

EXSC 372.01: Exercise Physiology

Course Syllabus - Fall 2011

Meeting Room: Gibson 260B (Starting 9/05/11!)
Meeting Days; Time: M, W and F; 10:00 – 10:50

Instructor: Matthew J. Garver, Ph.D.
Office: Gibson 134
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Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday
12:00-1:00	9:00-11:00	12:00-1:00	9:00-11:00	12:00-1:00

ACU Mission Statement: The mission of Abilene Christian University is to educate students for Christian service and leadership throughout the world.

Department of Kinesiology and Nutrition Mission Statement: The Kinesiology and Nutrition Department trains students to live healthful and physically active lives.

Catalog Description: An examination of the effects of physical activity upon the human body.

Co-requisites: EXSC 373 (Required Lab)

Objectives: Upon completion of EXSC 372, the student should have the ability to describe:

1. Control systems of the body
2. Structure and functions of the nervous system
3. Structure and functions of the skeletal muscle system
4. Plasticity of the skeletal muscle system
5. Role of vitamins and minerals in the metabolic pathways
6. Regulation of body water balance including input and output sources
7. How carbohydrates, lipids and proteins are used as fuel for exercise
8. Nutritional strategies for optimal exercise performance
9. The determinants of energy expenditure
10. The determinants of aerobic and anaerobic exercise performance
11. Cardiovascular dynamics and gas exchange in the human body
12. Structure and functions of the pulmonary system
13. Homeostatic principles related to heat production, heat storage and heat dissipation
14. The influence of chronic endurance training on health and fitness
15. The influence of environmental changes on exercise performance
16. The effects of ergogenic aids

Course Materials and Support:

Required Text: Powers, S.K. & Howley, E.T. 2009. *Exercise Physiology: Theory and Application to Fitness and Performance*. 7th ed. McGraw-Hill: New York.

Support: Blackboard access to syllabus, lecture power point presentations and grades. The Professor has scheduled office hours and is available by email and special request.

Teaching Strategies: Lectures will be in power-point format. While supplemental reading will enhance understanding of course material, exams will be given on the lecture material. Exams may consist of any of the following: multiple choice, fill in, short answer or essay.

Grading System: Final grades are based on a 300 point scale. Letter grade conversion below:

Letter Grade	Quality Points – GPA	Points Earned
A	4.0	270-300
B	3.0	240-269.99
C	2.0	210-239.99
D	1.0	180-209.99
F	0	Below 180

Grade Breakdown: The grading rubric is provided below:

TESTS	200 Points Possible
Exam #1: Control System – Nutrition	50 pts
Exam #2: Metabolism Basics – Components Fick	50 pts
Cumulative Final: All material with focus on Pulmonary System – Environmental Physiology	100 pts
Research Outline and Paper	50 Points Possible
Outline due October 10 th in class (Up to 10 pts deducted from final paper if not turned in completed or on time)	0 pts up to -10 pts
Paper due November 18 th at 11:59 PM (Submitted by blackboard in Microsoft Word or equivalent format)	50 pts
Quizzes and Application Assignment	50 Points Possible
Quiz #1: Control System – Skeletal Muscle	20 pts
Quiz #2: Nutrition-Metabolism	20 pts
Application Assignment	10 pts
TOTAL POSSIBLE POINTS	300

Grade Deductions: The student's final grade will be lowered by 10 points for each absence beyond 5 (unexcused) and as specified for tardiness or failure to attend the entire class session.

ADA Compliance: The ACU Student Disability Services Office (a part of Alpha Academic Services) facilitates disability accommodations in cooperation with instructors. In order to be

eligible for accommodations, you must be registered with Disability Services and a separate request must be made for each class in which accommodations are needed. Call extension 2667 for an appointment with the Director of Disability Services.

Course Policies:

Attendance: As stated in the ACU Course Catalogue, class attendance is expected. Attendance is imperative for development of understanding and meeting course objectives; therefore, attendance will be recorded. Zeros will be recorded for any quiz, exam or assignment due during or completed in class when a student is absent (only exception: see University Sponsored Events). A student who notifies the instructor when he/she is ill or foresees an absence (NOT University sanctioned) is not excused from the class without appropriate documentation (i.e. physician documentation).

Tardy Arrival - Arriving after the scheduled class time will be considered a tardy and two tardy arrivals to class will equal an absence.

UNIVERSITY SPONSORED ABSENCES: It is the student's responsibility to:

1. Arrange to take tests, labs etc more than 48 hours PRIOR TO THE UNIVERSITY SPONSORED ABSENCE
2. CHECK before returning to class to determine if an in-class assignment was assigned during University sponsored absence

Attire and Professionalism: At all class meetings, attire should be comfortable, but in good taste and reflecting professional demeanor. Hats/caps, for males or females, are not to be worn during any test, quiz or other evaluation period.

Academic Integrity: University Policy for Academic Integrity and Honesty

1. Academic Integrity is defined as academic work completed as assigned for each class by the individual or group responsible for the work. Academic work includes but is not limited to reading assignments, assessments and examinations, attendance at required out-of-class activities, written or oral presentations, laboratory experiments and research.
2. See Academic Integrity and Honesty Policy for details of what constitutes academic dishonesty and resultant disciplinary actions. www.acu.edu/campusoffices/provost

Cell Phones, Calculators and other Electronic Devices:

1. Unless being utilized for academic purposes as instructed by the professor, to prevent disruption of classes, all cell phones must be turned to the OFF or vibrate (w/out sound) setting and put away during class time. No cell phone is to be answered inside the classroom or in close proximity to the classroom door – be courteous with usage just outside the class.
2. With the possibility that sensitive information can be accessed, students are not to leave their phones in sight during examinations. Likewise, students are cautioned that inappropriate use of a cell phone outside of the classroom shall be construed as cheating and result in associated penalties.

Tentative Course Schedule

The information below is provided to give students some guidance in the intended direction and content for the course. The Professor reserves the right to make changes to the course content, course schedule and/or grading policies as necessary to maximize student learning.

<u>Mid Term #1 Lecture Content</u>	
Quiz #1 content	Control System
Quiz #1 content	Nervous System
Quiz #1 content	Skeletal Muscle
	Vitamins, Minerals and Water
	Macromolecules
	Optimal Nutrition for Body Composition and Performance (Assignment associated with lecture)
<u>Mid Term #2 Lecture Content</u>	
Quiz #2 content	Metabolism Basics
Quiz #2 content	Metabolism of Macromolecules
Quiz #2 content	Metabolism During Exercise
Quiz #2 content	Energy Expenditure at Rest and During Physical Activity
	Anatomy of the Cardiovascular System
	Regulation and Integration of the Cardiovascular System
	Components of the Fick Equation
<u>Final Exam Lecture Content</u>	
	Pulmonary Anatomy: Structure and Function
	Pulmonary System: Gas Transport
	Ventilation and the Oxyhemoglobin Dissociation Curve
	Thermoregulation
	Ergogenic Aids
	Training for Health, Fitness Perform.
	Environmental Physiology

IMPORTANT DATES AS PLANNED

QUIZZES AND EXAMS

Date of Quiz #1 – September 15th

Mid Term #1 – October 5th

Date of Quiz #2 – October 24th

Mid Tem #2 – November 9th

Final Exam – Tuesday, December 13th, 10:00-11:45

PAPER –See Blackboard for more details!

Paper Outline – October 10th in class

Research Paper – November 17th by 11:59 PM via Blackboard