

# Bemidji State University

## PHED 4170: Advanced Principles for Strength and Speed Training Exercise

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Theory and practice of strength and speed training with emphasis on technique analysis and instructional methods for strength training. Includes facility design and equipment purchasing and maintenance. Prepares students for National Strength and Conditioning Association Certified Strength and Conditioning Specialist (CSCS). Prerequisite: PHED 3300 or consent of instructor.

### B. COURSE EFFECTIVE DATES: 08/03/2013 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Adaptations to Aerobic Endurance Training Programs
2. Adaptations to Anaerobic training programs
3. Administration, Scoring and Interpretation of Selected Tests
4. Age- and Sex-Related Differences
5. Bioenergetic of Exercise and Training
6. Biomechanics of Resistance Exercise
7. Nutritional Factors in Health and Performance
8. Periodization
9. Plyometric Training
10. Resistance Training
11. Speed and agility
12. Structure and Function of body systems

### D. LEARNING OUTCOMES (General)

1. demonstrate a basic knowledge of exercise physiology, including training adaptations, and overtraining
2. demonstrate knowledge of commonly abused substances and the detrimental effects of the substances on the body
3. demonstrate skills needed for physiological testing, specifically the student will be able to select, organize, administer and evaluate tests of strength and physical performance
4. demonstrate the ability to instruct and lead exercises in strength conditioning/training and joint flexibility including spotting, flexibility, plyometric and other conditioning exercises
5. demonstrate the ability to prescribe individual exercise programs that are safe and effective
  - a. that maximize physical performance using various training methods and modes
  - b. that appropriately apply exercise order, load, volume, rests, training frequencies, and muscle balance

**E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted