

PELF 132

Strength and Conditioning for Competitive Sports

2 Credits

Community College of Baltimore County Common Course Outline

Description

PELF 132 – Strength and Conditioning for Competitive Sports: is an intensive advanced training program incorporating and applying knowledge of human movement as it relates to athletes. To assess athletic abilities, weight machines, free weights, plyometrics, and cardiovascular equipment including treadmills, ellipticals, stationary cycles, and rowers will be used throughout the course. The priority within the course is to enhance the development of muscular strength, muscular endurance, and cardiovascular fitness through the study and application of aerobic and anaerobic training principles. The modalities used in this course are specifically created for those who wish to gain a greater level of fitness in a specific competitive sport during the off-season.

Overall Course Objectives

Upon completion of this course, students will be able to:

1. develop an effective personal fitness routine;
2. apply the principles of aerobic and anaerobic training;
3. identify the importance of maintaining a specific level of fitness through physical activity;
4. explore the physiology of the cardiovascular and muscular systems in relation to strength and conditioning;
5. define the terminology used in strength and conditioning programming;
6. design an effective personal fitness program using sound training principles;
7. evaluate improvements in muscular strength, muscular endurance, and cardiovascular fitness;
8. identify the anatomical, psychological, and physiological benefits of physical training;
9. describe personal risk factors associated with hypokinetic diseases and cardiovascular diseases;
10. demonstrate critical thinking that allows for effective implementation of fitness programs;
and
11. discuss the relationship of other health factors to fitness and health.

Major Topics

- I. Musculoskeletal anatomy and physiology
- II. Cardiovascular anatomy and physiology
- III. Proper lifting techniques
- IV. Speed training
- V. Plyometrics

The Common Course Outline (CCO) determines the essential nature of each course.
For more information, see your professor's syllabus.

- VI. Periodization programming
- VII. Weight room safety
- VIII. Types of muscular training
 - a. Strength
 - b. Endurance
- IX. Types of cardiovascular training
 - a. Aerobic
 - b. Anaerobic
- X. Adverse effects of training
 - a. Musculoskeletal injuries
 - b. Overtraining
- XI. Program Design
 - a. Exercise selection
 - b. Exercise sequence
 - c. Progressive overload
- XII. Health factors
 - a. Diet
 - b. Nutrition
 - c. Stress
 - d. Sleep

Course Requirements

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- One written assignment
- Two exams
- One capstone assignment
- Attendance and active participation

Written assignments and research projects: Students are required to use appropriate academic resources in their research and cite sources according to the style selected by their professor.

Other Course Information

This course requires strenuous physical activity. This course may require you to obtain physician permission pending the health history questionnaire.

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