HEFI 1601: Training Principles & Methodology I

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 1
Lab Hours/Week: 4
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

This course introduces students to the fundamental theories and principles providing a basis for fitness training. Students will gain knowledge of the physiology and anatomy of human movement, learn the scientific vernacular of exercise, and recognize their potential role as movement specialists. An overview of exercise methodology will be explored. Gravity based resistance training exercises will be introduced, studied, practiced and analyzed, leading to an understanding of exercise methodology. Students will rehearse instruction of resistance exercise, using observational patterns and cueing. Additional topics of study include variations and specialized modes of strength training, protocol for organizing exercise in fitness plans, the necessity and variations of mobility and stability training. References will be made and instruction provided in the areas of strength testing, exercise science, program design, and exercise selection.

B. COURSE EFFECTIVE DATES: 08/30/2004 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Develop an understanding of how the human body is designed for movement and the role of our profession as "movement/exercise specialists."
2. Introduce the basic principles of training and identify their relationship to fitness program design.
3. Explore fundamental human biomechanics; examining how the body works as a system of levers.
4. Investigate "functional anatomy" to create an understanding of how muscles and joints are involved in movement.
5. Study methods of labeling/categorizing strength training exercises and define related resistance exercise terminology.
6. Introduce basic and traditional resistance exercises.
7. Practice the instruction of strength exercises; gaining skill in the use of cueing sequences.
8. Become familiar with resistance training equipment and the weight room environment.

D. LEARNING OUTCOMES (General)

1. demonstrate the understanding of the basic fundamental principles of human movement as related to levers, motion descriptor, functional anatomy and the Standard Anatomical Reference Planes.
2. be able to analyze movement patterns and demonstrate correct techniques for the major exercise protocols. In addition the learner will be able to demonstrate the design and application of a "spinal stability" exercise program for both "pre-hab" and rehabilitation.
3. be able to demonstrate an understanding of human motion as it applies to the kinetic chain, posture analysis, functional movement patterns, and specific functional anatomy of the hip, shoulder and knee joints.
E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted