Course Acronym:	PE
Course Number:	280
Descriptive Title:	Exercise and Nutrition Programs for Fitness and Weight Management
Division:	Health Sciences and Athletics
Department:	Physical Education
Course Disciplines:	Physical Education
Catalog Description:	Students will be given guidelines for the design of individual exercise programs of aerobic fitness, weight loss, and development of muscle mass, muscle strength, and joint flexibility. Nutritional support for optimizing these fitness objectives is integrated throughout the course. Students participate in both classroom discussions and relevant exercise training. Measurement of aerobic fitness, body composition, and tests of muscle function will be conducted to guide exercise and dietary recommendations.
Prerequisite:	
Co-requisite:	
Recommended Preparation:	English 1A
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	3
Outside Study Hours:	4
Total Course Hours:	90
Course Units:	3
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	Prior to July 1992
Transfer UC:	No
Effective Date:	
General Education: ECC	Area 5 - Health and Physical Education
Term:	
Other:	
CSU GE:	Area E - Lifelong Understanding and Self-Development
Term:	
Other:	

IGETC:	
Term:	
Other:	
Student Learning Outcomes:	**SLO #1 Cardiopulmonary Fitness** Students will evaluate their level of Cardiopulmonary Fitness and make training program design recommendations for improvement based on laboratory fitness test results and reference standards for age and gender. **SLO #2 Muscle Endurance** Students will assess current fitness levels in muscle endurance and develop programs to improve fitness levels. **SLO #3 Caloric Intake** Students will identify and apply principles of proper diet and nutrition systems when formulating caloric intake.
Course Objectives:	1. Implement guidelines for developing aerobic fitness, muscle strength and endurance, flexibility, and improvements in body composition in a personally relevant exercise training program. 2. Explain the need for lifetime physical activity and weight control as they relate to health enhancement and disease risk reduction. 3. With respect to accuracy and precision, evaluate methods commonly available for evaluating aerobic fitness, muscle performance, flexibility, and body composition. 4. Explain the benefits of achieving and maintaining high levels of aerobic and muscular fitness through the lifespan. 5. Evaluate results of fitness evaluations for identification of strengths, weaknesses, and need for change. 6. Using proper technique, correctly demonstrate at least one resistance training exercise for each of the major muscles or muscle groups. 7. Demonstrate understanding of static and PNF stretching techniques by exhibiting specific stretches for lower and upper body parts. 8. Design an eight-week progressive exercise training program that is likely to improve aerobic fitness, muscle performance, and flexibility. 9. Assess 3-day personal dietary intake for total caloric intake and the percentages of carbohydrates, fats, and proteins in comparison to current Institute of Medicine recommendations. 10. Construct an energy balance plan that will achieve negative calorie balance.
Major Topics:	**I. Course Orientation (3 hours, lecture)** A. Brief overview of the five health components of fitness B. Overview of health, wellness, and disease prevention C. Overview of nutrition D. Description of fitness evaluations **II. Goal Setting and Assessment (2 hours, lecture)**

A. Development of SMART goals specific to improving health, fitness, and performance through exercise
B. Field fitness assessments

III. Cardiovascular Fitness (6 hours, lecture)

A. Guidelines and methods for developing and maintaining cardiovascular performance.
B. Standards for cardiovascular fitness, including sub VO2 max test
C. Training adaptations due to cardiovascular training
D. Progressive overload and various training programs

IV. Cardiovascular Fitness (16 hours, lab)

A. Implement exercise guidelines and methods for developing and maintaining aerobic fitness
B. Standards and calculations for fitness assessment
C. Aerobic training adaptations due to training

V. Muscular Strength and Endurance (8 hours, lecture)

A. Guidelines and methods for developing and maintaining muscle performance (strength, endurance, hypertrophy)
B. Standards for muscular strength including upper and lower body exercises
C. Training adaptations due to weight training
D. Progressive overload and various training programs

VI. Flexibility and Mobility (6 hours, lecture)

A. Guidelines and methods for developing and maintaining joint mobility
B. Standards for flexibility
C. Various stretching techniques

