

# EXERCISE SCIENCE (EXS)

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## **EXS 170 Introduction to Exercise Science (3 Credits)**

Designed to expose students to the important aspects of the health-related academic field of exercise science and its disciplines, with a special emphasis on Kinesiotherapy, and their impact on a healthy lifestyle, disease prevention, and rehabilitation.

## **EXS 267 Therapeutic Exercises & Sports (4 Credits)**

Designed to give a general overview of patho-physiology and the effects of specific diseases/conditions on the exercise response as outlined in the Kinesiotherapy Scope of Practice and Kinesiotherapy Standards of Practice. This includes the effects of exercise training on the condition, management of medications, recommendations for exercise testing, exercise programming, and research within the Kinesiotherapy discipline.

## **EXS 291 Care & Prevention of Athletic Injuries (3 Credits)**

Theoretical foundation for care and prevention of athletic injuries while addressing anatomy, medical conditions, and evaluation techniques with emphasis on basic first aid skills.

**Prerequisites:** Take PED-287. Take PED-287L. Take BIO-100. Take BIO-100L., Take PED-288. Take PED-288L.

## **EXS 292 Stress Management (3 Credits)**

This course offers a comprehensive and proactive approach to stress management and prevention. Students will investigate and critically analyze factors that cause stress within their lives and discuss how those stressors can be managed by using various relaxation techniques and practice strategies to initiate and maintain lifestyle changes that will help to both manage and prevent stress.

## **EXS 300 Exercise Physiology (3 Credits)**

This course is concerned with the study of how the body responds, adjusts, and adapts physiologically to the acute stress of exercise or physical activity and the chronic stress of physical training so that appropriate applications are considered for safe exercise programming to include injury prevention and rehabilitation.

**Prerequisites:** Take PED-287. Take PED-287L. Take PED-288. Take PED-288L., Take BIO-165. Take BIO-166.

## **EXS 300L Exercise Physiology Lab (1 Credits)**

This course is designed to familiarize students with basic lab procedures and tests, and to provide experience in subject recruitment, data collection, and abstract presentation. This course is a co-requisite to the Exercise Physiology Lecture class.

## **EXS 355 Anatomical Kinesiology (3 Credits)**

Study of anatomical terminology and gross human osteology, arthrology, myology, neurology, and angiology.

**Prerequisites:** Take PED-287. Take PED-287L. Take PED-288. Take PED-288L., Take BIO-165. Take BIO-166.

## **EXS 356 Biomechanics of Human Motion (3 Credits)**

Analysis of the functions and mechanics of human motion as applied to human movement with emphasis on qualitative movement analysis to improve performance and prevent injury.

**Prerequisites:** Take EXS-355. Take MTH-153. Take PHY-152.

## **EXS 363 Clinical Aspects of Aging (2 Credits)**

This course is designed to identify important aspects of applying fitness evaluation and prescription to the older adult population. Emphasis on the physiology of aging, motivational techniques, evaluation, and programming with attention to chronic conditions. The role of good health habits and physical exercise in modifying functional age and quality of life of older adults will also be presented.

**Prerequisites:** Take EXS-300. Take EXS-300L.

## **EXS 363H Honors Clinical Aspects of Aging (2 Credits)**

This Honors course is designed to identify important aspects of applying fitness evaluation and prescription to the older adult population.

Emphasis on the physiology of aging, motivational techniques, evaluation, and programming with attention to chronic conditions. The role of good health habits and physical exercise in modifying functional age and quality of life of older adults will also be presented.

## **EXS 369 Research Mthds & Statistical Evaluation (3 Credits)**

This course is designed to familiarize the student, with the research methodology and testing as, applied to , exercise science and human performance, with, detailed study of the following: research design,, reviews of , literature, ethics in research, statistical, analysis, research writing, and application of, research in professional , settings

**Prerequisites:** Take MTH-153.

## **EXS 430 Neurological/Pathological Fndtns Exer (3 Credits)**

Survey of illnesses relating to neurological dysfunction and the nature and physiological consequence of disease processes for healthy and diseased populations.

**Prerequisites:** Take EXS-447. Take EXS-447L.

## **EXS 430H Honors Neuro and Patho Found in Exer (3 Credits)**

Survey of illnesses relating to neurological dysfunction and the nature and physiological consequence of disease processes for healthy and diseased populations.

**Prerequisites:** Take EXS-447. Take EXS-447L.

## **EXS 483 Clinical Kinesiology I (3 Credits)**

Practical application of the knowledge with emphasis on physical musculoskeletal function, neurological involvement, goniometry, anthropometry, and gait analysis.

**Prerequisites:** Take EXS-355. Take EXS-356.

## **EXS 484 Clinical Kinesiology II (3 Credits)**

Introduction to the development of rehabilitation as an integral part of comprehensive medical care and its application to restore persons with physical and emotional impairments to the optimal level of functional independence. Consideration of neurological dysfunction/rehabilitation, orthopedic/rehabilitation, prosthetics, orthotics, respiratory and cardiac dysfunction.

**Prerequisites:** Take EXS-483

## **EXS 491 Clinical Experience Practicum (3 Credits)**

This course is the clinical experience practicum course required for the Kinesiotherapy program. The course is taken concurrently with some of the required Kinesiotherapy internship hours. It will include discussion and lecture on topics about appropriate and inappropriate exercise interventions.

**Prerequisites:** Take PED-287. Take PED-287L. Take PED-288. Take PED-288L., Take BIO-165. Take BIO-166.

## **EXS 493E Clinical Internship in Exercise Science (6 Credits)**

Practicum experiences require 500 hours of supervised field work conducted at an approved setting which provide the opportunity to utilize and personalize knowledge gained in the classroom in a practical environment.

## **EXS 493F Clinical Internship in Exercise Science (6 Credits)**

Practicum experiences require 500 hours of supervised field work conducted at an approved setting which provide the opportunity to utilize and personalize knowledge gained in the classroom in a practical environment.

**EXS 493G Clinical Internship Exercise Science I (10 Credits)**

Practicum experiences require 500 hours of supervised field work conducted at an approved setting which provide the opportunity to utilize and personalize knowledge gained in the classroom in a practical environment.

**EXS 493J Clinical Internship Exercise Science II (10 Credits)**

Practicum experiences require 500 hours of supervised field work conducted at an approved setting which provide the opportunity to utilize and personalize knowledge gained in the classroom in a practical environment.