KIN A280: STRENGTH CONDITIONING/THEORY

Item	Value
Curriculum Committee Approval Date	11/04/2020
Top Code	083520 - Fitness Trainer
Units	3 Total Units
Hours	72 Total Hours (Lecture Hours 45; Lab Hours 27)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)

Course Description

Theory and applications of strength development, muscular endurance, flexibility, neuromuscular coordination, nutrition and supplementation. Includes planning, developing and setting up programs designed to achieve the desired goals in the most efficient way. Also, includes introduction to fitness and exercise testing procedures. Transfer Credit: CSU; UC: Credit Limitation: Any or all of these HLED, KIN, PE Theory courses combined: maximum credit, 8 units.

Course Level Student Learning Outcome(s)

1. Identify the mechanisms to increase strength, muscular endurance, and flexibility.
2. Identify the exercises to increase strength, muscular endurance and flexibility.
3. Identify the mechanisms to increase physical performance.

Course Objectives

- 1. Explain different principles of increased strength development.
- 2. Explain different principles of increased muscular endurance.
- 3. Explain the principles for increased flexibility.
- 4. Explain the different principles for body fat loss.
- 5. Explain the different principles for lean body increase.
- 6. Describe different theories and principles involved in physical performance.
- 7. Develop techniques on how to measure muscular strength, flexibility, body composition, and muscular endurance.
- 8. Set up exercise prescription programs for individuals concerning strength development, muscular endurance and nutrition to lose body fat, gain lean body weight, and help develop a healthier lifestyle.

Lecture Content

1. Facts and basic principles of strength development, and muscular endurance increase. 2. Recognition of the changes in the physiological, neurological, and psychological process of the body through weight training and proper nutrition. 3. Knowledge of weight training biomechanical and principles. A. Philosophies, principles and theories of: 1. Muscular endurance increase 2. Muscular strength development 3. Muscle flexibility improvement 4. Neuromuscular coordination improvement 5. Theories of nutrition in relation to losing body fat 6. Nutrition in relation to losing body fat and increasing lean body density 7. Nutrition in relation to hea lthy living B. Setting up exercise programs to: 1. Develop muscular endurance 2. Develop strength 3. Develop muscle flexibility 4. Increase lean body density 5. Increase neuromuscular coordination C. Setting nutritional programs to: 1. Increase lean body density 2. Decrease body fat D. Setting up programs to combine more than one of the above E. Learning how to measure physical fitness

Lab Content

Lab:1. Health Risk and PARQ screening assessment2. Health and Fitness AssessmentA. Exercise Testing SelectionB. Pre-exercise Testing (Biometrics)1. Body Mass Index (BMI)- Hgt/Wgt and Girth Measurements2. Calculating Target Heart Rates3. Heart rate/ Blood pressure Testing4. Body Composition: SkinfoldsC. Exercise Testing Assessments1. Cardiorespiratory fitness: VO2 testing2. Muscular Strength and Endurance tests3. Flexibility testsD. Exercise testingE. Functional Movement Assessment F. Equipment 1.Correct Form and Use of Weight Machines and Equipment 2. Free Form Weights : Dumbbells, Plyometrics, Rollers, Resistance balls and bands

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Lecture, Lab, PowerPoint, videos.

Reading Assignments

Students will spend approximately 4 hours a week reading from the text book and articles from peer reviewed journals and research articles

Writing Assignments

Students will spend approximately 1 2 hours per week be required to complete written assignments

Out-of-class Assignments

Students will spend approximately 1 2 hours a week completing individual and group written assignments; homework assignments to emphasis course topics.

Demonstration of Critical Thinking

Objective written exams, class projects, written reports, problem solving exercises, Internet assignments, lab work

Required Writing, Problem Solving, Skills Demonstration

Objective written exams, class projects, written reports, problem solving exercises, Internet assignments, lab work

Eligible Disciplines

Physical education: Master's degree in physical education, exercise science, education with an emphasis in physical education, kinesiology, physiology of exercise, or adaptive physical education, OR bachelor's degree in any of the above AND master's degree in any life science, dance, physiology, health education, recreation administration, or physical therapy OR the equivalent. Master's degree required.

Textbooks Resources

1. Required National Strength Conditioning (NSCA). Essentials of Strength Training and Conditioning, 4 ed. Human Kinetics, 2015

Other Resources

1. Selected handout materials to be provided and distributed by the instructor