

GEORGE MASON UNIVERSITY
School of Recreation, Health, and Tourism

KINES 310—Exercise Physiology I (3)
Fall 2012

DAY/TIME:	T,TH 9:00 – 10:15 a.m.	LOCATION:	PW – 134 Bull Run Hall
PROFESSOR:	Dr. Joel Martin	EMAIL ADDRESS:	jmarti38@gmu.edu
OFFICE LOCATION:	210 Bull Run Hall	PHONE NUMBER:	703-993-7607
OFFICE HOURS:	W10:00 – 12:00 pm Or by appointment	FAX NUMBER:	703-993-2025

PREREQUISITES

BIOL 124, BIOL 125, ATEP 300 (formerly KINE 300).

COREQUISITES

KINE 200

COURSE DESCRIPTION

Introduces students to the physiologic, neuroendocrine, and biomechemical changes of the human body that are associated with exercise and work.

COURSE OBJECTIVES

Upon successful completion of this course students will:

1. Have a theoretical knowledge regarding the physiological responses and capacity for exercise by the human body.
2. Be able to differentiate the physiological metabolic processes that govern human movement and apply each of these processes to physical performance.
3. Be able to compare and contrast the physiological principles of the support systems of the body and appraise how each system is affected by and adapts to exercise.
4. Demonstrate the ability to make recommendations regarding exercise programs based on basic exercise physiology knowledge.
5. Attain knowledge of current issues in exercise physiology research and be able to critically evaluate published literature.

COURSE OVERVIEW

This course provides a theoretical basis for understanding the body's physiological responses to exercise. Specifically, the course investigates how the support systems of the body (respiratory, cardiovascular, muscular, etc.) function, in cooperation with human energy production to insure that energy is provided for exercise. Emphasis will be placed upon the practical application of exercise physiology principles to coaching, teaching, and other physical training practices.

Attendance and Participation

Attendance is **required** for this class. Arriving to class late or leaving early will be count as an absence. Students are expected to show up prepared to class and participate during class activities. Students who know they will need to miss a class for a legitimate reason should contact the instructor before the class. Students who unexpectedly miss a class for an excused reason should contact the instructor within 24 hours of missing the class. Make-up tests, quizzes, assignments, or other grades will be granted for excused absences only. Excused absences include: serious illness, official university excused absences and extenuating circumstances. It is the student's responsibility to contact the instructor in order to obtain the make-up work.

Academic Load

In addition to attending the lectures there will be regular homework assignments and projects that may require anywhere from 2-10 hours of work per week. Additionally, regular readings will be assigned to students. Students are expected to complete all outside work on time. Extensions will not be granted on assignments unless an extenuating circumstance arises. Students may be asked to provide official documentation in certain instances. The purpose of the assignments is to aid students in learning the material. ***Students who attend lectures, complete all assignments on time, and attend office hours when necessary will be better prepared for the exams than students who do not do so.***

Assignments

All assignments must be typed unless specifically told not to. A loss of points may occur for improper grammar and spelling. It is recommended students save all assignments on their personal computers and/or a back-up device.

Class Delivery

The course is primarily a lecture course. However, other approaches may be used to facilitate learning. These include: class discussions, videos, demonstrations and in-class activities.

Technology Use During Class

As per GMU policy, all sound emitting technology is required to be turned off during the class meeting time. No sound emitting technology (e.g., cell phones, smart phones, iPads, Tablets, pagers, etc.) is allowed at any time during the class period. Students who are observed using any form of technology inappropriately (e.g., sending text messages from cell phones, visiting social networking sites from laptops, etc) will be dismissed from class for the day, counted as an absence, and not permitted to make up missed assignments.

Correspondence

The preferred method of communication outside of class is email. Emails should originate from a George Mason email account and be in a professional format (i.e. emails should not look like a text message!). The following is an example:

Dr. Martin,

I have a question regarding....

Regards,
Student Name

REQUIRED READINGS

McArdle, W.D., Katch, F.I., Katch, V.L. (2011) *Essentials of Exercise Physiology (4th edition)*. McGraw-Hill Publishing.

EVALUATION

This course will be graded on a point system, with a total of 700 possible points.

