GEORGE MASON UNIVERSITY  
School of Recreation, Health, and Tourism  

EFHP 610: Advanced Exercise Physiology (3)  
Fall 2012

DAY/TIME: T/Th 10:30 – 11:45 am  
LOCATION: PW 247 Bull Run Hall

PROFESSOR: Dr. Charles Robison  
EMAIL ADDRESS: crobiso4@gmu.edu

OFFICE LOCATION: PW 205 Bull Run Hall  
PHONE NUMBER: 703-993-7115

OFFICE HOURS: T TH 1:00 – 3:00pm,  
by appointment  
FAX NUMBER: 703-993-2025

PREREQUISITES: 
Graduate standing or permission of the instructor

COURSE DESCRIPTION:  
Lecture, demonstration, and seminar experiences in applying research findings to understanding physiological function and effects of exercise on people.

COURSE OBJECTIVES:  
Upon completion of EFHP 610 students should be able to:  
1. Describe the responses that occur during exercise in the body’s various physiological systems  
2. Describe the physiological changes that occur as a result of aging and explain how these changes affect performance.  
3. Explain how gender differences affect performance  
4. Prepare and present research findings on a topic related to a specific area of exercise physiology  
5. Demonstrate the ability to critically review current research and connect findings to topics discussed in class.

COURSE OVERVIEW:  
Topics that are covered include the physiology of the skeletal muscle, cardiorespiratory, and endocrine systems. Additional topics to be addressed include: body composition, gender differences, aerobic and anaerobic power, and aging. Material for the course will be drawn from the required textbook and assigned readings of published research. Class lectures will be presented in PowerPoint with handouts posted on Blackboard in advance of class meetings.

NATURE OF COURSE DELIVERY  
Face to face  
REQUALI EADINGS:
Specific journal articles will be assigned.

EVALUATION:
Written Examinations 65% (Objectives 1,2,3)
Final Project 25% (Objectives 4,5)
Article Presentation 10% (Objectives 4,5)

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>94 – 100</td>
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<tr>
<td>A-</td>
<td>90 – 93</td>
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<td>B+</td>
<td>88 – 89</td>
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<tr>
<td>B</td>
<td>84 – 87</td>
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<tr>
<td>B-</td>
<td>80 – 83</td>
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<tr>
<td>C</td>
<td>70 – 79</td>
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<tr>
<td>F</td>
<td>60 – 69</td>
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<tr>
<td>F-</td>
<td>0 – 69</td>
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<tr>
<td>B-</td>
<td>80 – 83</td>
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Note:* Although a B- is a satisfactory grade for a course, students must maintain a 3.00 average in their degree program and present a 3.00 GPA on the courses listed on the graduation application.

TENTATIVE COURSE SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Week # 1</td>
<td>Introduction, Energy and Phosphagen System</td>
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<tr>
<td>Week # 2</td>
<td>Glycolysis, Glycogenolysis and Oxidation of Pyruvate and Lactate</td>
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<td>Week # 3</td>
<td>Lipid Metabolism</td>
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<td>Week # 4</td>
<td>Protein Metabolism, <strong>Exam 1</strong></td>
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<td>Week # 5</td>
<td>Ventilation, Cardiovascular Anatomy and Physiology</td>
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<td>Week # 6</td>
<td>Cardiovascular Anatomy and Physiology, Circulation and Its Control</td>
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<td>Week # 7</td>
<td>Circulation and Its Control, Cardiovascular Dynamics During Exercise</td>
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<td>Week # 8</td>
<td>Cardiovascular Dynamics During Exercise, <strong>Exam 2</strong></td>
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<tr>
<td>Week # 9</td>
<td>Skeletal Muscle Structure and Contractile Properties</td>
</tr>
<tr>
<td>Week # 10</td>
<td>Neurons, Motor Unit Recruitment, and Integrative Control of Movement; Principles of Skeletal Muscle Adaptations</td>
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Week # 11  | Muscle Strength, Power, and Flexibility, **Exam 3**
Week # 12  | Obesity, Body Composition, and Exercise; Exercise in the Heat and Cold
Week # 13  | Growth and Development
Week # 14  | Aging and Exercise
Week # 15  | **Exam 4**
Tuesday,12/18, 10:30 – 1:15pm  | **Final Project Presentations**

*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://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.