

Fitness Instructor (elective)

The purpose of the Fitness Instructor elective course is to provide students with the knowledge, skills, and experience needed to become certified in personal training, strength and physical conditioning, group fitness, or in other health fitness specialty areas. Students will learn to develop individualized programs with goals that are based on a variety of factors that affect one's overall health, to include genetic and chronic health conditions, sports injuries, age and gender, level of fitness, and lifestyle factors. Students will gain knowledge and skills to help improve posture, movement, flexibility, balance, core function, cardiorespiratory fitness, and muscular endurance and strength. Students will learn a variety of business skills, to include effective communication, leadership skills, marketing strategies, consumer advocacy, résumé writing, and interviewing skills. Students will also earn a certification in CPR and AED.

Motor Skill Development

- FI.1 The student will demonstrate mastery of the movement skills and patterns used to perform a variety of strength-training, conditioning, and fitness activities.
- a) Demonstrate correct movement skills and patterns for strength-training, physical conditioning, and fitness activities.
 - b) Analyze movement activities for component skills and movement patterns.
 - c) Describe and demonstrate activities specific to improving the skill-related components of fitness.
 - d) Define and identify *activities of daily living* (ADL) as the tasks of everyday life.
 - e) Apply movement skills and patterns to functional fitness activities that support ADL.
 - f) Identify and describe advanced resistance-training techniques.
 - g) Apply principles of exercise progression to improve fitness.
 - h) Demonstrate correct and safe techniques and form when performing strength-training, physical conditioning, and fitness activities and exercises.
 - i) Demonstrate proper use of fitness equipment, selectorized weight machines, and free weights.
 - j) Demonstrate safety protocols and procedures for strength-training, physical conditioning, and fitness activities.
 - k) Identify contraindications to advanced resistance-training techniques.
 - l) Identify and describe factors that influence participation in physical activity and adherence to an exercise program.
 - m) Explain principles that result in behavior change.
 - n) Describe psychological factors that may influence a person's adherence to an exercise program.
 - o) Identify and apply strategies to increase adherence in an exercise program.
 - p) Explain the role of the personal trainer in promoting an individual's adherence to an exercise program.
 - q) Identify and explain considerations for special populations.

Anatomical Basis of Movement

- FI.2 The student will apply knowledge of anatomy and movement principles and concepts to skill performance in strength training, conditioning, and fitness activities.
- a) Identify the planes of movement and types of movement that occur in the frontal, sagittal, and transverse planes.
 - b) Define common anatomical terms.
 - a) Identify major bones of the skeletal system.
 - c) Identify and describe types of joints, including hinge and multiaxial (ball and socket).

- d) Explain muscle structure and function, to include major muscles of the body, terms related to muscles, and muscle origins and insertions.
- e) Explain movements that result based on muscle origin and insertion.
- f) Explain how muscles contract, to include agonist and antagonist movements in relation to muscle contraction.
- g) Identify and explain curvatures of the spine.
- h) Perform and analyze postural evaluation of another individual.
- i) Perform and analyze movement evaluation for stability and mobility of the joints of another individual.
- j) Perform and analyze flexibility evaluation of another individual.
- k) Perform and analyze balance and core-strength evaluations of another individual.
- l) Identify contraindications to assessments of movement.
- m) Perform assessments to evaluate the health-related components of fitness.
- n) Perform assessments to evaluate the skill-related components of fitness.
- o) Identify contraindications to health-related and skill-related fitness assessments.
- p) Identify and explain different methods for determining body composition.
- q) Explain the benefits and challenges of different methods for determining body composition.
- r) Differentiate between recommendations for physical activity and training principles to meet goals for general health benefits, weight management, fitness improvements, and athletic performance enhancement.
- s) Explain the effects of acute and chronic exercise on aerobic and anaerobic energy systems.
- t) Explain the body's response to cardiorespiratory exercise.
- u) Explain the body's response to resistance training.
- v) Explain the body's response to warm-up and cool down.
- w) Explain blood-pressure response related to acute exercise, chronic exercise, and changes in posture.
- x) Explain reversibility or deconditioning and the effect on fitness and performance.
- y) Define common musculoskeletal injuries.
- z) Compare and contrast muscle fatigue and delayed onset muscle soreness (DOMS) with musculoskeletal injury/overuse.
- aa) Explain inflammatory response and the healing process.
- bb) Identify and describe upper-extremity injuries.
- cc) Identify and describe lower-extremity injuries.
- dd) Identify and explain exercise modifications appropriate when participant is injured.

