**Physiology of Exercise**

**(KINE3680-001 and 002) Course Syllabus**

**Fall 2011**

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**Instructor:** Dr. Heidi Kluess

**Office:** 2100 Memorial Coliseum

**Phone:** 844-1844

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**Office Hours:** TTH 10-11AM, or by appointment

**Credit:** 4 credit hours

**Prerequisites:**

**Corequisites:**

**Syllabus prepared:** 7/21/2011

**Class Schedule:** TTH 11:00AM to 12:15PM

**Lab Schedule:** T 12:30PM-2:10PM, Coliseum 2034

**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:** Undergraduate 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 and adaptations to specific training programs
4. An ability to perform basic physiology of exercise laboratory test
5. An abbreviated understanding of exercise prescriptions for the general population

**Required Text:** Powers and Howley. Exercise Physiology: Theory and Application to Fitness and Performance, 2012, 8thed.

**Student Evaluation:**

A. Examinations: 79% of class grade (no retakes or upgrades)

Tests (1-4) 19.75% each

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 **Sept 1, 2011**.

**Grading Scale:**

A: 90% - 100% D: 69.99% - 60.0%

B: 89.99% - 80.0% F: < 60.00%

C: 79.99% - 70.0%

**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 absence 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).

**Laboratory Schedule**

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.

**Disability Accomodations:** 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

**Professionalism:** As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College’s conceptual framework. These professional commitments or dispositions are listed below: o Engage in responsible and ethical professional practices

o Contribute to collaborative learning communities

o Demonstrate a commitment to diversity

o Model and nurture intellectual vitality

Tentative schedule of topics and exams.

|  |  |  |
| --- | --- | --- |
| TH 8/18 | Topic/activity | Reading |
| T 8/23 | Syllabus and history | Ch 1, Harvard Fatigue Laboratory: Contributions to WWII, Comments on Classical Papers |
| TH 8/25 | History |  |
| T 8/30 | Control of internal environment | Ch 2 |
| TH 9/1 | Control of internal environment | Ch 2 |
| T 9/6 | Bioenergetics | Ch3 |
| TH 9/8 | Bioenergetics | Ch3 |
| T 9/13 | Exercise Metabolism | Ch 4 |
| TH 9/15 | Exercise Metabolism | Ch 4 |
| T 9/20 | **Exam 1** |  |
| TH 9/22 | Hormonal responses to exercise | Ch 5 |
| T 9/27 | Hormonal responses to exercise | Ch 5 |
| TH 9/29 | Measurement of work, power, energy | Ch 6 |
| T 10/4 | Measurement of work, power, energy | Ch 6 |
| TH 10/6 | The nervous system | Ch 7 |
| T 10/11 | The nervous system | Ch 7 |
| TH 10/13 | **Exam 2** |  |
| T 10/18 | Skeletal muscle | Ch 8 |
| TH 10/20 | Skeletal muscle | Ch 8 |
| T 10/25 | Circulatory adaptations | Ch 9 |
| TH 10/27 | Circulatory adaptations | Ch 9 |
| T 11/1 | **Exam 3** |  |
| TH 11/3 | Respiration | Ch 10 |
| T 11/8 | Respiration | Ch 10 |
| TH 11/10 | Acid base balance | Ch 11 |
| T 11/15 | Acid base balance | Ch 11 |
| TH 11/17 | Temperature regulation | Ch 12 |
| T 11/22 | Temperature regulation | Ch 12 |
| TH 11/24 | Exercise and the environment | Ch 24 |
| T 11/29 | Physiology of Training | Ch 13 |
| TH 12/1 | Physiology of Training | Ch 13 |
| Final exam | **Exam 4** |  |