

PHYSIO 50 Course Outline as of Fall 2009

CATALOG INFORMATION

Dept and Nbr: PHYSIO 50      Title: EXERCISE, FITNESS  
Full Title: Exercise, Fitness and Wellness  
Last Reviewed: 2/23/2009

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	4.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	4.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	105.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 210.00

Title 5 Category: AA Degree Applicable  
Grading: Grade or P/NP  
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP  
Also Listed As:  
Formerly:

**Catalog Description:**  
The physiology of exercise: how and why the body responds to exercise, the role of exercise in fitness and wellness.

**Prerequisites/Corequisites:**

**Recommended Preparation:**  
Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: The physiology of exercise: how and why the body responds to exercise, the role of exercise in fitness and wellness. (Grade or P/NP)  
Prerequisites/Corequisites:  
Recommended: Eligibility for ENGL 100 or ESL 100  
Limits on Enrollment:  
Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>			<b>Effective:</b>	<b>Inactive:</b>
<b>CSU GE:</b>	<b>Transfer Area</b>			<b>Effective:</b>	<b>Inactive:</b>
	E	Lifelong Learning and Self Development		Fall 1981	Spring 2012
<b>IGETC:</b>	<b>Transfer Area</b>			<b>Effective:</b>	<b>Inactive:</b>
<b>CSU Transfer:</b>	Transferable		<b>Effective:</b>	Fall 1981	<b>Inactive:</b>
					Spring 2012
<b>UC Transfer:</b>			<b>Effective:</b>		<b>Inactive:</b>

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon completion of this course the student will be able to:

1. Evaluate the source and credibility of reports of scientific experiments in exercise physiology and related topics.
2. Define wellness and list its components, including physical fitness.
3. Describe the principles of nutrition and describe their relationship to exercise.
4. Define body composition and its relationship to recommended body weight.
5. Compare aerobic and anaerobic exercise and their health benefits.
6. Describe how adequate strength is necessary for fitness and wellness and the principles that govern the development of muscular strength and endurance.
7. Define muscular flexibility and evaluate its importance to adequate fitness.
8. Identify the major health risks in the US, and describe the role of exercise in their management.
9. Perform a variety of fitness measurements including heart rate, blood pressure, maximal oxygen uptake, body composition assessment.

### **Topics and Scope:**

- I. Research in exercise physiology
  - A. Scientific method
  - B. Experimental design
  - C. Credibility of information sources
- II. Physical fitness and wellness
  - A. Definitions and fitness standards
  - B. Principles of nutrition
  - C. Major U.S. health problems
- II. Body composition assessment
  - A. Techniques
  - B. Determining recommended body weight
  - C. Principles of weight control

- D. Physiology of weight loss
- IV. Cardiovascular exercise
  - A. Endurance assessment
    - 1. Aerobic and anaerobic endurance
    - 2. Interpreting maximal oxygen uptake
  - B. Principles of cardiovascular exercise prescription
    - 1. Guidelines
    - 2. Rating the fitness benefits of aerobic activities
    - 3. Predicting oxygen uptake and caloric expenditure
- V. Muscular strength and endurance
  - A. Principles of strength training
  - B. Strength training programs and exercises
  - C. Factors affecting strength: aging, gender, metabolic rate
- VI. Flexibility
  - A. Principles of muscular flexibility
  - B. Muscular flexibility assessment
  - C. When to stretch
- VII. Skill-related components of physical fitness
- VIII. Health and fitness
  - A. Cardiovascular disease
    - 1. Prevention and risk profile
    - 2. Abnormal electrocardiogram
    - 3. Abnormal cholesterol
  - B. Stress management
    - 1. Sources and vulnerability
    - 2. Stress management
- Laboratory exercises:
  - 1. Heart rate and blood pressure
  - 2. Nutrient analysis
  - 3. Hydrostatic weighing for body composition
  - 4. Estimation and daily caloric requirement
  - 5. Cardiovascular endurance assessment
  - 6. Cardiovascular exercise prescription
  - 7. Muscular strength and endurance assessment
  - 8. Muscular flexibility assessment
  - 9. Self Assessment of cardiovascular risk
  - 10. Stress vulnerability questionnaire
  - 11. Stress management techniques

### **Assignment:**

- 1. Read an average of 20-30 pages per week of text and laboratory material.
- 2. Perform labs, assess and tabulate data collected.
- 3. Read research articles (1/week) and write brief, typed summaries.
- 4. Perform fitness assessments and design an individual semester length exercise program.
- 5. Exams: 4/semester including multiple choice, true/false, completion and short essay questions.

### **Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Research paper summaries

Writing  
10 - 20%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Assess and tabulate lab data

Problem solving  
10 - 25%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Conduct fitness assessments

Skill Demonstrations  
10 - 20%

**Exams:** All forms of formal testing, other than skill performance exams.

Multiple choice, true/false, completion, short essay; 4 exams/semester including final

Exams  
30 - 50%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Class participation and attendance

Other Category  
0 - 10%

### **Representative Textbooks and Materials:**

Advanced Fitness Assessment and Exercise Prescription, 5th edition, V. H. Heyward, 2006  
Principles and Labs for Fitness and Wellness. 9th edition, W. W. K. Hoeger and S. A. Hoeger, 2008