The instructor will not cover basic material, but will instead focus on the more difficult concepts in the assigned reading.

*Blackboard Introductory Lectures:* Blackboard will be used in this class as a means to help you prepare for in-class lectures. Prior to each new in-class topic, a short 20 – 30 minute voice-narrated lecture will be available via Blackboard. These lectures will be available all semester so you watch them as many times as you want. I will also provide a printable handout of these lectures on Blackboard. These on-line lectures will be available a week before the corresponding in-class lecture.

**COURSE POLICIES/EXPECTATIONS:**

1. It is expected that everyone will complete the pre-class assignment for each in-class lecture prior to class.
2. If you have special learning needs, please inform me on the first day of class.
3. Cell phones must be turned to "OFF" or "SILENT" (not VIBRATE) during class. Do not take calls or text others during class.
4. Please do not bring food into the classroom.
5. Academic dishonesty (cheating, plagiarism, copying, etc) will not be tolerated and will result in a failing grade for the semester.

**EVALUATION:**

3 major exams	50%
Final exam	25%
Assignments	15%
Paper	10%

*Exams:* Exams will be based upon material covered in the reading assignments, on-line lectures, quizzes, and in-class lectures, discussions, and group work. Exams will consist of *multiple choice* questions, *short answer* (one-word answers) questions, *short essay* (one to three paragraphs) questions, and/or *diagrams*. The final exam will be held during the scheduled final examination period and will be cumulative. During exams, the instructor (or proctor) will only answer questions regarding structural errors in exam questions (i.e., typos) or questions regarding ambiguity.

Assignments:

Class Work. Throughout the semester, I will assign both on-line individual work and in-class group work (problem-solving, discussions, etc). More information regarding these assignments will be given as the semester progresses.

Blackboard Quizzes: After completing the reading assignment for the introductory material and watching the introductory lecture, you will be required to take a 5 – 10 minute quiz on Blackboard. These quizzes can be taken up to 7 days prior to the in-class lecture and may be taken up to two times, with the higher of the two scores counting. Blackboard quizzes must be completed by midnight the night before the in-class meeting. The three lowest quiz scores will be dropped. Any missed quizzes will be counted as zero; there will be no make-ups for quizzes. Do not wait until the last minute to complete the quiz, as errors do often arise in Blackboard. No extension will be granted for such errors.

Paper: Students will be assigned a topic related to exercise physiology and will write a short paper regarding the topic. The paper will be due near the end of the semester and further details will be given later in the semester.

Attendance: Although attendance will not be directly graded, your success in this class will depend on your attendance and the effort you put forth.

Scheduling Conflicts for exams and assignments: Make-up exams and assignments will be given only for University-approved activity (i.e., athletic events, performances, etc). Flat tires, vacations, etc. are not valid reasons for missing an exam or assignment. Since university-approved absences are known at the beginning of the semester, it is up to the student to notify the instructor during the first two weeks of class if there is a conflict with any of the scheduled exams. In such an event, a make-up exam will be given prior to the exam to be missed.

Exam Regrades: Regrade requests for exams containing addition errors or answer key reading errors will be accepted. All other regrade requests must be made in writing and must address the specific question(s) to be regarded. Regrade requests will not be accepted for exams written in pencil, in ink other than blue or black, or where white-out has been used. Written regrade requests will only be accepted for essay questions when more than 5 points are in question. I reserve the right to regrade the entire exam, and the grade may be affected positively or negatively.

Preparation and Participation: Students are strongly encouraged to ask, and respond to, questions in class; vigorous interaction in the class makes for much more interesting sessions for both instructor and students.

Extra Credit: There will be no extra credit points given in this class. It is not fair to the class as a whole to presume the instructor will give individuals opportunities to obtain extra credit points. Please do not ask for extra credit opportunities.

Grading will be based on a modified 10-point scale (average): A = 89.5 - 100; B = 79.5 - 89.4; C = 69.5 - 79.4; D = 59.5 - 69.4; F = below 59.5

**IN-CLASS LECTURE RESOURCES:** Outlines and audio recordings of in-class lectures and discussions *may* be made available at the discretion of the instructor and on a class-by-class basis. In such cases, these resources will only be available to students who attend class.

**SUGGESTIONS FOR STUDY:**

Students should expect this to be a difficult class, especially if students have not met the Anatomy and Physiology prerequisite. However, the following steps will help the student master the material presented in this class:

1. Do the assigned reading before class. Be able to intelligently discuss the material in the chapter.
2. Identify concepts and information that are unclear and inquire about this in class.
3. If material is still unclear, ask one of your peers for insight, or make an appointment with the instructor for assistance (Drop-ins are welcome except right before class).
4. Devote a minimum of 2 hours per week to review materials covered during each week of class; do not expect to do well if you cannot commit to this level of effort.

**CHEATING:**

There is *no tolerance* for persons who plagiarize and/or cheat. *Any* act of cheating or plagiarism will result in dismissal from the course. Per university guidelines, the student(s) will be reported to the department head with failure of the class as the recommended course of action.

**AMERICANS WITH DISABILITIES ACT (ADA):**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination law that provides comprehensive civil rights protection to individuals with disabilities. Among other things, this statute requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. "If you have a disability, including a learning disability, for which you request disability support services/accommodation(s), please contact Ida MacDonald in the Disability Support Services office so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability support services/accommodation(s) must provide appropriate documentation of his/her disability to the Disability Support Services counselor. For more information, call or visit the Student Services Center located in the University Center, Room 282. The telephone number is 566-7079 (TDD 565-5579)." Additional information may also be obtained at the following UT Tyler Web address: <http://www.uttyler.edu/disabilityservices>.

**GRADE REPLACEMENT:**

If you are repeating this course for a grade replacement, you must file intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to file intent to use grade forgiveness will result in both the original and repeated grade being used to calculate your overall grade point average. A student will receive grade forgiveness (grade replacement) for only three (undergraduate student) or two (graduate student) course repeats during his/her career at UT Tyler. (2006-08 Catalog, p. 35)

**COPYRIGHT:**

The handouts used in this course are copyrighted. The term "handouts" refers to all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, PowerPoint slides, outlines, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

**TOPICS:**

We will cover the following topics this semester:

- Bioenergetics
- Exercise Metabolism
- Exercise Endocrinology
- Neural Control of Movement
- Skeletal Muscle
- Cardiovascular Response to Exercise
- Respiratory Response to Exercise
- Adaptations to Aerobic Training
- Adaptations to Resistance Training
- Environmental Exercise Physiology

### *Tentative Schedule*

<b>Week of:</b>	<b>Monday</b>	<b>Wednesday</b>	<b>Friday</b>
8/24		Syllabus	Pre-test
8/31			
9/7	<b>No Class - Labor Day</b>		
9/14			
9/21			<b>EXAM 1</b>
9/28			
10/5			
10/12			
10/19			<b>EXAM 2</b>
10/26			
<b><i>10/30/09 - LAST DAY TO WITHDRAW FROM COURSE WITH AUTOMATIC "W"</i></b>			
11/2			
11/9			
11/16			
11/23	<b>EXAM 3</b>	<b>No Class - Thanksgiving</b>	<b>No Class - Thanksgiving</b>
11/30			
12/7			
12/14			<b>FINAL EXAM</b>

