

Oxford College of Emory University
Division of Physical Education & Dance
PE 100 Health and Conditioning Fall 2001
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Office Hours: Monday 2:00 pm – 3:00 pm or TBA

Division Preface – See attached

I. Course Description:

This course is designed for students interested in learning and engaging in exercise programs that enhance the cardiorespiratory (aerobic) system. Students learn basic exercise physiology, nutrition, and medical aspects of exercise, body composition and weight control, and the designing of aerobic exercise regimens. In this class aerobic enhancement is achieved, for the most part through walking and running.

II. Text:

Aerobic Movement Dr. Richard Shappell

III. Course Objectives:

At the end of this course the student will be able to demonstrate the following:

- a. The ability to define the different principles of exercise.
- b. The ability to design and implement their own exercise program based on their exercise goals and the exercise principle presented in class.
- c. Complete a 30-minute run/jog/walk without stopping.
- d. Explain the physiological effects of exercising in different types of weather.
- e. Describe the functions of the cardiorespiratory system and how exercise improves cardiorespiratory efficiency.
- f. Define the differences between aerobic and anaerobic exercise and explain ATP-PC system, Glycolysis and the Aerobic Energy System.
- g. Explain the differences between the sexes in references to physical activity.
- h. Define what an ergogenic aid is and explain two of them.
- i. Explain the relationship between dieting and set point theory.

III. Dress:

Students are required to wear running shoes and socks. Students are further urged to wear loose fitting shirts and shorts. Shirts must be worn at all times.

IV. Sequence of Events:

1. Reading and Lectures
2. On-going exercise program
3. Exams
4. Post test

V. Units of Instruction

1. Training the Cardiorespiratory System
 - a. Define warm-up and cool-down
 - b. Understand and be able to define:
 - i. The principle of adapting to stress
 - ii. The principle of intensity
 - iii. The principle of duration of exercise
 - iv. The principle of frequency
 - v. The principle of duration of exercise sessions
2. Chapter One – Types of exercise and other considerations
 - a. Understand the differences among various physical activities.
 - b. Understand the ramifications of exercising in warm and cold weather.
 - c. Understand and explain heat acclimatization.
3. Chapter Two – The cardiorespiratory system
 - a. List and explain the functions of the four chambers of the heart.
 - b. Trace the flow of blood through the heart.
4. Chapter Three – Factors affecting oxygen distribution
 - a. Define and explain ventilation and diffusion.
5. Chapters Four and Five – Factors affecting oxygen distribution
 - a. Define and explain the following: Heart rate, stroke volume, cardiac output, venous return, shunting, hemoglobin, mitochondria, myoglobin and blood pressure.
6. Chapter Six – Metabolism
 - a. Define and explain the words aerobic, anaerobic, and explain the ATP-PC system, glycolysis and aerobic energy system.
7. Chapter Seven – Cardiorespiratory changes in exercise
 - a. List and explain the physiological changes that take place before during and after exercise.
8. Chapter Eight – The physiological effects of aerobic training
 - a. List and explain the physiological effects (on the body) of aerobic exercise.

9. Chapter Nine – Sex differences
 - a. Explain the differences between the sexes in reference to physical activity.
10. Chapter Ten – Ergogenic aids/Nutrition/Weight Control
 - a. Define what an ergogenic aid is and also be able to list and explain two of them.
 - b. List the nutrients and explain the function of each.
 - c. Explain the relationship between dieting and set point theory.

Chapter Twelve and Supplement

VI. Post Tests:

Students shall engage in a non-stop exercise bout at the end of the semester.

VII. Evaluation:

- A. Written Exams: (40% - 400 points) There will be (5) announced written exams during the semester. The lowest will be dropped.
- B. Final Exam: (10% - 100 points) Administered on the final class day, this exam is comprehensive.
- C. Fitness Program: (25% - 250 points) Personal fitness plan to be developed by the student designed to meet personal fitness needs.
- D. Post-Test (25% - 250 points) the post-test consists of a non-stop 30-minute run/jog/walk.
- E. Cut Policy: Students who miss more than three (3) times during the semester will lose 50 points per absence. This deduction will come from the final point accumulation. For example: Student X has 900 total points and misses four classes. The final grade will be 900 – 50 (point deduction for the 4th missed class) = 850 points. Student X will go from an A to a B in the class based on the grading scale.

VIII. Grading:

- A = 900 or more points
- B = 800 – 899 points
- C = 700 – 799 points
- D = 600 – 699 points
- F = 599 points or less

IX. Honor Code:

Students are expected to adhere to the honor code – Note: Falsifying homework slips is an honor code violation.