Fitness Planning

- FI.3 The student will plan and describe a personalized fitness and conditioning program for others that includes skill-related and health-related fitness components to achieve and maintain a health-enhancing level of physical fitness for a lifetime.
- a) Identify components of health/medical history.
 - b) Identify limitations of health/medical history.
 - c) Identify signs and symptoms common for cardiovascular, metabolic, or pulmonary diseases.
 - d) Conduct health and exercise history with another individual.
 - e) Develop SMART fitness goals with another individual based on fitness assessments and personal desired outcomes.
 - f) Apply FITT principle to improve or maintain cardiovascular and musculoskeletal fitness in healthy adults, seniors, youth, adolescents, and pregnant women.
 - g) Develop functional programming for stability, mobility, and movement.
 - h) Develop a resistance-training program with appropriate progressions.

- i) Develop a cardiorespiratory-training program with appropriate progressions.
- j) Evaluate fitness programming for others to determine effectiveness.
- k) Identify contraindications of cardiorespiratory exercise.
- l) Define and explain exercises to improve range of motion, to include dynamic stretching, passive stretching, proprioceptive neuromuscular facilitation (PNF), and partner stretching.
- m) Identify contraindications of range of motion exercises.
- n) Describe different forms of mind-body exercise (e.g., yoga, Pilates, tai chi).
- o) Identify indications for use of mind-body exercise.
- p) Identify contraindications for mind-body exercise.

Social Development

- FI.4 The student will accept responsibility for taking a leadership role as well as demonstrate the ability to follow, in order to accomplish group goals.
- a) Define and explain cultural competence and its importance in developing rapport with another individual.
 - b) Demonstrate effective teaching techniques for working with individuals of different learning styles, motivation levels, and physical activity levels.
 - c) Explain learning styles and instructional strategies, to include visual, auditory, and kinesthetic.
 - d) Demonstrate effective and varied teaching techniques for a variety of exercises.
 - e) Demonstrate and explain how to respond in an emergency situation.
 - f) Identify signs of cardiac emergency.
 - g) Demonstrate CPR and AED procedures for adults and children.
 - h) Identify emergency situations requiring first aid.
 - i) Demonstrate first-aid techniques used in emergency situations.
 - j) Identify and describe universal precautions and personal protection used during CPR and first aid.

Energy Balance

- FI.5 The student will explain energy balance.
- a) Identify and explain dietary guidelines based on USDA recommendations.
 - b) Identify macronutrients used by the body for energy.
 - c) Identify the number of kilocalories found in macronutrients that provide energy.
 - d) Explain energy balance and relationship to weight gain, weight loss, or weight maintenance.
 - e) Explain lipid and lipoprotein profiles.
 - f) Explain the influences of nutrition and physical activity on lipid and lipoprotein profiles.
 - g) Explain the importance of hydration.
 - h) Explain how to maintain hydration in a physically active individual, including effective methods to rehydrate after exercise.
 - i) Identify and describe common supplements and ergogenic aids used by individuals in training programs.
 - j) Explain potential risks, benefits, and contraindications associated with use of supplements and ergogenic aids.
 - k) Explain the relationship between body composition and health.
 - l) Define terms related to body composition including *body mass index* (BMI), *lean body mass*, and *fat mass*.
 - m) Explain influences on body composition including diet, exercise, and behavior modification.
 - n) Identify and explain inappropriate weight loss methods.
 - o) Identify and explain eating disorders including anorexia nervosa and bulimia nervosa.

- p) Explain the female athlete triad.

Professional Responsibilities

- FI.6 The student will identify and explain professional and legal responsibilities to manage a personal business and be employed as a personal fitness instructor.
- a) Identify and explain requirements to become a certified personal fitness instructor and maintain certification, to include certification requirements, requirements to maintain certification, and resources for professional development to increase knowledge and skill and maintain certification.
 - b) Identify and explain the role, scope of practice, and code of ethics of a personal fitness instructor.
 - c) Identify and describe professional responsibilities of a personal fitness instructor.
 - d) Identify and describe necessary facility maintenance.
 - e) Explain and describe appropriate inspection and care of equipment to maintain safety and maximize use.
 - f) Identify and describe appropriate facility supervision to maintain safety of users.
 - g) Identify and describe legal considerations of working as a personal fitness instructor.