

GEORGE MASON UNIVERSITY  
School of Recreation, Health, and Tourism  
Division of Health and Human Performance  
KINE 310-001: Exercise Physiology I (3)  
Fall 2013

DAY/TIME:	T, TH 9:00 – 10:15 a.m.	LOCATION:	PW – 131 Bull Run Hall
PROFESSOR:	Dr. Joel Martin	EMAIL ADDRESS:	jmarti38@gmu.edu
OFFICE LOCATION:	207 Bull Run Hall	PHONE NUMBER:	703-993-7607
OFFICE HOURS:	W Noon – 2 pm Or by appointment	FAX NUMBER:	703-993-2025
Dept. Website	rht.gmu.edu	Class Website:	mymasonportal.gmu.edu

**PREREQUISITES:**

BIOL 124, BIOL 125, ATEP 300

**COREQUISITES:**

KINE 200

**COURSE CATALOG DESCRIPTION:**

Introduces students to the physiologic, neuroendocrine, and biochemical 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.

**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

**NATURE OF COURSE 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.

## REQUIRED READINGS

Kenney, L.W., Wilmore, J.H., Costill, D.L. (2012) *Physiology of Sport and Exercise* (5<sup>th</sup> edition). Human Kinetics.

## EVALUATION

This course will be graded on a point system, with a total of 1000 possible points.

Assignment	Points
Mid-Term Exam #1	100
Mid-Term Exam #2	100
Mid-Term Exam #3	100
Mid-Term Exam #4	100
Final Exam	250
HW	200
Activity Labs	150
<b>Total</b>	<b>1000</b>

### 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	

### Mid-Term Exams and Final Exam

There will be **4** mid-term exams and a final exam (5 total exams). The final exam will be cumulative. The format for all exams will be multiple choice, true/false, and fill in the blank questions. **IMPORTANT** – students will be given a list of possible test questions several weeks before each exam. Some of the questions will be based on the lecture and some will be based on the readings from the textbook. It is recommended that students bring the lecture-based questions to class so that they can work on them during the lecture. Approximately 50-60 of the possible test questions will comprise each of the 4 mid-term exams.

### Homework Assignments

Regular homework will be assigned and due 1 week after it is assigned. There will be **10** total HW assignments. The homework will be due at the start of class in which it is due. No late homework assignments will be accepted. A hard copy of the homework must be handed in and homework handed in via email will not be accepted, unless there are extenuating circumstances. Points will be taken off for homework that is not stapled with a single staple in the upper left corner.

### Activity Labs

There will be **3** activity-based labs. These are intended to give students hands-on, practical experience with concepts that are covered in class. The data will be collected in class. For each lab students will be required to answer several short questions based on the data. A formal short lab report will be due approximately one week after performing the lab. Labs must be typed. A lab handout, with more detailed instructions, will be handed out on the day the lab is performed.

### Attendance and Participation

Regularly attending class is mandatory and will count towards the final grade in the class. Students are encouraged to ask questions during class if something is unclear. Participation during the activity labs is mandatory. Participation does not necessarily mean performing the physical activity – lab groups will need members to perform the physical activity, instruct the person performing the activity, take measurements, and record data.

TENTATIVE COURSE SCHEDULE

DATE			TOPIC	READINGS/ASSIGNMENT DUE
T	August	27	<i>Lecture Day</i> – Syllabus; Introduction to Exercise Physiology, Macronutrients and Micronutrients	Read Chapter 15 pp 367-391
TH	August	29	<i>Non-Lecture Day</i> – Read/Listen/Watch Supplement Materials on Blackboard for Mid-Term Exam #1; Read Book; Work on HW #1; Study (No Class – Office Hours)	
T	September	3	<i>Lecture Day</i> –Optimum Nutrition for Exercise; Ergogenic Aids to Performance; Discuss HW #1	<b>HW Assignment #1 Due</b> Read Chapter 16
TH	September	5	<i>Non-Lecture Day</i> –Review for Mid-Term Exam #1	
T	September	10	<b>Mid-Term Exam #1</b>	<b>HW Assignment #2 Due</b>
TH	September	12	<i>Non-Lecture Day</i> – <b>Activity Lab #1</b> – Heart Rate Monitoring During Workout; Go over Mid-Term Exam #1 commonly missed questions (No Class – Office Hours)	
T	September	17	<i>Lecture Day</i> –Fundamentals of Human Energy Transfer During Exercise; Discuss HW #2	Read Chapter 2
TH	September	19	<i>Non-Lecture Day</i> – Read/Listen/Watch Supplement Materials on Blackboard for Mid-Term Exam #2; Read Book; Work on HW #3; Study (No Class – Office Hours)	
T	September	24	<i>Lecture Day</i> –Measuring and Evaluating Human Energy – Generating Capacities During Exercise; Energy Expenditure During Rest and Physical Activity	<b>HW Assignment #3 Due ;</b> <b>Activity Lab #1 Due</b> Read Chapter 5
TH	September	26	<i>Non-Lecture Day</i> – Optional Review for Mid-Term Exam #2; Discuss HW #3 and Activity Lab #1	
T	October	1	<b>Mid-Term Exam #2</b>	<b>HW Assignment #4 Due</b>
TH	October	3	<i>Non-Lecture Day - Activity Lab #2</i> – Computing Energy Expenditure Using Equations; Go over Mid-term Exam #2 commonly missed questions	
T	October	8	<i>Lecture Day</i> – The Cardiovascular System and Exercise; Discuss HW #5	<b>HW Assignment #5 Due</b> Read Chapter 6 and Chapter 8 pp 181-196

