



Exercise Physiology

Exercise Physiology is the study of how the body responds to the stress of exercise. This includes how the body responds to the acute stimulus of exercise stress, as well as, how the body adapts to a chronic exercise stimulus (training). This requires a basic science background (chemistry, physics and biology) and good understanding of human anatomy, human physiology and exercise physiology. These background knowledges can then be applied to evaluate physical fitness levels and then develop appropriately designed and administered exercise prescriptions. An exercise prescription is a systematic application of exercise stimulus that can be use for all populations with the goals of promoting health, preventing disease and enhanced performance (sports or activities of daily living).

Professional Preparations

A degree in exercise physiology will prepare you for three different professional directions: Pre-professional program preparation, Exercise Physiology Research and Exercise Physiology Applications.

Pre-professional Preparation

Many of your students use there degree in exercise physiology as a preparation for application to a graduate level professional program, such as: Physical Therapy, Physician's Assistant, Chiropractic School. The basic science background of our program does a good job of preparing students for application to these professional programs.

Exercise Physiology Research

Some students are interested in pursuing a career in a research environment, such as academia. The research direction of exercise physiology requires an even greater emphasis on the basic sciences, with more classes in biochemistry, genetics and molecular biology. This can be accomplished by supplementing our degree with these courses or by receiving a pre-professional degree in our Biology Department.

Exercise Physiology Applications

This professional direction represents the majority of our majors. There desire is to use their knowledge to work with individuals or groups to promote physical fitness, health and performance. These individuals or groups can be grouped into three different categories: Health/Fitness, Clinical/Rehabilitation, and Athletic Performance. Our program does a good job of preparing students to work in all three of these categories.

Health/Fitness

This represents the average population. These individuals are basically healthy, but may not as physically fit as is recommended.

Community fitness - Application of exercise physiology in the promotion of healthy physically active life styles. This could include programs that specialize in various segments of the population (youth, elderly, athletes, etc.)

Corporate fitness - Corporations have found that physically fit employees are more productive and more cost effective investments. Exercise physiologists deliver exercise programming for a corporation that can be on location or may be contracted out to a local fitness facility.

Personal Training - The recommendation of appropriate exercise prescription on a one on one basis in a client's home or through a fitness facility.

Clinical/Rehabilitation

This typically represents a less healthy population. While disease conditions may limit the ability to safely perform exercise, in a controlled environment the benefits of exercise can safely be obtained.

Cardiac Rehabilitation - The application of exercise physiology in the prevention of detraining immediately following a cardiac event, and increasing the physical working capacity during the recovery period. The goal of this program is to return the individual to work and to reduce the risk of future problems.

Pulmonary Rehabilitation - The application of exercise physiology in the training of individuals with pulmonary diseases. The goal of this program is to improve physical working capacity and to reduce the need for acute medical care.

Work Hardening - The application of exercise physiology and rehabilitative medicine in the rehabilitation of on the job injuries, for the purpose of returning the individual to work and to prevent future job related injury. This application is usually conducted in conjunction with a physical therapist.

Hospital Based Fitness Programs - The application of exercise physiology to make exercise recommendations for individuals with increased health risk due to a variety of health related problems (arthritis, obesity, diabetes, pregnancy, etc.)

Diagnostic Testing - The application of exercise physiology in the performance of many cardiovascular, pulmonary and vascular diagnostic procedures in a clinical setting.

Athletic Performance

The application of exercise physiology for the purpose of increasing athletic performance. The Strength and Conditioning Coach is a relatively new occupation and represents a small job market. However, it also represents the fastest growing application of exercise physiology.