

**TEXAS A&M UNIVERSITY-COMMERCE  
DEPARTMENT OF HEALTH AND HUMAN PERFORMANCE  
HHPK 450 Physiology of Exercise**

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**REQUIRED TEXT:** McArdle, W. D., Katch, F. I., & Katch, V. L. (Current Version). Exercise physiology: nutrition, energy, and human performance. Lippincott Williams & Wilkins

Lab Manual: Beam, WC, Adams GM. Exercise Physiology, Laboratory Manual (current edition)  
ISBN 9780073376592

**Course Description:**

This course is designed to explore concepts of physiological functions of the human body during physical activity, exercise, and stress to include the following: cardiovascular, respiratory, muscular, and neurological control of movement; ergogenic aids and performance; nutrition; control and maintenance of body weight; sex differences and cardiovascular disease; and physical activity. Students will describe, explain and explore how the body performs and responds to physical activity.

**Course Objectives:**

1. Explore the relationships between exercise physiology and sports / physical education.
2. Explore the specific physical responses of the body to short- and long-term bouts of exercise.
3. Explore the mechanisms of energy metabolism during exercise.
4. Examine procedures and protocol in conducting various exercise physiology measurements.
5. Explore the relationship among variables such as temperature, age, and gender to exercise.
6. Study the effects of ergogenic aids to athletic performance.
7. Apply physiological concepts to human exercise in a wide variety of activities including improvement of performance in motor activities, evaluation of exercises for special purposes, design of basic conditioning programs, and evaluation of equipment used in athletics and other forms of exercise.

**Course Requirements:**

**Class Participation, Group/ Homework Activities, Quizzes**

Perfect attendance and an A or B average going into the test will allow the student to be exempt from the final exam. Students will participate in several class, group, and homework activities (including quizzes) throughout the semester. Some will be graded, and some will not. Student attendance will be averaged into this category. Attendance of class is defined as being in class when it is scheduled and for the duration of class time. If for some reason you are unable to stay to the end of class, let me know in advance (when possible) to minimize disruption. All attendance and activities will be worth 10 points (or **10% of your final grade**).

**Tests:**

Students will take 3-4 tests throughout the semester to combine for 600 points total. Tests will cover lectures, class activities, as well as the book. If your absence is unexcused (e.g. absence not due to illness and accompanied by proper documentation or school-sponsored event) you will not be permitted to make up a missed exam. (600 points, **60% of final grade**)

### **Article Summaries**

Each student will be required to write four (4) summaries of exercise physiology articles. Articles should be from peer-reviewed journals only, including such journals (but not limited to): *Medicine and Science in Sports & Exercise* and *Research Quarterly for Exercise and Sport*, *Journal of Strength and Conditioning Research*. Each article summary should be cited in APA or MLA format, 1.5-2.0 pages typed, double-spaced in Times New Roman Font. Articles will not be accepted after 5:00 pm the day they are scheduled to be turned in. Unless prior arrangements have been made there will be no exceptions. Improper format will result in a reduction of 20%. Reference should be listed at the top of the summary in APA format. Each article summary is worth 25 points each. (**10% of your final grade**)

### **Laboratory Experiences:**

**You must attend all labs.** All lab write-ups are required and are due at the beginning of the next lab. The lab graduate assistant, will conduct labs and collect all lab write-ups from you. Laboratory write-ups will consist of **25% of your final grade**.

### **Course Grading:**

1. Class, group, homework, quizzes	50 points	5%
2. Tests (4)	600 points	60%
3. Article Summary (4)	100 points	10%
<u>4. Labs</u>	<u>250 points</u>	<u>25%</u>
<b>Total:</b>	<b>1000 points</b>	<b>100%</b>

### **Grading Scale:**

<b>100 – 90%</b>	<b>A</b>
<b>89 – 80%</b>	<b>B</b>
<b>79 – 70%</b>	<b>C</b>
<b>69 – 60%</b>	<b>D</b>
<b>59 – 0%</b>	<b>F</b>

### **Student Conduct:**

This course will cover exercise physiology. Students should feel comfortable discussing their individual views and experiences concerning each subject. Students should also respect each other's differences and respect each other as each issue is discussed. **If the instructor deems that individual students are not being respectful toward each other or the instructor, then these students will be asked to leave (and eventually drop the course if the negative conduct continues).** Please refer to pages 42 – 45 of the TAMU-C Student Guidebook's Codes of Conduct for details.

### **Students with Disabilities:**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services**  
**Texas A&M University-Commerce**  
**Gee Library, Room 132**  
**Phone (903) 886-5150 or (903) 886-5835**  
**Fax (903) 468-8148**  
[\*\*StudentDisabilityServices@tamu-commerce.edu\*\*](mailto:StudentDisabilityServices@tamu-commerce.edu)



**Plagiarism/academic dishonesty**--Plagiarism is copying another's work as your own without proper acknowledgment. Be aware that the intent to deceive the reader does not have to be present for plagiarism to occur. Also ignorance of the definition of plagiarism is also not an excuse and will result in the same consequences as for someone who has knowledge of it. Plagiarism is also not restricted to copying the writings of others, nor to stealing from established authors; it also includes the ideas of your fellow students. If you plagiarize in this class (including cheating on tests) you will receive an automatic "F". If you are in any doubt as to whether your work constitutes plagiarism or academic dishonesty, please discuss this with me confidentially.

**HHPH 450 Exercise Physiology**  
**Spring 2014**  
**Tentative Itinerary (\*subject to change with notice)**

<b>Week</b>	<b>Chapters</b>	<b>Topics</b>	<b>Assignments Due (Thursdays except for tests.)</b>
1-4	Intro. and 18	Syllabus Introduction to Exercise Physiology Structure and Function of Exercising Muscle	
	19 & 4-9	Metabolism and Neurological Control of Exercising Muscle	Article Summary description and walkthrough
	20	Hormonal Control <b>Test 1</b>	
5-8	15-17	Energy Expenditure and Fatigue The Cardiovascular System and Its Control	Article Summary 1
	12-14	Respiratory Regulation During Exercise Cardiorespiratory Responses to Acute Exercise	
		<b>Test 2</b>	Article Summary 2
9-12	21-22	Principles of Exercise Training Adaptations to Resistance Training / Aerobic Training	
	24-25	Exercise in Hot and Cold Environments: Thermoregulation Altitude	Article Summary 3
		<b>Test 3</b>	
13-16	28-30	Training for Sport Body Composition and Nutrition for Sport Ergogenic Aids	
	31-32	Special Populations: Children and Adolescents in Sport and Exercise Aging in Sport and Exercise	Article Summary 4
		<b>Test 4 (Final)</b>	