



Curriculum Overview

Strength and Conditioning

Course Description

Strength and Conditioning is a course focusing on developing muscular strength, endurance, and overall athletic performance. The major focus will be strength training. Students will follow a research-based designed program that will tailor to their needs. Students will also be tasked with developing skill-related components of fitness, such as speed, agility, balance, coordination, power, and reaction time. This course is designed for any student who is willing to work hard and develop an understanding of how to train based on your needs. This is a repeatable course, so long as the department approves and the student has earned a "C" or better.

Enduring Understandings

Students will understand...

- Participating in ongoing strength training and conditioning promotes a healthy balance of overall fitness.
- Understanding the physiological concepts related to exercise and applying to one's practice will increase fitness levels.
- Designing and implementing an effective strength and conditioning program can help prevent injury and increase functional muscular strength.
- The proper use of safety equipment and spotting techniques decreases the likelihood of injury.
- Utilizing proper techniques and skills will maximize the effects of one's personal training program.
- Proper care and use of equipment increases safety and longevity of the equipment.

Essential Questions

- How does participating in ongoing strength training and conditioning promote a healthy balance of one's overall fitness?
- What is the relationship among the five components of fitness and training principles when designing a program?
- What is the seven-step process in developing a strength training program?
- How do the various lifts, spotting techniques and safe use of equipment decrease the likelihood of injury?
- How can exercises be progressed and regressed based on the needs of an individual?
- What are the long-term benefits of strength training on the body?
- Why is strength training important in an individual's overall health?
- How does nutrition impact sports performance?

Units of Study

- Unit 1: Safety and Technique
- Unit 2: Basic Sciences of Strength and Conditioning
- Unit 3: Training Principles & Program Design
- Unit 4: Final Project
- Final Project is based on the year of the student who can repeat the course.
 - Example:
 - First Year = Movement Analysis of Week 4 compared to Week 16
 - Second Year = Design your “personal” program
 - Third Year = Area of research (nutrition, program design, sport specific, any exercise science topic *approved by the teacher).

Primary Resources

- Bompa, T. O., & Buzzichelli, C. (2019). *Periodization: Theory and methodology of training* (6th ed.). Human Kinetics.
- Haff, G., & Triplett, N. T. (2016). *Essentials of strength training and conditioning*. Human Kinetics.
- Brookbush Institute
- USA Weightlifting
- National Athletic Training Association