

**Physiology of Exercise
(KINE 3680-102) Course Syllabus**

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Office Hours: M-F 10:00 - 11:30

Credit: 4 Semester hours

Prerequisites:

Corequisites:

Syllabus Prepared: 1-6-2010

Class Schedule: 8:00-8:50 MWF COLSM 2040

Lab Schedule: Variable

Course Description:

This course will focus on: basic energy, musculoskeletal, nervous, cardiovascular, and respiratory systems as they relate to aerobic and anaerobic exercise. Emphasis will be placed on the adaptations of these systems to training.

Objectives:

Undergraduates exercise physiology students are expected to demonstrate competency in the following areas:

- 1) A general knowledge of the bioenergetics systems and their functions during specific exercises.
- 2) A general knowledge of the adaptations of the bioenergetics systems to specific training programs.
- 3) A general knowledge of various organ systems and their functions during exercise, as well as adaptation to specific training programs.
- 4) An ability to perform basic physiology of exercise laboratory tests.
- 5) An abbreviated understanding of exercise prescriptions for the general population.

Required Text:

- 1) Powers & Howley, Exercise Physiology: Theory and Application to Fitness and Performance, 2006 7th Ed

Student Evaluation:

- A. Examinations: 79% of class grade (no retakes or upgrades)
 - Test #1 19.75%
 - Test #2 19.75%
 - Test #3 19.75%
 - Test #4 19.75%
- B. Laboratory participation and Reports: 20% of class grade. Students must attend lab to receive data. Students missing lab for unexcused reasons will receive a 0 for that portion of their lab grade.
- C. Course syllabus acceptance: 1% of class grade

This syllabus serves as a contract to identify what is required for a given course grade. Each student is required to either 1) formally accept the terms outlined in this syllabus, or 2) engage in open discussion with the instructor about matters of clarification/alteration, followed by formal acceptance of the revised syllabus. Formal acceptance of the syllabus is performed within the Blackboard quiz content module and counts toward 1% of the class grade. All students must complete the syllabus acceptance on or before **January 25, 2010**.

Grading Scale:

- A: 90% - 100%
- B: 89.99% - 80.0%
- C: 79.99% - 70.0%
- D: 69.99% - 60.0%
- F: < 60.00%

Attendance Policy:

Lecture attendance Attendance is mandatory as a pre-requisite for participation. However, attendance will not be regularly taken or recorded. As such, class attendance will not directly impact your course grade. Students will be expected, should they choose to be absent for any excused or unexcused reasons, to obtain all information necessary for successful completion of this course.

Lab attendance No Lab absences will be allowed. Lab write-ups will not be accepted if one was not present for data collection. The only exception to this is data will be provided to students that miss lab for an excused absence.

Exam attendance: Exam dates will be announced in class at least 1 week in advance of the exam date. Missed exams will result in 0 points for that portion of the course grade, no exceptions. Excused absences on exam dates must be arranged in advance of the start of the exam for makeup consideration. It is the student's responsibility to be aware of scheduled exams – even in the event that they miss a class where an exam is announced (for excused or unexcused reasons).

<u>Units of Study During Lecture</u>	<u>Textbook Chapter</u>	<u>Tentative Test</u>
1) Course introduction and Chapter 1	1	
2) Control of the internal environment	2	
3) Bioenergetics	3	
4) Exercise metabolism	4	Exam 1
5) Hormonal responses to exercise	5	
6) Measure of work, power and energy expenditure	6	
7) The nervous system	7	Exam 2
8) Skeletal muscle	8	
9) Circulatory adaptations to exercise	9	Exam 3
10) Respiration during exercise	10	
11) Acid base balance during exercise	11	
12) Temperature regulation	12	
13) Physiology of training	13	Exam 4

Note that Exam 4 is a non-cumulative final exam scheduled according to the Auburn University exam schedule.

Laboratory Schedule

Lab Contents

Journal Assignment (Out of Lab Assignment)

Lab 1: Body composition/Anthropometric data

Lab 2: Laboratory VO₂ Testing

Lab 3: Field VO₂ Testing

Lab 4: Wingate/Anaerobic Cycling

Lab 5: Lactate

Lab 6: Muscle Strength/Muscle Endurance

Lab 7: Blood Pressure

Lab 8: Pulmonary

Late Policy: Assigned lab work will be accepted late with penalty. All assigned work is due on the stated date during the class period. Assignments turned in at any time after the scheduled class period are considered late. Assignments received late will be penalized 5% grade penalty (on a 100% scale) per assignment if turned in after class time on the due date. Assignments receive a 10% per day penalty (on a 100% scale) thereafter.

Academic Integrity Policy: The Auburn University student academic honesty code (Title XII) found in the *Tiger Cub* applies to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Cell Phone policy: It is requested that cell phones be turned off during class. You will not be prohibited from answering cell phone calls during class time, though you will be required to leave class to answer a call. Further, students that choose to take cell phone calls during class time will not be permitted to return for the remainder of that class period as a courtesy to other students.

Texting in class will not be tolerated. Students observed texting will be removed from class.

Cell phones and other handheld devices may not be used or visible during exams. If you need a calculator during an exam, you must bring a “low-tech” device that is not capable of text messaging. Students choosing to have a texting device visible during an exam will receive a 0 grade for that exam.

Disability Accommodations: Students who need special accommodations in class, as provided for by the American Disabilities Act, should arrange a confidential meeting with the instructor during office hours the first week of classes - or as soon as possible if accommodations are needed immediately. You must bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have these forms but need accommodations, make an appointment with The Program for Students with Disabilities, 1244 Halley Center, 844.2096 (V/TT) or email: scw0005@auburn.edu