

**FDNT 60 Course Outline as of Fall 2023****CATALOG INFORMATION**

Dept and Nbr: FDNT 60 Title: NUTRITION AND PHY FIT

Full Title: Nutrition and Physical Fitness

Last Reviewed: 2/6/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	1.00	17.5	Lecture Scheduled	17.50
Minimum	1.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	1.00		Contact Total	17.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00

Total Student Learning Hours: 52.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

In this course students will examine contemporary findings in nutrition specifically related to performance in athletics and exercise. Students will perform computer analysis of calorie and nutrient intake and apply the results to improve and enhance performance, energy level, and general well-being.

**Prerequisites/Corequisites:****Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:****Schedule of Classes Information:**

Description: In this course students will examine contemporary findings in nutrition specifically related to performance in athletics and exercise. Students will perform computer analysis of calorie and nutrient intake and apply the results to improve and enhance performance, energy level, and general well-being. (Grade Only)

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>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 1981	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Plan a diet with optimal levels of nutrients to support moderate levels of physical activity, peak athletic performance and overall good health.
2. Choose food sources of nutrients to build and maintain optimal body composition to support lifelong health.

### **Objectives:**

At the conclusion of this course, the student should be able to:

1. Describe the basic mechanisms involved in energy production and storage in the body.
2. Discuss aerobic and anaerobic pathways in the body.
3. Describe the relationship between energy intake and expenditure needed to maintain energy balance.
4. Describe the importance of carbohydrate in a training diet.
5. Discuss the pros and cons of carbohydrate loading.
6. Describe the functions of lipids for moderate exercise, injury prevention and healing.
7. Describe the factors which contribute to atherosclerosis and develop a personal strategy to minimize these factors.
8. Explain the functions of protein in the body related to physical activity.
9. Discuss the pros and cons of various types of nutritional supplements.
10. Describe the functions of vitamins and minerals in the body in relation to athletic performance, muscle building, and workout recovery, and identify the consequences of excessive intake.
11. Identify the major functions of water and explain the influence of proper hydration during exercise.
12. Discuss the interactions among the major electrolytes supporting normal blood pressure, muscle function and hydration.
13. Describe the effects of sugar, caffeine, and alcohol in athletic performance.
14. Plan a diet with optimal levels of carbohydrates, lipids, and protein for optimal physical

fitness.

## **Topics and Scope:**

- I. Metabolism and the Energy Pathways
  - A. The energy sources
  - B. Aerobic and anaerobic pathways
- II. Fuel Usage
  - A. Intensity
  - B. Duration
  - C. Fitness level
  - D. Peak athletic performance
- III. Carbohydrate
  - A. Training diet
  - B. Optimal carbohydrate: protein ratios for training and recovery
  - C. Carbohydrate loading
  - D. Food sources of carbohydrates
- IV. Fats
  - A. The importance of fat
  - B. Food sources of saturated and unsaturated fat
  - C. Cardiovascular disease
- V. Proteins
  - A. Protein needs and exercise
  - B. Food sources of proteins
  - C. Protein supplements
- VI. Vitamins and Minerals
  - A. Energy metabolism
  - B. Muscle recovery
  - C. Bone strength
- VII. Hydration
  - A. Hydration and exercise
  - B. Choice of fluid sources
  - C. Electrolyte balance
- VIII. Sugar, Caffeine and Alcohol
  - A. Sugar before and during exercise
  - B. The effect of caffeine on exercise
  - C. The effect of alcohol on exercise
- IX. Eating for Performance
  - A. Pre-exercise meals
  - B. Fuel and hydration during exercise
  - C. Fuel and hydration after exercise
  - D. Injury prevention
- X. Eating for Recovery
  - A. Maximizing alertness - micronutrients and neurotransmitters
  - B. Glycogen repletion, rehydration, anti-inflammatories
- XI. Body Composition
  - A. Assessing body composition
  - B. Weight control and energy balance
  - C. Building muscle and limiting body fat

## **Assignment:**

1. Read chapters in text (20-30 pages per week) and answer assigned chapter questions/complete in-class worksheets, class discussions
2. Diet analysis, record three-day food intake and physical activities, analyze and write evaluation of nutrient intake with modifications, as needed
3. Quizzes (3-4)
4. Presentation or poster related to sports beverage, sports nutrition bar, snack foods, diet, or supplements designed to support athletic workouts, competition, and performance

### 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.

Answer chapter questions; in-class worksheets

Writing  
10 - 20%

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

Diet analysis

Problem solving  
10 - 35%

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

None

Skill Demonstrations  
0 - 0%

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

Quizzes

Exams  
20 - 35%

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

Class presentation or poster; class participation and attendance

Other Category  
30 - 40%

### Representative Textbooks and Materials:

Sports Nutrition Guidebook. 6th ed. Clark, Nancy. Human Kinetics. 2019.

Peak: The New Science of Athletic Performance that is Revolutionizing Sports. 1st ed. Bubbs, Marc. Chelsea Green Publishing. 2019.