

COURSE SYLLABUS

PHYSIOLOGY OF EXERCISE

KINE 3311.001

Spring Semester 2009, TR 11:00 – 12:15, HPC 3055

Instructor: Dr. Scott A. Spier

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Office hours: TWR 1:00 – 3:00 p.m., or by appointment (Drop-ins welcome)

COURSE DESCRIPTION:

Study of functional responses to acute and chronic exercise.

REQUIRED TEXT:

Wilmore, Jack H., David L. Costill, and W. Larry Kenney. Physiology of Sport and Exercise, 4th edition, Human Kinetics, 2008.

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. Each student will be expected to prepare for in-class lectures using pre-recorded lectures, reading assignments, and 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 prior to class. The instructor will not cover basic material, but will instead focus on the more difficult concepts in the assigned reading.

EVALUATION:

<u>Option 1</u>		<u>Option 2</u>	
Exams 1-3	80%	Exams 1-3	50%
Final Exam*	0%	Final Exam	30%
Quizzes	10%	Quizzes	10%
Class work	5%	Class work	5%
Attendance	5%	Attendance	5%

*You must have an "A" average to skip the final exam.

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.

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.

Exams: 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 comprehensive. You may opt out of taking the final exam if you maintain an "A" average (i.e., 90 or higher).

Class work: Occasionally, I will assign in-class group problem-solving or discussions. More information regarding these assignments will be given as the semester progresses.

Attendance: Attendance will be taken on a regular basis. Your success in this class will depend on your attendance and the effort you put forth.

Make-up work: Make-up exams will be given only for university-approved absences. 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.

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.

EXAM REVIEW SHEETS: Review sheets listing topics to be covered on the exams will be made available through Blackboard at least one week prior to each exam.

SUGGESTIONS FOR STUDY:

Students should expect this to be a moderately 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 an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to file an 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
- Age/Gender Considerations with Exercise