GROSSMONT COLLEGE

COURSE OUTLINE OF RECORD

Curriculum Committee Approval: 11/30/2021

GCCCD Governing Board Approval: 12/14/2021

ES 023A - BEGINNING RESISTANCETRAINING

1. Course Number Course Title Semester Units

ES 023A Beginning ResistanceTraining 1.0

Semester Hours

1 hour lecture 16-18 hours 32-36 outside-of-class hours 1 hour laboratory 16-18 hours

64-72 total hours

2. Prerequisite

None

Corequisite

None

Recommended Preparation

None

3. Catalog Description

This course provides instruction and practice in resistance training with emphasis in beginning level use of resistance exercise machines, free weights, and other equipment. Emphasis will be placed on the latest scientific theories and correct lifting techniques of resistance training. The students will develop a personalized muscular strength, muscular endurance, and flexibility program. Students will also learn the fundamental principles of physical fitness and their impact on a life-long health and wellness.

4. Course Objectives

The student will:

1. Recognize and define beginning level resistance training principles and programs.
2. Identify and locate the major muscle groups and basic resistance exercises and stretches.
3. Evaluate muscle strength, muscle endurance, and body composition through pre & post assessments.
4. Demonstrate knowledge of and implement resistance training principles and systems.
5. Design, monitor, and evaluate a personalized resistance training program using principles of resistance training and exercise theories.
6. Identify and interpret the Core Curriculum concepts that lead to an active and healthy lifestyle.
7. Discuss physical literacy and identify personal habits that prevent disease and promote health.
8. Instructional Facilities
9. Resistance Training Lecture and Lab Facility that is ADA compliant
10. Resistance training equipment and supplies: Barbells, dumbbells, variable resistance machines, plate loaded weight machines, physio balls, equipment accessories, powerlifting platforms, stability training equipment, medicine ball, kettle bells, and any other current industry-approved equipment.
11. Floor Mats for each student
12. Physical fitness assessment equipment
13. Projector, screen, and audio and visual equipment

1. Special Materials Required of Student
2. Appropriate fitness attire (t-shirts, shorts or sweat paints, and proper athletic shoes)
3. Appropriate footwear
4. Towel
5. Course Content
6. Physiological assessment of current fitness and health levels (muscle strength, muscle endurance, flexibility, body composition, body mass index, girth measurements, and blood pressure)
7. Resistance training modalities and activities:
8. Modalities: body weight, dumbbells, barbells, plate-loaded machines, isotonic resistance machines, cable/pulley equipment, suspension training, kettle bells, and medicine balls.
9. Introduction of stability equipment and activities: physio ball, Bosu trainer and unilateral exercises
10. Selection of resistance training exercises and stretches for the major muscle groups
11. Resistance training principles
12. Resistance training concepts:
13. Individual training goals: muscle strength, muscle endurance, and general muscle fitness
14. Types of muscle contraction: concentric, eccentric, isometric, isotonic, and isokinetic
15. Phases of a lifting session (dynamic warm-up, resistance training exercises, static stretches, and recovery)
16. Development of a beginning level personalized fitness training program
17. Personal goals and needs
18. Resistance training program design variables:
    * + - 1. Selection of exercises
          2. Sequence
          3. Tempo/cadence
          4. Volume: resistance, repetitions, and sets
          5. Rest periods
          6. Frequency of training sessions
          7. Range of motion
19. Resistance training systems (i.e., pyramid, single set, multiple set, super set, and compound)
20. Resistance training techniques
21. Basic lifting mechanics (starting position and movement technique)
22. Grips (i.e., supinate/underhand and pronate/overhand, neutral, and alternating/reverse)
23. Grip widths (i.e., shoulder-width, narrow, and wide)
24. Breathing (patterns and Valsalva maneuver)
25. Spotting
26. Flexibility and recovery
27. Types of flexibility: dynamic and static
28. Types of stretching exercises for each muscle group
29. Self-myofascial release (i.e., foam rolling)
30. Injury prevention and treatment (RICE)
31. Resistance training adaptations
    1. Benefits of resistance training
    2. Basic muscle physiology (motor unit recruitment, neuromuscular adaptation, and hypertrophy)
32. Correct technique for using resistance training equipment and activities
33. Muscle development activities: proper technique for body weight, weight training machines, and resistance training equipment (i.e., tubing, dumbbells)
34. Flexibility activities: stretching exercises
35. Core Curriculum Concepts
36. Increasing physical literacy
    1. Self-efficacy, motivation, adherence strategies
    2. Benefits of leading a physically active lifestyle
37. Fitness training principles: progressive overload, specificity, reversibility, individuality, FITT
38. Name and location of major muscle groups
39. Healthy eating principles
40. Six essential nutrients
41. Healthy eating patterns based on current guidelines
42. Body composition and weight management: assessment, strategies to improve, and role of exercise and healthy eating)
43. Impact of an active and healthy lifestyle on disease prevention: heart disease, obesity, metabolic conditions, stress management, and mental health
44. Method of Instruction

a. Group and individual lecture

b. Visual and online instructional materials (DVD, video, fitness apps and software, and Canvas)

c. Student demonstration and performance

d. Instructor-led demonstration and activities

e. One-on-one instruction and consultation

f. Physiological assessments and monitoring

1. Methods of Evaluating Student Performance
2. Observation of correct form of movement mechanics, resistance training principles, and program design variables (criteria checklist)
3. Written final exam (knowledge and Core Curriculum Concepts)
4. Written self-assessments (i.e., resistance training log)
5. Pre and post fitness assessment~~s~~
6. Muscle strength (i.e., resistance training machine, barbells, and dumbbells)
7. Muscle endurance (i.e., push-ups, plank, and sit-ups)
8. Flexibility (i.e., back saver sits and reach)
9. Body Composition (i.e., bioelectrical impedance, skinfold calipers, girth measurements)
10. Health Measurements (i.e., resting heart rate, resting blood pressure, height/weight)
11. Evaluation of outside class assignments
12. Practical exams (resistance training technique for specific exercises)

10. Outside Class Assignments

1. Perform at least one additional day of prescribed resistance exercises to meet minimum frequency standards needed to improve muscle strength, muscle endurance, and flexibility.
2. Weekly assignments (i.e., reading, discussion forum on class concepts, video analysis, self-reflection)
3. Assignments based on course text (i.e., healthy eating, risk of heart disease)

11. Representative Texts

* 1. Representative Text(s):

Exercise Science and Wellness Department. *The Way to a Long and Healthy Life.*

El Cajon, CA: Grossmont College, 7th edition, 2017.

b. Supplementary texts and workbooks:

Instructor material**s**

Student Learning Outcomes

Upon completion of the course, the student will:

1. Demonstrate basic knowledge, skills, and an appreciation of beginning resistance training.
2. Identify the basic principles for maintaining an active and healthy life.