

Department:

Physical Education

Course Description:

Released by the National Council on Strength & Fitness (NCSF), this is an intensive cumulative core course designed to prepare students for the NCSF National Certified Personal Trainer Exam. The course covers all the areas required for the exam and will include lessons with textbook reviews, presentations, and study guide sessions, as well as lab activities for each lesson or chapter of the textbook. There will be three hours lecture and two hours lab per week.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Describe functional anatomy that applies to personal training.
2. Explain how “biomechanics” is an encompassing term.
3. Explain the role of muscle physiology in personal training.
4. Explain the role of the endocrine system and describe how to manipulate the system to optimize health improvements.
5. Explain bioenergetics and the role of the energy value of food.
6. Label the parts of the heart and describe cardiovascular physiology.
7. Describe the six classes of nutrients, explain the role nutrients play in the proper function of the body, and distinguish between energy yielding and non-energy yielding nutrients.
8. Implement appropriate nutritional supplementation for various training stresses that call for nutritional adjustments.
9. Evaluate various body compositions and determine body fat percentage and body mass index.
10. Identify common obstacles to weight loss and common errors when assessing weight loss.
11. Define “physical fitness,” “health,” and “wellness,” and identify positive and negative health behaviors.
12. Screen for exercise participation and collect data for program decision making.
13. Explain testing and evaluation factors and considerations for assessing physical fitness.
14. Identify and explain the components that make up the exercise program and the factors that affect the exercise program.
15. Explain the role of flexibility in health, identify factors that affect range of motion, and explain how to assess flexibility.
16. Identify the heart rate training zones and evaluate aerobic assessments and data.
17. Explain the use of oxygen and its relationship to energy expenditure.
18. Differentiate between aerobic and anaerobic training and describe the benefits of resistance training for anaerobic exercise.

19. List factors for successful implementation of exercise principles and explain training factors that need to be considered when prescribing resistance training exercises.
20. Define functional and traditional training and explain the role of muscles in functional training.
21. Explain the basic biomechanics of training and detect common movement errors.
22. Identify factors for creating an exercise program, collect data, and review results.
23. Create an exercise program that matches exercise and intensity with the participant, and manipulate variables for progressive improvement.
24. Make recommendations for exercise with special populations.
25. Describe the ethical and professional behavior appropriate for a certified personal fitness trainer.

Course Content:

- A. Functional Anatomy
- B. Biomechanics
- C. Muscle Physiology
- D. Endocrine System
- E. Bioenergetics
- F. Cardiovascular Physiology
- G. Nutrition: Energy Yielding Nutrients
- H. Nutrition: Non-Energy Yielding Nutrients
- I. Nutritional Supplementation
- J. Body Composition
- K. Weight Management
- L. Physical Fitness and Health
- M. Pre-Exercise Screening and Test Considerations
- N. Assessment of Physical Fitness
- O. Exercise Programming Components
- P. Flexibility Assessment and Programming
- Q. Programming for Cardiovascular Fitness
- R. Anaerobic Training
- S. Resistance Training Techniques
- T. Functional Training Concepts
- U. Creating an Exercise Program
- V. Working with Special Populations
- W. Ethics and Professional Behavior

Learning Assessments:

Course competencies will be assessed by use of textbook and lab manual reviews, study guides, quizzes, exams, a comprehensive final exam, and the National Certification Exam for Personal Trainers.

Instructional Materials:

Textbook: Advanced Concepts of Personal Training, with Study Guide and Lab Manual.
NCSF Training and Assessment DVD
Concepts of Training CD-ROM
NCSF Personal Trainer Course Information CD-ROM

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

On-Campus Students: At enrollment, any on campus student may complete a form that will allow them to self-identify any disability.

Off-Campus Regional Students: Self-identify your disability and accommodation needs with the Regional Coordinator and/or instructor, preferably prior to the first class meeting.

Online Students: Self-identify your disability and accommodation needs by contacting the Disabilities Coordinator. Students must provide their own programs to allow accessibility on their home computer.

Any student may also identify their disability by completing an online form located on the HCC homepage under Students Services/Resources/Disabilities. Questions should be directed to the Disabilities Coordinator.