1. Course Information
Exercise Physiology
Biology 6xx
3 Credit Hours
Prerequisites: Graduate standing or permission of instructor
Fall 2014

2. Professor:
Robert H. Coker, PhD, FACSM
Office: 226 Arctic Health Research Building
Office Hours: 10:00 AM-12:00 PM (MWF), and by appointment

Fitness and Performance, Eighth Edition; Also supplementary readings as posted on Blackboard.

4. Course Description: Physiological responses and adaptation to exercise in humans, emphasizing
energy metabolism, adipose and lean tissue, central and peripheral components of oxidative
metabolism, and the environmental influences on these parameters.

5. Course Goals:
The primary focal points of this course are directed at the neural, cardiorespiratory, skeletal, muscular
systems, and how they respond and/or adapt to the stress of acute and chronic exercise. The
complex interaction between environmental stressors on exercise performance will also be covered.
This course will provide a solid foundation for advanced study in the field of exercise physiology.

6. Student Learning Outcomes:
1. Demonstrated knowledge of the acute responses and chronic adaptations to aerobic and
   resistance exercise.
2. Demonstrated knowledge of the physiological assessments for muscular and cardiorespiratory
   responses to exercise.
3. Demonstrated knowledge of the scientific literature in two areas of investigation.
4. Gain an understanding to research methods in Exercise Physiology.

7. Instructional Methods: A lecture and discussion based model will be used in this course. Students
   will be given the opportunity to answer questions posed by the Professor. As part of the requirements
   of the course, students will also make a one brief presentation of a research article that specifically
   relates to the current section of the course (ie., respiratory, muscle, etc.).

8. Course Calendar:

   Class Schedule

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<tr>
<th>Date</th>
<th>Chapter</th>
<th>Topic</th>
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<tbody>
<tr>
<td>09/04/14</td>
<td>Chapter 1</td>
<td>Physiology of Exercise in the US: Past and Future</td>
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<tr>
<td>09/09/14</td>
<td>Chapter 2</td>
<td>Control of the Internal Environment</td>
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<td>09/11/14</td>
<td>Chapter 3</td>
<td>Bioenergetics</td>
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<td>09/16/14</td>
<td>Chapter 4</td>
<td>Exercise Metabolism</td>
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<tr>
<td>09/18/14</td>
<td>EXAM 1</td>
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<td>09/23/14</td>
<td>Chapter 5</td>
<td>Hormonal Responses to Exercise</td>
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<td>09/25/14</td>
<td>Chapter 6</td>
<td>Measurement of Work, Power, and Energy Expenditure</td>
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<td>09/30/14</td>
<td>Chapter 7</td>
<td>The Nervous System: Structure and Control of Movement</td>
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<td>10/02/14</td>
<td>Chapter 8</td>
<td>Skeletal Muscle: Structure and Function</td>
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9. Course Policies: Honor Code and Plagiarism: Students will be expected to uphold the UAF standard of conduct for students relating to academic dishonesty. Students will assume full responsibility for the content and integrity of the academic work submitted by them during the course. For the student code or additional information, please use the following URL http://www.uaf.edu/catalog/current/academics/regs3.html

10. Evaluation:
Student performance will be based on four primary components 1) exams, 2) quizzes, 3 oral presentation, and 4) two literature reviews on two topics relevant to the course. The sum of these four components = 100 points.

Calculation of Grade: In brief, A = 90-100, B = 80-89, C = 70-79, D = 65-69, F = 64 or below. The grade in the course will be based on the accumulation of 100 possible points described above.

Exams: Four exams will be given during the course, including a final exam. One of these exams will be administered and graded prior to mid-term so that students can accurately assess their initial performance in the course. Each exam will be worth 10 points for graduate students.

Quizzes: Ten quizzes will be given during or following lecture. Each quiz will be worth one point, and is designed to promote attendance and reinforce acquisition of core objectives.

Oral Presentation: Worth 10 points towards the final grade, each student will present one research article in the field of exercise physiology. This article will be specifically relevant to the section discussed. Students will cover the rationale, methods, results and discussion sections of the article.
Literature Review: Each of the literature reviews will be worth 20 points highlighting the importance of scientific interpretation in the field of exercise physiology. The review should include the following components: 1) General Statement of the Topic, 2) References to Previous Research, 3) Existing Gaps in Knowledge, and 4) References to Ongoing Studies related to the Topic. Generally speaking, 5 points will be assigned to each of these sections and evaluated accordingly.

11. Support Services: Tutoring is not specifically available but students are urged to contact Dr. Coker to get additional guidance on course material.

12. Disabilities Services: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. I will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to students with disabilities. **If students require any assistance due to documented disability, please make the Professor aware of this important need by the 2nd week of semester, and they will make the necessary accommodations.**