

HPE*K241 Exercise Physiology with Lab

Instructor: Heidi Zenie

Office: C102

Office Hours: T/R 1:00-2:00, 3:00-4:00

Phone: 860 215 9485

Email: hzenie@trcc.commnet.edu

Course Description

This class will cover physiological responses/adaptations to exercise. Topics in this course include neuromuscular, metabolic, cardiovascular, hormonal, and respiratory systems as they pertain to acute and chronic exercise. The major goal of the class is to develop a basic understanding of exercise physiology that will 1) allow the student to utilize exercise physiology in their daily lives and future profession, 2) prepare the student to take additional courses in exercise science.

Course Outcomes

Upon completion of this course the student will have:

1. knowledge of the basic anatomy of the cardiovascular system and respiratory system
2. Ability to distinguish between aerobic and anaerobic metabolism
3. Knowledge to describe the normal acute responses to cardiovascular exercise
4. Knowledge to describe the normal acute responses to resistive training
5. Knowledge of the normal chronic physiologic adaptations associated with cardiovascular exercise
6. Knowledge of the normal chronic physiologic adaptations associated with resistance training
7. Knowledge of the structure and function of the skeletal muscle fiber.
8. Knowledge of the characteristics of fast- and slow-twitch muscle fibers.
9. Knowledge of the sliding filament theory of muscle contraction.

10. Knowledge of twitch, summation, and tetanus with respect to muscle contraction.
11. Knowledge of and ability to describe the implications of ventilatory threshold (anaerobic threshold) as it relates to exercise training and cardiorespiratory assessment.
12. Explain the metabolic and hormonal control of fuel for exercising muscle
13. Describe the neural control of exercising muscle.
14. Explain how energy is expended during exercise and its effect on fatigue.
15. Explain the principles of thermoregulation, and describe how the body responds to exercise in hot and cold environments.
16. Describe how the body responds to exercise at altitude.
17. Explain sound principles for optimizing body composition and nutrition for sport.

Instructional Materials

Plowman, S. *Exercise Physiology for Health, Fitness, and Performance*, 4th ed. Philadelphia, Pa: Lippincott Williams & Wilkins.

Delavier, F. 2010 *Strength Training Anatomy*, 3rd ed. Champaign, IL: Human Kinetics.

Academic Misconduct

The instructor has primary responsibility for control over classroom behavior and maintenance of academic integrity, and can request the temporary removal or exclusion from the classroom of any student engaging in conduct that violates the general rules and regulations of the institution. Extended or permanent exclusion from lecture or laboratory activities or further disciplinary action can only be effected through appropriate procedures of the institution.

Plagiarism, cheating on quizzes or tests, or any form of academic dishonesty is strictly prohibited. Students guilty of academic dishonesty directly or indirectly will receive a zero for the exercise, quiz or test and may receive an "F" grade for the course in addition to other possible disciplinary sanctions which may be imposed through the regular institutional procedures. Any student that believes

that he or she has been erroneously accused may appeal the case through the appropriate institutional procedures if their grade was affected.

Grade Determination

a. Written Exams

There will be 3 written exams each worth 100 points.

b. Laboratory Experiences and Skills

Each lab is worth 17 points.

c. Homework/vocabulary/classwork 17 points each

d. Unit quizzes 16 points each

The grading in this course is determined by the 1000 Point Grading Method. Please see My Grades in Blackboard to follow your academic performance during the semester.

Letter Grade	Point Ranges	Grade Point Value
A	950 - 1000	4.000
A-	900 - 949	3.667
B+	890 - 899	3.333
B	810 - 889	3.000
B-	800 - 809	2.667
C+	790 - 799	2.333
C	710 - 789	2.000
C-	700 - 709	1.667
D+	690 - 699	1.333
D	610 - 679	1.000
D-	600 - 609	0.667
F	0 - 599	0.000

Make-Up Work

Any assignment can be obtained from the instructor or on blackboard. Unit tests can only be made up by special arrangement with the instructor. Make-up tests will be granted on an individual basis only following a conference with the instructor; where the reason(s) for missing the test must be determined

mitigating circumstances beyond the control of the student such as, illness, death in the family, or change in condition of employment. If two tests are missing during the semester and/or if the final exam is missed the student will receive an "F" grade if he or she is failing other parts of the course or an "I" if the student is passing all other parts of the course.

Revisions to the Syllabus

Students are responsible for learning all of the objectives and all of the items in the course outline whether they are discussed in lecture, and/or lab or not. The instructor reserves the right to revise the objectives, topic outline, or academic schedule contained in the syllabus without notice. However, if the revisions affect scheduled unit tests, a 48-hour notice will be given for the new test date.

Technology

Cellular phones and beepers are only allowed in class or lab if they are turned off or in silent mode. Under no circumstances are phones to be answered in class. When there are extenuating circumstances that require that a student be available by phone or beeper, that student must speak to the instructor prior to class, so that together they can arrive at an agreement.

Special Notice

If you have a visible or hidden disability which may require classroom, lab and/or test-taking modifications, please see me as soon as possible. If you have not registered with Chris Scarborough, learning specialist or a counselor in the Student Services Development Center, you must do so early in the semester.