Overview: Basic mammalian anatomy and physiology is a core competency that is necessary for the study of exercise physiology. 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.

Catalog 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.

Prerequisites: 1 year of Human Anatomy and Physiology and 1 semester of Chemistry. If a student enrolls in the course without these prerequisites, they will be withdrawn from the course.

Course Objectives:
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. Introduction to research methods.


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.).

Grading:

Undergraduate
Student performance will be based on three primary components for undergraduates: 1) exams, 2) quizzes, and 3) oral presentation. The sum of these three components = 100 points.

Graduate
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 20 possible points for undergraduates; 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.

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/reg3.html

UAF 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 award of this important need by the 2nd week of semester, and they will make the necessary accommodations.**

Class Schedule

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<td>Control of the Internal Environment</td>
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<td>The Nervous System: Structure and Control of Movement</td>
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<td>Chapter 8</td>
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