VII. Flexibility and Mobility (4 hours, lab)

A. Static

B. Dynamic

C. Proprioceptive Neuromuscular Facilitation (PNF)

VIII. Body Composition (10 hours, lab)

A. Analyze various methods for measuring body composition
B. Standards for body composition and BMI
C. Obesity vs. overweight and disease prevention

IX. Basic Nutrition (11 hours, lecture)

A. Energy balance equation
B. Macronutrients: carbohydrates, fats, and proteins including water
C. Micronutrients: vitamins and minerals

	D. Choosing a healthy diet for disease prevention **X. Field Tests (8 hours, lab)** A. Demonstrate ability to perform field tests 1. body composition 2. aerobic capacity 3. muscle strength 4. muscle endurance **XI. Fitness Programs (16 hours, lab)** A. Implement exercise guidelines and methods for developing and maintaining muscular endurance, hypertrophy, and strength B. Standards and calculations for fitness assessment C. Muscular training adaptations and periodization D. Monitoring changes in body composition
Total Lecture Hours:	36
Total Laboratory Hours:	54
Total Hours:	90
Primary Method of Evaluation:	1) Substantial writing assignments
Typical Assignment Using Primary Method of Evaluation:	Calculate your target heart rate training zone using the Karvonen method. Determine if your training zone is within the ACSM guidelines. Develop a training program using the FITT principle.
Critical Thinking Assignment 1:	In a one- to two-page paper, using fitness assessment data, SMART goals, and ACSM exercise training guidelines, propose an eight-week progressive training plan to improve aerobic fitness and muscle hypertrophy/strength.
Critical Thinking Assignment 2:	Using the nutritional website provided in class, track and analyze a 3-day food and beverage intake. Assess your present level of macronutrient (CHO, PRO, FAT) and micronutrient (vitamins and minerals) intake and compare to your recommended daily requirements. If changes are needed, what specifically can you do to improve your daily nutritional intake? Please submit in a one- to two-page essay regarding changes.
Other Evaluation Methods:	Completion, Essay Exams, Matching Items, Multiple Choice, Reading Reports, Term or Other Papers, True/False, Written Homework
Instructional Methods:	Demonstration, Discussion, Group Activities, Lab, Lecture, Multimedia presentations, Other (specify), Role play/simulation
If other:	Internet resources, Nutrient analysis software, Periodical literature
Work Outside of Class:	Answer questions, Problem solving activity, Required reading, Skill practice, Study, Written work (such as essay/composition/report/analysis/research)
If Other:	
Up-To-Date Representative Texts:	Fahey, Thomas D, Paul Insel, and Walton Roth. Fit & Well: Core Concepts and Labs in Physical Fitness and Wellness.15th edition Mcgraw-Hill Education 2023.
Alternative Texts:	

Required Supplementary Readings:	
Other Required Materials:	Access to the Internet.
Requisite:	
Category:	
Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	
Requisite course:	English 1A
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	**Student should be able to read and use critical thinking skills for class discussions and writing assignments.** ENGL 1A - Read and apply critical-thinking skills to numerous published articles and to college-level, book-length works for the purpose of writing and discussion. ENGL 1A - Compose multi-paragraph, thesis-driven essays with logical and appropriate supporting ideas, and with unity and coherence. ENGL 1A - Demonstrate ability to locate and utilize a variety of academic databases, peer-reviewed journals, and scholarly websites. ENGL 1A - Utilize MLA guidelines to format essays, cite sources in the texts of essays, and compile Works Cited lists.
Requisite Skill:	
Requisite Skill and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s). If applicable	
Enrollment Limitations and Category:	
Enrollment Limitations Impact:	

Course Created by:	Thomas W. Storer, Ph.D
Date:	09/01/1984
Original Board Approval Date:	
Last Reviewed and/or Revised by:	Danielle Roman
Date:	10/17/2023
Last Board Approval Date:	01/17/2024
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