

COURSE SYLLABUS

LAST REVIEW	Spring 2021
COURSE TITLE	Introduction to Exercise Science
COURSE NUMBER	EXSC-0201
DIVISION	Math, Science, Business & Technology
DEPARTMENT	Exercise Science
CIP CODE	24.0101
CREDIT HOURS	3
CONTACT HOURS/WEEK	Class: 3
PREREQUISITES	None
COURSE PLACEMENT	None

COURSE DESCRIPTION

This course is to introduce the scientific discipline of Exercise Science. Students will be exploring the areas of exercise science, exercise physiology, preventive and rehabilitation of sports-related injuries, biomechanics, sport psychology, motor learning, and nutrition and health benefits of exercise.

Program Learning Outcomes

1. Student will be able to analyze and implement an appropriate assessment of the client to determine their exercise needs
2. Student will be able to discuss the importance of exercise science as it relates to enhancing and recognizing health and fitness activities, sports and athletic performance
3. The student will be able to recognize incorrect lifting technique and develop a plan for error correction.

TEXTBOOKS

<http://kckccbookstore.com/>

METHODS OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE

- I. Overview of the Human in Motion

- A. Introduction to Exercise Science
- B. Exercise Science and Related Disciplines
- C. The Scientific Method
- D. Movement at Every Level
- II. Physiology of Exercise
 - A. Exercise Physiology
 - B. Adaptations to Exercise Training
 - C. Nutrition and Exercise Science
 - D. Health Benefits of Exercise and Fitness
 - E. Exercise and the Environment
- III. Sports Medicine: Prevention and Rehabilitation of Injuries
 - A. Fundamentals of Sport Medicine
 - B. Treatment of Sports Medicine Injuries
- IV. Biomechanics of Human Motion
 - A. Introduction to Biomechanics
 - B. Special Topics in Biomechanics
 - C. Exercise, Sport, and Materials Science
- V. The Mind and Brain in Exercise
 - A. Sports Psychology
 - B. The Neural Control of Movement
 - C. Motor Learning
- VI. Special Issues in Exercise Science
 - A. Developmental Issues in Exercise Science
 - B. Intervention Strategies

COURSE LEARNING OUTCOMES

Upon successful completion of this course, the student will:

- A. The student will be able to define exercise science and its sub disciplines.
- B. The student will be able to discuss muscular contraction, environmental stress and health related aspects of exercise.
- C. The students will be able to identify the role of nutritional concepts with performance.
- D. The student will be able to discuss common sport injuries, inappropriate exercises and some common rehabilitative treatments for sport injuries.
- E. The student will be able to discuss the kinetics of human movement, force and motion and muscle force.
- F. The students will be able to define biomechanics and discuss techniques to analysis human movement, kinetics of human, and muscle force.
- G. The student will be able to define Sports Psychology and discuss athletic personality, exercise addiction, and methods to control stress.

- H. The student will be able to define Motor Learning and discuss skill acquisition and retention.
- I. The student will be able to discuss developmental issues from the perspective of varying age and levels of development.

ASSESSMENT OF COURSE LEARNING OUTCOMES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

College Catalog

<https://www.kckcc.edu/academics/catalog/index.html>

College Policies and Statements

<https://www.kckcc.edu/about/policies-statements/index.html>

Accessibility and Accommodations

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.