Lecture Contact Hours: 16-18; Outside-of-Class Hours: 32-36;
Laboratory Contact Hours: 32-36; Outside-of-Class Hours: 0;
Total Student Learning Hours: 80-90

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

Exercise Science 014C – Advanced Weight Training

1 hour lecture, 1 unit
2 hours laboratory, 0.5 units
Total units: 1.5 units

Catalog Description
This course builds on intermediate weight training principles, providing advanced instruction in strength and conditioning methods that emphasize muscular endurance, strength, and functional movement. Students will deepen their understanding of advanced program design, technique refinement, and adaptations for diverse goals and abilities. Emphasis is placed on inclusive practices that support personal growth, body diversity, and accessible fitness training

Prerequisite
None

Recommended Preparation
”C” grade or higher or “Pass” in ES 014B or equivalent

Entrance Skills
Without the following skills, competencies and/or knowledge, students entering this course will be highly unlikely to succeed:
1) Plan an individual resistance program as well as maintain a written record charting exercises, sets, repetitions and resistance improvements.
2) Correctly perform a minimum of two exercises for each major muscle group during each class.
3) Improve strength in each major muscle group (shoulder, back, chest, abdomen, arms and legs)
4) List safety procedures, weight room etiquette and rules, as well as giving the rationale for each.

Course Content
1) Advanced Resistance Training and Safety Principles
   a. Olympic lifts, power lifts, multi-joint
2) Personal Fitness and Assessment
   a. Short and long-term goals
3) Advanced Exercise Techniques and Adaptation
   a. Multi-joint exercises
   b. Machines versus free weights
4) Advanced Program Design and Progress Monitoring
   a. Self-assessment strategies and tracking performance
   b. Periodization and Recovery

Course Objectives
Students will be able to:
1) Synthesize advanced training principles (e.g. periodization, Olympic and power lifting techniques) to optimize performance in strength, hypertrophy, or endurance-focused programs.

2) Create and critically evaluate personalized long-term training programs that integrate complex movement progressions, goal specificity, periodization, and recovery.
3) List and describe advantages and disadvantages of free weights versus machines.
4) Demonstrate advanced weight training techniques with attention to technical precision, injury prevention, and adaptability for varying training environments and populations.

Method of Evaluation
A consistent and inclusive grading system will be implemented by the instructor and applied equitably across all students. Assessments will be based on multiple forms of evaluation that align with course outcomes and allow for varied means of demonstrating understanding and progress. The grading components are as follows:
1) Quizzes and Knowledge Checks
   a. Short quizzes and open format assessments to evaluate students' understanding of key concepts, including terminology, safety practices, muscle identification, and principles of strength and endurance training. Multiple formats may be used to support diverse learning styles (e.g., multiple choice, visuals, short answer, open-book).
2) Skill Demonstrations and Participation
   a. Evaluation of students' ability to safely and effectively perform foundational resistance exercises, with opportunities for modification and adaptation. Emphasis is placed on effort, proper form, willingness to apply feedback, and inclusive participation rather than performance benchmarks.
3) Case study assignment that measures students' ability to create a resistance training program for beginner, intermediate and/or competition-level body building.
4) Project or Reflective Assessment
   a. A culmination assignment (written, visual, or multimedia) in which students demonstrate understanding of course content, reflect on their growth, and explain how principles of resistance training can be applied to their own lives in inclusive and sustainable ways.

Special Materials Required of Student
Appropriate attire

Minimum Instructional Facilities
Appropriate gymnasium facility outfitted with barbells, dumbbells, Olympic weights, platforms, machines and adequate space for lifting weights

Method of Instruction
1) Lecture, demonstration and video
2) Peer group activities

Out-of-Class Assignments
1) **Reading**: review course materials, digital references, and other multimedia.
2) **Writing**: maintaining a fitness log, and more.
3) **Other**: N/A.

Texts and References
1) Required (representative examples):
   a. Delavier, Frederic. *Strength Training Anatomy*, 4th Ed. Human Kinetics, 2022.
2) Supplemental: None

Student Learning Outcomes
Upon successful completion of this course, students will be able to:
1) Design, demonstrate and evaluate an advanced weight training program that aligns with individual fitness goals, physical needs, and training principles

2) Apply advanced-level exercise science terminology to explain key components of a weight training plan.
3) Monitor and evaluate personal progress through consistent tracking methods, identifying major muscle groups, and making informed adjustments to improve performance and outcomes.