

Revised: Fall 2016

HLT 206 Exercise Science

COURSE OUTLINE

Prerequisites: Students should have completed HLT 125 prior to taking this course.

Course Description:

Surveys scientific principles, methodologies, and research as applied to exercise and physical fitness. Emphasizes physiological responses and adaptations to exercise. Addresses basic elements of kinesiology, biomechanics, and motor learning. Presents an introduction to the physical fitness industry. (VCCS MCR Description)

This course presents an introduction to exercise science to include application of functional anatomy, applied exercise physiology and exercise adaptation responses, applied kinesiology, energy cost, nutrition, exercise testing and programming for cardiovascular endurance, muscular strength, endurance and flexibility. (Additional Description added by the faculty)

Semester Credits: 3 Lecture Hours: 3

VIRGINIA WESTERN COMMUNITY COLLEGE
PO Box 14007
Roanoke, VA 24038
(540)-857-7273



HLT 206

Exercise Science

Course Outcomes:

At the completion of this course, the student should be able to:

- Complete a pre and post self-assessment as to the student's goals and overview of what exercise science is
- Demonstrate basic understanding of anatomical body systems related to exercise science
- Demonstrate basic understanding of nutritional assessment and programming for weight management and athletic performance
- Conduct an in depth interview of a professional practicing in exercise science
- Demonstrate analytical thinking and writing skills

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Required Materials:

Textbook:

Aces Essentials of Exercise Science for Fitness Professionals

Author: ACE

ISBN: 978-1-890720-31-5

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Topical Description:

- Introduction to Exercise Science via historical development and current research
- Body systems related to Exercise Science (nervous, muscular, skeletal, cardiovascular, pulmonary, urinary, digestive, endocrine, immune and energy systems)
- Exercise Physiology and clinical exercise physiology including disease and clinical conditions
- Athletic training and sports medicine - responsibilities and current issues
- Exercise and sport nutrition (basic nutrients, intake and athletic performance)
- Exercise and sport psychology
- Motor Behavior (history, development, control and application)
- Sport Biomechanics as related to kinetics
- Equipment and Assessment in exercise Science
- Careers and Professional Issues in Exercise Science

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