

Exercise Physiology

APK 6116

Class Schedule and Course Syllabus

Dr. Elisabeth Barton

Tentative Class Schedule

Date	Class Topic	BYOA	Quizzes	Chapter
21-Aug	No Class – Solar Eclipse	Small Group Meetings for BYOA Project		
28-Aug	Homeostasis and Exercise	Athlete Choice		1,2
4-Sep	HOLIDAY			
11-Sep	Metabolism	Homeostasis and Limits to Performance		3,4
18-Sep	Film: “Bigger Stronger Faster”		Quiz 1 (Ch 1-4)	
25-Sep	Endocrine System - Hormones	Energy Sources and Doping		5
2-Oct	Nervous System	Hormones		7
9-Oct	Skeletal Muscle Function	Sensory and Motor Units	Quiz 2 (Ch 5,7)	8
16-Oct	The Heart			9
23-Oct	Circulatory System	Muscle Fiber Types		9
30-Oct	Respiration	Cardiovascular Regulation	Quiz 3 (Ch 8,9)	10
6-Nov	Acid Base	Respiratory Function		11
13-Nov	Temperature Regulation			12,24
20-Nov	Adaptation, Injury, Repair	Temperature Regulation	Quiz 4 (Ch 10-12)	13
27-Nov	Training Regimens	Injury and Adaptation		13,21
4-Dec	Final wrap up BYOA	Training Program	Quiz 5 (Ch 13, 21)	
8-Dec	FINAL Project Deadline			
TBA	Make-Up Exams			

Course Syllabus

Class Time & Place: Monday periods 6-8 (12:50 – 3:50 pm); WEIM 1070

Instructor: Elisabeth Barton Ph.D.

Office: FLG 124

Phone: 352-294-1714

Office Hours: By appointment

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Course Objectives: This is an introductory exercise physiology course aimed at graduate students who possess an undergraduate level understanding of human exercise physiology. This course is designed to give students a fundamental knowledge of the acute and chronic responses to exercise. The overriding concept throughout the course will be how exercise challenges the body's normal "homeostasis", and as such illuminates key features of how we function (or don't!).

Particular attention will be placed upon understanding the mechanisms of how these responses occur. In addition to textbook material, the course will use the primary literature to understand the basis of physiological concepts, and to explore emerging concepts. *Students will be expected to be active participants through in class discussions and presentations.*

Lecture: Lecture time will be generally divided between two activities: 1) didactic presentations to provide background, largely based on the textbook; 2) student presentations of the ongoing project (see below). There will also be 5 in class quizzes based on the didactic presentations and textbook readings. At the end of some classes, there will be an option to stay to read papers in the weekly topic; participation in this component will be strongly encouraged for PhD students in the course.

Film: For September 18th, students will be asked to watch "Bigger Stronger Faster" in lieu of lecture. This is available on NetFlix, for those students with accounts, as well as YouTube. DVD copies of the film will also be available. There will be a set of questions based on the film to review the following week in class.

Student Project: Students will be asked to choose a sport or activity (e.g., swimming, running, mountain climbing) at the beginning of the course. Dr. Barton will meet with all students in small groups the first week of class to discuss in detail. As each physiological system is presented, the factors that are optimal for the activity of choice will be described and justified. For instance, a sprinter will require muscle, metabolic, and cardiac properties that are distinct from a long distance runner. This project will help guide in class discussions, and students will be chosen each week to present an update on their project. The final project will be compiled from the weekly assignments, and will be worth 20% of the final grade.

Quizzes: There will be 5 quizzes throughout the semester that are multiple choice/fill-in-the-blank, and based on the previous 2-3 lectures. These will be given at the start of class. The Top 4 quiz grades will be used to calculate final grades; in other words, students will be able to drop their worst quiz grade. Quizzes will be worth 70% of the final grade.

Papers: The primary literature forms the basis of fundamental concepts for physiology. Some concepts become sufficiently accepted to appear in textbooks, whereas others may not become substantiated enough to be part of the general knowledge. Further, in some areas of exercise physiology, there is a change in concepts, and so textbooks, which are many years behind in current knowledge, may not adequately address a new area. We will spend a portion of class time reviewing emerging concepts and classic papers in exercise physiology.

Course Textbook: Powers, S.K. & Howley E.T. *Exercise Physiology: Theory and Application to Fitness and Performance. Latest Edition.* McGraw Hill. Note that older editions will also suffice for this course.

Course Grading Scheme

Exams (best 4 out of 5)	70 points (17.5 points each)
Student Project	20 points
Class Participation	10 points
Total points	100 points

The point total listed above is final and the format of assigning points will not change. THERE WILL BE NO EXCEPTIONS TO THESE RULES!

Grading Scale (calculated to 2 decimal places):

- A = 90 – 100
- B+ = 87.5 – 89.9
- B = 80 – 87.4
- C+ = 77.5 – 79.9
- C = 70 – 77.4
- D+ = 67.5 - 69.9
- D = 60 – 67.4
- F = < 60

Honor Policy: The University policy on academic honesty is clear and reads as follows: “We the members of the University of Florida Community pledge ourselves and our peers to the highest standard of honesty and integrity.” This includes **ALL COURSE EXAMS, REPORTS, and ASSESSMENTS!** Students violating this policy will be sanctioned according to the Committee on Student Conduct, receive a grade penalty for the course or some other penalty for failure to abide by this standard of conduct.