

COURSE OUTLINE

Introduction to Personal Training

Course Description

PE 127. Introduction to Personal Training. 3 hours credit. This course will enable the student to understand the role of exercise in a wellness lifestyle, the scientific foundations necessary to evaluate fitness levels, and the prescription of exercise in a career in the fitness industry. This course will enable the student to sit for the Certified Health Professional Examination offered by the National Council of Strength and Fitness.

Course Relevance

The concepts learned in this course will allow the student to understand and utilize the knowledge of the principles of strength training, wellness, fitness and exercise in a career as a personal trainer.

Required Materials

Howley, T. and Franks, B. (2003). Health Fitness Instructor's Handbook. (4th ed.). Champaign, IL: Human Kinetics Publishers.

NCSF. Personal Trainer Certification Workbook. National Council Strength and Fitness.

NCSF. Personal Trainer Certification Lab Workbook. National Council Strength and Fitness.

Learning Outcomes

The intention is for the student to be able to

1. Demonstrate an understanding of the benefits of fitness through the development of a plan of health-enhancing behaviors
2. Utilize an understanding of the principles of strength training, fitness and exercise

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course:

Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Health Management
 - The student will expand his/her awareness of the health benefits of regular physical exercise, fitness, flexibility and proper nutrition.
2. Critical Thinking

- The student will develop critical thinking and analytical skills through designing exercise programs

Secondary skills (developed but not documented):

Teamwork
Ethical Conduct
Problem Solving
Time Management

Major Summative Assessment Task(s)

These learning outcomes and the primary Learning PACT skills will be demonstrated by:

1. Completion of fitness programs that include a personal trainer's recommendations for cardiorespiratory fitness, muscular strength, weight management, flexibility and functional training for sedentary adults, prepubescent youth, pregnant women and senior citizens. Each program should include all screening and evaluations to be completed by a personal trainer including health status questionnaire, resting test batteries, cardiorespiratory fitness evaluation, muscular strength and endurance testing.

Course Content

- I. Themes – Key recurring concepts that run throughout this course:
 - A. Fundamentals of weight training
 - B. Physiological and psychological benefits of strength training
- II. Issues – Key issues that will be addressed in this course:
 - A. Safety concerns and injury prevention
 - B. Motivation
 - C. Ethical conduct: performance enhancing drugs
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Evaluation and self-assessment
 - B. Establishing training goals
 - C. Time management
 - D. Nutrition
- IV. Skills / Competencies – Actions that are essential to achieve the course outcomes:
 - A. Assessments for flexibility, cardiorespiratory endurance and strength
 - B. Solve problems and make decisions for effective training programs
 - C. Leadership and communication as a trainer or coach
 - D. Organizing exercise programs

Learning Units

- I. Physical Activity and Health
 - A. Relationship between physical activity and health
 - B. Physical activity and the prevention of premature health problems
 - C. Implications for fitness professionals

- II. Physical Fitness and Performance
 - A. Physical fitness goals
 - B. Performance goals
 - C. Components of physical fitness and performance
 - D. Behaviors that support fitness and performance
 - E. Common behaviors for fitness and health
 - F. Setting fitness goals

- III. Health Appraisal and Evaluation Techniques
 - A. Evaluating health status
 - B. Making decisions based on health status
 - C. Changing of health fitness status

- IV. Exercise Physiology
 - A. Relationship of energy to work
 - B. Understanding muscle structure and function
 - C. Metabolic, cardiovascular, and respiratory responses to exercise
 - D. Effects of endurance training and detraining on physiological responses to exercise
 - E. Cardiovascular responses to isometric exercise and weightlifting
 - F. Regulating body temperature

- V. Functional Anatomy and Biomechanics
 - A. Understanding skeletal anatomy
 - B. Structure and function of joints
 - C. Factors that determine direction and range of motion
 - D. Common exercise mistakes
 - E. Muscle group involvement in selected activities
 - F. Basic mechanical concepts related to human movement
 - G. Common mechanical errors during locomotion, throwing, and striking

- VI. Measurement and Evaluation
 - A. Establishing validity
 - B. Increasing the accuracy of testing
 - C. Using test scores in a fitness program

- VII. Energy Costs of Physical Activity
 - A. Ways to measure energy expenditure
 - B. Ways to express energy expenditure
 - C. Formulas for estimating energy costs of activity