DATE			TOPIC	READINGS/ASSIGNMENT DUE
TH	October	10	<i>Non-Lecture Day</i> – Read/Listen/Watch Supplement Materials on Blackboard for Mid-Term Exam #3; Read Book; Work on HW #6 and Activity Lab #2 (No Class – Office Hours)	
T	October	15	<b>Columbus Day Recess – No Class</b>	
TH	October	17	<i>Lecture Day</i> –The Respiratory System and Exercise	<b>HW Assignment #6 Due ; Activity Lab #2 Due</b> Read Chapter 7 and Chapter 8 pp 196-203
T	October	22	<i>Non-Lecture Day</i> – Read/Listen/Watch Supplement Materials on Blackboard for Mid-Term Exam #3; Read Book; Work on HW #7 (No Class – Office Hours)	
TH	October	24	<i>Lecture Day</i> –The Neuromuscular System	Read Chapter 1 and 3
T	October	29	<i>Non-Lecture Day</i> – Read/Listen/Watch Supplement Materials on Blackboard for Mid-Term Exam #3; Read Book; Work on HW #8 (No Class – Office Hours)	
TH	October	31	<i>Lecture Day</i> –The Endocrine System - Hormones, Exercise and Training; Discuss HW #8	<b>HW Assignment #7 Due</b> Read Chapter 4
T	November	5	<i>Non-Lecture Day</i> - Optional Review for Mid-Term Exam #3;	
TH	November	7	<b>Mid-Term Exam #3</b>	<b>HW Assignment #8 Due</b>
T	November	12	<i>Non-Lecture Day</i> – <b>Activity Lab #3</b> – Body Composition Assessment; Go over Mid-Term Exam #3 commonly missed questions	
TH	November	14	<i>Lecture Day</i> – Exercise Training and Adaptations	Read Chapters 9, 10, 11, 12, 13
T	November	19	<i>Non-Lecture Day</i> – Read/Listen/Watch Supplement Materials on Blackboard for Mid-Term Exam #4; Read Book; Work on HW #10 (No Class – Office Hours)	

DATE			TOPIC	READINGS/ASSIGNMENT DUE
TH	November	21	<i>Lecture Day</i> – Body Composition, Obesity, Children, Aging and Disease Prevention	<b>HW Assignment #9 Due</b> Read Chapters 15 pp 355-366, Chapter 17, 18, 19, 21, 22
T	November	26	<i>Non-Lecture Day</i> - Optional Review for Mid-Term Exam #4;	
TH	November	28	<b>Thanksgiving Recess – No Class</b>	
T	December	3	<b>Mid-Term Exam #4</b>	<b>HW Assignment #10 Due ; Activity Lab #3 Due</b>
TH	December	5	<i>Non-Lecture Day</i> – Optional Review for final; Go over Mid-Term Exam #4 commonly missed questions; Questions about HW, Activity Labs, etc.	<b>Study for Final</b>
T	December	12	<b>Final Exam – 7:30-10:15 am 131 Bull Run Hall</b>	

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

### *Student Expectations*

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/honor-code/>].
- 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/policies/responsible-use-of-computing/>].
- 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.

### *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/>].

**PROFESSIONAL BEHAVIOR:** Students are expected to exhibit professional behaviors and dispositions at all times.

**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.

