

College of San Mateo
Official Course Outline

1. **COURSE ID:** KINE 301 **TITLE:** Introduction to Personal Training
Units: 3.0 units **Hours/Semester:** 48.0-54.0 Lecture hours; and 96.0-108.0 Homework hours
Method of Grading: Grade Option (Letter Grade or Pass/No Pass)
Recommended Preparation:
 Eligibility for ENGL 100, or Eligibility for ENGL 105

2. **COURSE DESIGNATION:**
Degree Credit
Transfer credit: CSU
AA/AS Degree Requirements:
 CSM - GENERAL EDUCATION REQUIREMENTS: E5d. Career Exploration and Self-Development
CSU GE:
 CSU GE Area E: LIFELONG LEARNING AND SELF-DEVELOPMENT: E1

3. **COURSE DESCRIPTIONS:**
Catalog Description:
 Successful completion of this course prepares students to take a variety of national certification exams including the National Council of Strength and Fitness (NCSF), and the National Academy of Sports Medicine (NASM). Study of basic human anatomy, exercise physiology, health screening and assessment, nutrition, aerobic and anaerobic conditioning.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**
 Upon successful completion of this course, a student will meet the following outcomes:
 1. Understand anatomical and physiological adaptations associated with strength training & conditioning.
 2. Comprehend and apply proper exercise assessments and program design.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**
 Upon successful completion of this course, a student will be able to:
 1. Obtain a Certified Personal Trainer certificate from a professional organization
 2. Demonstrate comprehension in formulating a safe personal training workout for people of all ages by understanding anatomical, physiological, and nutritional components in developing an exercise prescription
 3. Develop personal skills necessary to motivate individuals.
 4. Demonstrate a working knowledge of primary muscles involved in human locomotion and movement
 5. Describe the process and relationship of aerobic and anaerobic energy metabolism
 6. Develop a clear understanding of basic exercise physiology
 7. Identify the factors influencing health, wellness, and total fitness including heredity, lifestyle, and environment
 8. Demonstrate knowledge in the area of health screening as to the potential risks of participation in fitness testing and exercise
 9. Explain nutrition/weight management principles, hydration, dietary guidelines and the food pyramid
 10. Determine recommended training parameters for cardiovascular conditioning in a healthy adult
 11. Identify common modifications for special populations

6. **COURSE CONTENT:**
Lecture Content:
 1. Gross anatomy
 - A. Biomechanical principles of movement
 - B. Range of motion capabilities
 - C. Prime mover muscle action
 - D. Spinal structures
 2. Exercise physiology
 - A. Mechanics of muscle contraction
 - B. Fuel sources and energy metabolism
 - C. The role of oxygen in energy metabolism
 - D. MET intensity and caloric expenditure
 - E. Blood pressure responses to aerobic and anaerobic training

3. Health and fitness
 - A. Total fitness including heredity, lifestyle and environment
 - B. Prescribing physical fitness goals
 - C. Components of health and performance
4. Health screening and evaluation
 - A. The risks of participation in fitness testing and exercise
 - B. Risk factors for heart disease
 - C. Medical referrals
 - D. Cardiorespiratory considerations for exercise participation
5. Nutrition/weight management
 - A. Food labeling, dietary guidelines, and the food pyramid
 - B. Deficiencies in the American diet
 - C. Blood lipid profile
 - D. The role of fiber
 - E. Desired body weight, Body Mass Index and resting metabolic rate formulas
 - F. Carbohydrates, fat, and protein in human physiology
6. Exercise prescription and program considerations
 - A. Training parameters for cardiovascular conditioning
 - B. Principle of overload, specificity, and progression
 - C. Functional warm up
 - D. Health evaluation criteria in an exercise prescription
 - E. Proper sequence in training
 - F. Rate of perceived exertion
 - G. Physiological adaptations
 - H. Overtraining
 - I. Static vs. dynamic exercise
 - J. Program tracking
7. Practical instruction
 - A. Emergency procedures
 - B. Maintaining safe training environment
 - C. Guidelines for safe participation by students
 - D. Considerations for use of exercise machines
 - E. Proper body positioning
 - F. Biomechanical concerns and equipment setting
 - G. Injury prevention
8. Special populations
 - A. Elderly
 - B. Pregnant women
 - C. Children
 - D. Type I and II diabetics
 - E. Asthmatics
 - F. Osteoporosis

7. REPRESENTATIVE METHODS OF INSTRUCTION:

Typical methods of instruction may include:

- A. Lecture
- B. Critique
- C. Directed Study
- D. Discussion
- E. Guest Speakers
- F. Observation and Demonstration
- G. Other (Specify): 1. Lectures and discussions on gross anatomy, exercise physiology, health and fitness, health screening and evaluation, nutrition and weight management, exercise prescription, and program considerations. Graded discussion forums. 2. Demonstration of practical instruction techniques 3. Power point presentations on muscle contractions, gross anatomy and physiology 4. Instructor-generated handouts Students will be expected to write a 3-5 page research report on a related topic of their choice. Students will be expected to read 1-2 chapters per week from assigned text, study guide, and resource guide. Students will be expected to complete writing and reading assignments outside of class time. Examples of students' use of critical thinking include test taking, development of personal prescriptions, and use of formulas to analyze subject fitness levels.

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

Students will be expected to write a 3-5 page research report on a related topic of their choice.

Reading Assignments:

Students will be expected to read 1-2 chapters per week from assigned text, study guide, and resource guide.

Other Outside Assignments:

Graded discussion forums.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

- A. Class Participation
- B. Class Performance
- C. Class Work
- D. Exams/Tests
- E. Homework
- F. Papers
- G. Quizzes
- H. Research Projects
- I. Written examination
- J. 1. Major project measuring student's ability to prescribe a personal exercise program 2. Evaluation of chapter and mid-term examinations testing student's comprehension of major subject areas 3. Evaluation of student use of critical thinking through assigned research report 4. Analysis of practical instruction techniques 5. Evaluation of final practice examination for NCSF Personal Trainer Certification Grade Option

10. REPRESENTATIVE TEXT(S):

Possible textbooks include:

- A. Robert Murray; W. Larry Kenney. *Practical Guide to Exercise Physiology*, 2nd ed. Champaign: Human Kinetics, 2021

Origination Date: November 2021

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Course Originator: Mikel Schmidt