- VIII. Nutrition
 - A. Six classes of essential nutrients
 - B. Assessing dietary intake
 - C. Recommendations for dietary intake
 - D. Diet, exercise, and blood lipid profile

E. Nutrition for physically active individuals

IX. Body Composition

- A. Health and body composition
- B. Body composition assessment
- C. Methods for assessing body composition
- D. Calculating target body weight

X. Weight Management

- A. Prevalence of obesity in the United States
- B. Etiology of obesity
- C. Healthy ways to lose weight
- D. Behavior modification techniques
- E. Body weight and psychological factors
- F. Eating disorders
- G. Gaining weight

XI. Cardiorespiratory

- A. Why test for cardiorespiratory fitness
- B. Risks of cardiorespiratory fitness testing
- C. Testing sequence
- D. Graded Exercise Tests
- E. Variables for graded exercise testing
- F. Submaximal and maximal testing determination

XII. Muscular Strength and Endurance

- A. Defining muscular strength and endurance
- B. General adaptations to resistance training
- C. Muscle soreness
- D. Muscle fatigue
- E. Assessing muscular strength and endurance

XIII. Flexibility and Low Back Function

- A. Factors affecting range of motion
- B. Range of motion and low back function
- C. Measuring spine and hip-joint range of motion

XIV. Exercise Prescription for Cardiorespiratory Fitness

- A. Prescribing exercise
- B. Exercise training principles
- C. Guidelines for cardiorespiratory fitness programs
- D. Formulating exercise prescription
- E. Determining exercise intensity
- F. Exercise recommendations for the fit and unfit populations
- G. Program selection
- H. Environmental concerns

- XV. Exercise Prescription for Strength, Endurance, and Bone Density
 - A. Training considerations for increasing muscle/endurance and bone density
 - B. Aerobic and anaerobic adaptations
 - C. Weight training methods
 - D. Systems of resistance training
 - E. Resistance training and bone mineral density
 - F. Maintenance and overtraining
 - G. Warm-up and cool-down
 - H. Training safety tips
 - I. Exercise prescription for resistance training

- XVI. Exercise Prescription for Flexibility and Low Back Function
 - A. Anatomy of the spine
 - B. Spinal movements
 - C. Mechanics of the spine and hip joint
 - D. Low-back pain
 - E. Therapeutic and preventative exercise considerations

- XVII. Exercise Leadership for Fitness
 - A. Effective leadership
 - B. Activity progression
 - C. Walk/Jog/Run programs
 - D. Cycling
 - E. Games
 - F. Aquatic exercise
 - G. Exercising to music
 - H. Exercise equipment
 - I. Circuit training

- XVIII. Exercise Prescription for Special Populations
 - A. Exercise prescription for children
 - B. Exercise prescription for the elderly
 - C. Exercise prescription for pregnant women
 - D. Exercise prescription for diseases/disabilities

- XIX. Human Behavior, Psychology, Stress, and Health
 - A. Relaxation and arousal balance
 - B. Personality-based variables and physical activity
 - C. Understanding participant personalities
 - D. Physical activity and stress
 - E. Relationship between health and stress
 - F. Recommendations for maintaining healthy stress levels
 - G. Coping mechanisms

XX. Behavior Modification

- A. Transtheoretical model of behavior change
- B. Promotion and targeting for contemplators
- C. Methods of behavior change
- D. Relapse prevention
- E. Health fitness counseling

XXI. Injury Prevention and Treatment

- A. Preventing injuries
- B. Injury treatment
- C. Environmental concerns
- D. Common orthopedic problems
- E. CPR and emergency procedures

XXII. Program Administration and Management

- A. Setting long-range goals
- B. Managing personnel
- C. Developing a successful program
- D. Developing a budget
- E. Acquiring equipment and supplies
- F. Keeping records
- G. Evaluating the program

Learning Activities

Independent and collaborative learning activities will be assigned within and outside the college classroom to assist the student in achieving the intended learning outcomes. Class discussion, lectures, audio-visual aids, group activities, reading assignments, guest speakers, laboratory assignments and internet activities will also contribute to the learning process.

Grade Determination

The student will be graded on completion of assessment tasks, class participation, attendance, out-of-class assignments, examinations, training program project, laboratory assignments, and other methods of evaluation at the discretion of the instructor.