

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



COURSE OUTLINE

HEFI 375 – Fitness and Sports Nutrition

Prepared By: Deborah Molnar
Janet L. Parcell Mitchell, PT, DPT, ATC, CSCS

**SCHOOL OF SCIENCE, HEALTH, AND CRIMINAL JUSTICE
Health and Fitness Promotion
MAY 2012
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HEFI 375 Fitness and Sports Nutrition

- A. **TITLE:** Fitness and Sports Nutrition
- B. **COURSE NUMBER:** HEFI 375
- C. **CREDIT HOURS:** 3
- D. **WRITING INTENSIVE COURSE:** No
- E. **COURSE LENGTH:** 15 weeks
- F. **SEMESTER(S) OFFERED:** Fall/Spring
- G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**
3 hours of lecture per week
- H. **CATALOG DESCRIPTION:** This course provides students with an understanding of the link between nutrition and exercise. Specifically, students examine the unique demands of exercise training for athletes at all levels and the impact of nutrition on performance. Students integrate their knowledge of exercise physiology and sports nutrition to create a dietary plan that enhances athletic performance.
- I. **PRE-REQUISITES/CO-COURSES:** HEFI 303 Exercise Physiology

J. **GOALS (STUDENT LEARNING OUTCOMES):**

By the end of this course, the student will be able to:

| <i>Course Objective</i> | <i>Institutional SLO</i> |
|---|--|
| a. Identify basic dietary guidelines. | 3. Prof. Competence |
| b. Compare and contrast the digestion and absorption of carbohydrates, proteins, and fats. | 2. Crit. Thinking 3. Prof. Competence |
| c. Differentiate between the metabolism of carbohydrates, proteins, and fats. | 2. Crit. Thinking 3. Prof. Competence |
| d. Explain the effect of carbohydrates, proteins, and fats on exercise capacity. | 3. Prof. Competence |
| e. Translate dietary requirements of carbohydrates, proteins, and fats to appropriate food choices. | 2. Crit. Thinking 3. Prof. Competence |
| f. Discuss strategies to maintain fluid balance before, during, and after exercise. | 3. Prof. Competence |
| g. Describe the concepts of disordered eating and eating disorders. | 3. Prof. Competence |

- K. **TEXTS:**
Nutrition for Sport and Exercise, Dunford, M and Doyle, JA, Thomson, Belmont, CA, 2008.
- L. **REFERENCES:** to be determined
- L. **EQUIPMENT:** computer enhanced classroom
- N. **GRADING METHOD:** A – F.

O. MEASUREMENT CRITERIA/METHODS:

- Exams
- Papers
- Case Study project

P. DETAILED COURSE OUTLINE:

I. Introduction to Sports Nutrition

- A. Definitions Related to Training, Nutrition, and the Athlete
- B. Basic Principles of Training and Nutrition
- C. Basic Nutrition Standards and Guidelines
- D. Finding and Using Scientific Evidence

II. Energy

- A. Basic Energy Concepts
- B. Measurements of Energy
- C. Energy Balance – Intake vs Expenditure

III. Carbohydrates

- A. Forms and Classifications
- B. Digestion and Absorption
- C. Glucose Metabolism
- D. CHOs as a Fuel for Exercise
- E. Recommendations for the Athlete
- F. Translating to Food Choices

IV. Proteins

- A. Structure and Function of Amino Acids
- B. Digestion and Absorption
- C. Protein Metabolism
- D. Exercise Effects
- E. Recommendations for the Athlete
- F. Translating to Food Choices
- G. Supplements

IV. Fats

- A. Classifications
- B. Digestion and Absorption
- C. Fat Metabolism
- D. Fat as a Source of Energy for Exercise
- E. Recommendations for the Athlete
- F. Translating to Food Choices

IV. Water and Electrolytes

- A. Distribution and Roles of Body Water and Electrolytes
- B. Effects of Exercise on Fluid Balance
- C. Replenishing Water and Electrolytes

IV. Vitamins and Minerals

- A. Classification of Vitamins and Minerals
- B. Recommended Daily Intake
- C. Roles of Vitamins and Minerals
- C. Sources

IV. Diet Planning

- A. Energy Intake

- B. Nutrient Density
- C. Creating Individualized Diet Plans
- D. Intake and Exercise Timing
- E. Nutrition Periodization

IV. Weight and Body Composition

- A. Components of Body Tissues
- B. Measurement Techniques
- C. Body Composition Analysis
- D. Relationship to Performance

IV. Diet, Exercise, and Lifelong Health

- A. The Lifelong Athlete
- B. Impact of Chronic Disease

IV. Disordered Eating in Athletes

- A. Disordered Eating
- B. Eating Disorders
- C. Exercise Dependence
- D. Female Athlete Triad

Q. LABORATORY OUTLINE: N/A