Assignments	Points
<i>Mid-Term Exam #1</i>	150
<i>Mid-Term Exam #2</i>	150
<i>Final Exam</i>	150
<i>HW</i>	150
<i>Research Paper</i>	75
<i>Attendance & Participation</i>	<u>25</u>
TOTAL	700

Grading Scale

A = 94 – 100	B+ = 88 – 89	C+ = 78 – 79	D = 60 – 69
A- = 90 – 93	B = 84 – 87	C = 74 – 77	F = 0 – 59
	B- = 80 – 83	C- = 70 – 73	

TENTATIVE COURSE SCHEDULE

DATE			TOPIC	READINGS/ASSIGNMENT
T	August	28	Introduction to Exercise Physiology, Macronutrients and Micronutrients	Read Chapter 2; Assignment #1
TH	August	30	Macronutrients & Micronutrients	Read Chapter 3
T	September	4	Food Energy & Optimum Nutrition for Exercise	Read Chapter 5; Assignment #2
TH	September	6	Fundamentals of Human Energy Transfer	
T	September	11	Fundamentals of Human Energy Transfer	Read Chapter 6 ; Assignment #3
TH	September	13	Human Energy Transfer During Exercise	Read Chapter 7
T	September	18	Human Energy Transfer During Exercise	Assignment #4
TH	September	20	Measuring and Evaluating Human Energy – Generating Capacities During Exercise	Read Chapter 8
T	September	25	Energy Expenditure During Rest and Physical Activity	Assignment #5
TH	September	27	Cardiovascular System	
T	October	2	Review	Study
TH	October	4	Mid-term Exam #1	
T	October	9	No Class due to Columbus Day Recess	Read Chapter 10; Assignment #6
TH	October	11	Cardiovascular System	Read Chapter 9
T	October	16	Cardiovascular System/Pulmonary System	Assignment #7
TH	October	18	Pulmonary System	Read Chapter 11
T	October	23	Neuromuscular System	Assignment #8
TH	October	25	Neuromuscular System	Read Chapter 12
T	October	30	Hormones, Exercise, and Training	Assignment #9
TH	November	1	Hormones, Exercise, and Training	
T	November	6	Review	Study

DATE			TOPIC	READINGS/ASSIGNMENT
TH	November	8	Mid-Term Exam #2	Read Chapter 13
T	November	13	Exercise Training and Adaptations	Read Chapter 14; Assignment #10
TH	November	15	Exercise Training and Adaptations/Aids to Performance	
T	November	20	Body Comp, Obesity, & Weight Control	Read Chapter 15; Assignment #11
TH	November	22	No Class - Thanksgiving	Read Chapter 16 & 17;
T	November	27	Physical Activity, Aging and Disease	Work on research paper ; Assignment #12
TH	November	29	Physical Activity, Aging and Disease	Read Chapter 18; Work on research paper
T	December	4	Clinical Aspects of Exercise Physiology	Work on research paper
TH	December	6	Review for final/Research Papers Due	None
TH	December	13	Final Exam	

Note: Faculty reserves the right to alter the schedule as necessary.

2 Mid-Term Exams and 1 Final Exam

There will be 2 mid-term exams and 1 final exam (3 Total Tests). The final exam will be cumulative. The format for all exams will be multiple choice, true/false, short essays, and problem-solving questions.

Research Paper

Students will be required to submit a research paper. The research paper will be a literature review of a specific topic in the field of exercise physiology. The literature review must summarize the *major* papers related to the topic chosen. The literature review should be 5-7 pages (typed, double-spaced, 12 pt font). A **minimum of 10** references must be used. The paper should be formatted using APA guidelines. The research papers will be due at the start of the final class on December 6, 2012. A more detailed description of the paper requirements will be handed out in class.

Homework Assignments

Regular homework will be assigned every Tuesday and will be due the following Tuesday. The homework will be due at the start of class in which it is due. The 1 lowest HW grade will be dropped.

In Class Assignments

There will be regular assignments during classes. These will be short and due at the end of class.

Final Grades:

Once your FINAL GRADE at the end of the semester is posted on mymasonportal/blackboard, you will have 24 hours to inquire about it. After that period, your grade will be posted as final.

ACADEMIC INTEGRITY

Students are expected to follow the George Mason University Honor Code. All assignments are subject to evaluation under plagiarism detection software. In the event that students hand in written assignments that are identical to another students assignment both students will be given a zero for the assignment.

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

Campus Resources

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].
- For additional information on the College of Education and Human Development, School of Recreation, Health, and Tourism, please visit our website [See <http://rht.gmu.edu>].

CORE VALUES COMMITMENT: The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles.

