

**College of Public Health & Health Professions
Department of Physical Therapy
Syllabus**

**PHT6152C: Exercise Physiology
2 credit hours
Spring Semester 2014**

Class Time:

Tuesday 3:00 – 4:55

Location:

PT 1104

Primary Instructor:

Andrew Judge, Ph.D.

E-mail: arjudge@phhp.ufl.edu

Phone: 273-9220

Office: Biomedical Sciences Building,
Room J396 BMS

Office Hours: Wednesdays 8-10 a.m. - Other times by appointment

Additional Instructors

Sean Forbes, PhD

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David Fuller, PhD

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Course Description:

This class is designed to be a lecture course and give students a fundamental knowledge of the acute and chronic responses to exercise. Particular attention will be placed upon understanding the mechanisms of how these responses occur. The course begins with an overview of homeostasis, bioenergetics and metabolism. The class then enters into the specific areas of endocrinology, neuromuscular, circulatory and respiratory exercise physiology. Finally the class explores environmental exercise physiology, training, performance and ergogenic aids. The overriding concept throughout the course will be how the body attempts to maintain “homeostasis” in light of the disturbance caused by exercise.

Course prerequisites: PHT6935C

Course Objectives:

Upon successful completion of this course, students should be able to:

- 1. Describe and understand the general physiological responses to exercise*
- 2. Describe and understand the responses of the major physiological systems to exercise*
- 3. Describe and understand the lab assessments used to determine cardiorespiratory fitness and human performance*
- 4. Communicate effectively with patients and colleagues on appropriate exercise prescription.*

Teaching Methods: Lecture and class presentations

Course Textbook: Powers, S.K. & Howley E.T., *Exercise Physiology: Theory and Application to fitness and Performance*. McGraw Hill.

Notes:

Powerpoint notes for each lecture will be provided prior to each class

Course Outline:

Note: It is likely that this schedule will change slightly throughout the semester

Date	Class Topic	Chapter	
Jan 7	Intro & Physiology of Exercise, Homeostasis	1, 2	Judge
14	Measurement of Work, Power and Energy Expenditure	6	Forbes
21	Bioenergetics & Exercise Metabolism	3, 4	Judge
28	Exercise Metabolism & Hormonal Response to Exercise	4, 5	Judge
Feb 4	Skeletal Muscle Adaptations to Use/Disuse	8	Judge
11	Skeletal Muscle Adaptations, Circulatory Responses to Exercise	8	Judge
18	EXAM 1	1-6, 8	
25	Circulatory Responses to Exercise cont.		Judge
Mar 4	Spring Break – No class		
11	Respiration During Exercise & Acid Base Balance	10	Fuller
18	Circulatory Responses to Exercise	9	Judge
25	Temperature & Environment & Physiology of Training	12, 13, 24	Judge
Apr 1	Work Tests to Evaluate Cardiorespiratory Fitness	15	Forbes
8	Lab Assessments of Human Performance	20	Forbes
15	Factors Affecting Performance	19	Judge
22	Completion of unfinished materials and review		Judge
TBD	EXAM 2	9-13, 15, 19, 20, 24	

Course Grading Scheme:

Exams:

There will be two written exams and each will determine 45% of the final grade. Exams will consist of multiple choice questions and short written answers. Grades will be determined according to the established grading scale shown below. There will be no opportunity for any extra credit. Also, you will have one week following the return of each exam to appeal the grade. All grades must be appealed in writing (please email). **THERE WILL BE NO EXCEPTIONS TO THESE RULES!**

Presentations:

Group presentations (in groups of no more than 5) on topics outlined below (or another topic approved by the primary instructor) will determine 10% of the final grade. Students may select to join a group that will present an overview of information to the rest of the class in ~25 mins. The topics are:

Appropriate Physical Activity for:

Weight Loss and Weight Management
 Flexibility and Muscular Strength
 Cardiorespiratory Fitness
 Developing and Maintaining Fitness
 Older Adults
 Children
 Bone Health
 Patients with Coronary Artery Disease
 Patients with Hypertension
 Pregnant women
 Patients with Diabetes
 Patients with COPD
 Cancer Patients
 Exercise and Fluid Replacement
 Nutrition and Athletic Performance

There are Medicine and Science in Sports & Exercise (MSSE) position statements that cover several of these topics. However you are encouraged to explore other reliable resources and have the freedom to present the information you believe is important and that will be of value to you and your class. Presentations must be professional, however. Groups may sign up for any of the dates below on a first come first served basis:

Date	Topic	Group
Jan 21		
28		
Feb 4		
11		
18	<i>EXAM 1</i>	
25		
Mar 4	Spring Break – No class	
11		
18		
25		
Apr 1		
8		
15		
22	Last Day – No presentations	

Grading Scale

This course will be graded according to the departmental guidelines located in the student handbook. We will follow the standard grading scale listed below.

93-100 =	A 4.00 grade point
90-92 =	A- 3.67 grade point
87-89 =	B+ 3.33 grade point
83-86 =	B 3.00 grade point
80-82 =	B- 2.67 grade point
70-79 =	C 2.00 grade point
60-69 =	D 1.00 grade point
Below 60 =	E 0 grade point

Academic Honesty / Honor Code

In this professional program we are particularly sensitive to students submitting independent work and to using complete and accurate referencing in complying with the University of Florida Rules - 6Cl-4.017 Student Affairs: Academic Honesty Guidelines.

Further details regarding the University of Florida honesty policy is available at:

<http://www.dso.ufl.edu/judicial/procedures/academicguide.php> and in your student handbook. All students are required to abide by the Academic Honesty Guidelines, the following pledge has been accepted by the University and is expected of all students:

"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity".

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

Policy Related to Class Attendance

Attendance is mandatory. Please contact the instructors as soon as possible if you are unable to attend class for any reason. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis.

Accommodations for students with disabilities

If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office (<http://oss.ufl.edu/>). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575, or Student Mental Health Services, 352-392-1171. Visit their web sites for more information: <http://www.counsel.ufl.edu/> or <http://www.health.ufl.edu/shcc/smhs/index.htm#urgent>

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations,

mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: www.health.ufl.edu/shcc

Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789. BUT – *Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone - do not be afraid to ask for assistance.*

Professional Behavior

Professional behavior is critical for a successful transition from the classroom to the clinical setting. The faculty recognizes the importance of this by incorporating the development and evaluation of professional behavior into each academic course.

Professional behavior is described in the Student Handbook and is exemplified by:

1. Attendance to all classes
2. Timeliness
3. Attentiveness.
4. Respectful and polite interaction with peers and instructors
5. Active learning as demonstrated by questions and discussion
6. Other behaviors as described on Professional Behaviors and Student Responsibilities in the Student manual.

Laptop & Smartphone policy

Laptop computers are permitted for taking notes. *However, internet use is not permitted during lectures. Texting or other use of phones is not permitted.*

Dress Code

Please review the policies for lecture attire in your Student Handbook.