

KINS 3700 Syllabus
Applied Exercise Physiology
Fall 2008

Instruction Information

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Office Hours: As posted or by appointment

Credit: 2 semester hours

Meetings: Two 50-minute lectures each week, Ramsey Center room 202

Lecture: Monday, Wednesday, 10:10am – 11:00am

Course Description

This class will cover physiological responses/adaptations to exercise. Topics in this course include neuromuscular, metabolic, cardiovascular, hormonal, and respiratory systems as they pertain to acute and chronic exercise. The major goal of the class is to develop a basic understanding of exercise physiology that will: 1) allow the student to utilize exercise physiology in their daily lives and future profession, 2) prepare the student to take additional courses in exercise science.

Prerequisites

CBIO 2200-2200L and CBIO 2210-2210L (Anatomy and Physiology I and II)

Textbooks

SK Powers and ET Howley. Exercise Physiology: Theory and Application to Fitness and Performance. Boston: McGraw-Hill.

Lecture Information

You are expected to attend lecture: if you choose not to attend, all missed handouts and announcements are your responsibility. Please be advised that downloading the class notes may not provide you with a complete set of notes.

Course Requirements

Exam 1	20%
Final Exam	20% (Comprehensive)
Quizzes	60% (15% x 4)

A student who wishes to have an exam re-graded must discuss concerns with the instructor within one after the exam has been returned.

Grading Scale

Grades will be established based on the percentage of the total possible points earned in the class.

93.0-100%	A	Excellent
83-89.9%	B	Above average
73-79.9%	C	Average
63-69.9%	D	Passing
Less than 60%	F	Failure

+/-'s awarded with averages of 7-9 (i.e. 87-89=B+) and 0-3 (80-83=B-)

NOTES:

- Exams and quizzes cover lecture and readings. **There are no make-ups for missed exams/quizzes.**
- If you have any special needs in taking exams/quizzes, please notify the professor in advance.
- Final course grade point average (GPA) will be computed as:

$$\text{GPA} = 0.15(Q1) + 0.15(Q2) + 0.20(EX1) + 0.15(Q1) + 0.15(Q2) + 0.20(FNL)$$

Where, QZ 1-4, EX1, FNL are the numerical equivalents of grades on the quizzes and exams

WebCT

Class information including lecture slides will be posted on WebCT.

University Honor Code and Academic Honesty Policy

All academic work must meet the standards contained in "A Culture of Honesty." Students are responsible for informing themselves about those standards before performing any academic work.

More detailed information about academic honesty can be found at:

<http://www.uga.edu/ovpi/honesty/acadhon.htm>.

The Disability Resource Center

The Disability Resource Center coordinates and provides a variety of academic and support services to students. The mission of the center is to promote equal educational opportunities and a welcoming academic, physical, and social environment for students with disabilities at The University of Georgia.

<http://www.dissvcs.uga.edu/>

Exercise Physiology
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General Overview of Course Content

Introduction and history	Ch. 1
The internal environment	Ch. 2
Homeostasis	
Control systems	
Bioenergetics	Ch. 3
Fuels for exercise	
Carbohydrates (glycolysis, glycogenolysis)	
Krebs cycle, electron transport chain	
Exercise metabolism	Ch. 4
Fuel utilization during exercise	
Factors governing fuel utilization	
Nutrition for performance	
Hormonal response to exercise	Ch. 5
Hormone regulation and action	
Hormonal control of substrate use during exercise	
Regulation of fluid balance	
Measurement of work, power and energy expenditure	Ch. 6
Measurement of work and power	
Measurement of energy expenditure	
Direct and indirect calorimetry	
The nervous system	Ch. 7
Neuron structure function	
Exercise and brain health	
Skeletal muscle	Ch. 8
Muscle function	
Muscle fiber types	
Training	
Circulatory adaptations to exercise	Ch. 9
Circulatory response to exercise	
Adaptations of circulatory system in response to overload	
Respiration during exercise	Ch. 10
Ventilatory response to exercise	
Regulation of ventilation	
Temperature regulation	Ch. 12, 24
Heat and cold acclimatization	
Training to maximize performance	Ch. 13
Training principles	Ch. 20
Strength and endurance training	Ch. 21
Nutrition and performance	
Nutrients and fluid	Ch.18, 23
Ergogenic aids	Ch. 25

This is a general course overview only-revisions may be necessary