

# NUTF 0010 - PRINCIPLES OF NUTRITION

## Catalog Description

Advisory: Eligibility for ENGL 1A

Hours: 54 lecture

Description: Scientific concepts of nutrition related to the function of nutrients in basic life processes and current health issues with emphasis on individual needs. The specific nutrient needs throughout the lifespan will also be examined. (C-ID NUTR 110) (CSU, UC)

## Course Student Learning Outcomes

- CSLO #1: Analyze the structures and functions of the six essential nutrients as they relate to the human body through the life cycle.
- CSLO #2: Evaluate the components of a healthy diet using product food labels, the Dietary Guidelines for Americans and the Dietary Reference Intakes.
- CSLO #3: Critique individual nutrient and energy needs based on analysis of dietary intake.
- CSLO #4: Identify dietary and lifestyle modifications for improving health throughout the life cycle.

## Effective Term

Fall 2020

## Course Type

Credit - Degree-applicable

## Contact Hours

54

## Outside of Class Hours

108

## Total Student Learning Hours

162

## Course Objectives

1. Identify functions and sources of nutrients.
2. Explain nutrient digestion, absorption, and metabolism.
3. Apply dietary guidelines and current nutrition recommendations.
4. Utilize scientific principles to analyze and evaluate nutrition information.
5. Describe how nutrition affects health, fitness, and disease.
6. Evaluate an individual food record using a diet analysis program.
7. Identify the environmental and social factors that impact food access and intake.

## General Education Information

- Approved College Associate Degree GE Applicability
  - AA/AS - Behavioral Sciences
  - AA/AS - Health Ed/Physical Ed
- CSU GE Applicability (Recommended-requires CSU approval)

- CSUGE - D7 Interdisciplinary Soc/Behav
- CSUGE - E1 Lifelong Learning and Self-Development
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

## Articulation Information

### Methods of Evaluation

- Classroom Discussions
  - Example: Following a lecture on the etiology, prognosis, and treatment of Diabetes Mellitus Type I and II, the instructor will lead a discussion on how diet, lifestyle, and genetics may influence the risk of this disease. Students are evaluated on participation and engagement in the discussion and accuracy of their responses.
- Essay Examinations
  - Example: Students will be provided with a child nutrition case study and will write an essay analyzing and evaluating the subject's nutrient intake to identify areas needing improvement and make recommendations to improve health. Essays will be evaluated base on an instructor created rubric.
- Objective Examinations
  - Example: Students will take a multiple choice examination on carbohydrates, lipids, proteins, and alcohol. Standard grading. Example questions: Which of the following foods does not contain dietary fiber? 1. A. Fruit and vegetables B. Breads, cereals, pasta C. Milk, fish, and vegetable oils D. Nuts and seeds 2. A major function of fat in the body is to: A. Build muscle B. Protect vital organs C. Regulate blood glucose levels D. Make glucose
- Problem Solving Examinations
  - Example: Students will complete a series of calculations to determine the energy content of carbohydrate, lipid, protein, and alcohol in a food product and in an individual's diet. Standard grading based on correct calculation.
- Projects
  - Example: Students will identify strengths and weaknesses within their eating pattern by preparing a diet analysis of dietary intakes of foods and beverages for three to five days and comparing the results to current dietary guidelines for energy and nutrient recommendations. Projects will be evaluated based on an instructor created rubric.
- Reports
  - Example: Students will research a current fad diet and write a report evaluating its nutritional efficacy and impact on health and disease. Reports will be evaluated based upon an instructor created rubric.

## Repeatable

No

## Methods of Instruction

- Laboratory
- Lecture/Discussion
- Distance Learning

Lab:

1. Instructor will divide the class into small groups and assign each with a vitamin or mineral. Students will research their micronutrient and

create a poster displaying its functions, food sources, and associated deficiency and toxicity risks. Students will then report their findings to the class and the instructor will guide a discussion concerning each.

Lecture:

1. Instructor leads a presentation on the chemical structure of alcohol, its digestion, absorption and metabolism, recommended intake guidelines, and its short and long term effects on the body. After the presentation, the instructor will facilitate a class discussion regarding how current drinking culture may influence alcohol consumption and future risk of chronic disease.

Distance Learning

1. The instructor will conduct an on-line lecture on how nutrition affects health, fitness, and disease. Students will then create a list of specific questions regarding one of the specific areas covered and post the questions for other students to review and reply to. Students are required to review and comment on a minimum of 5 other students comments/posts.

## Typical Out of Class Assignments Reading Assignments

1. Students will read a current nutrition article, analyze and evaluate the information for accuracy regarding health-related nutrition claims, and report findings to the class. 2. Students will read five food packaging labels and complete a worksheet to analyze the nutrient content, identify product claims, and calculate the percentage of energy from fat, carbohydrate and protein in each product.

## Writing, Problem Solving or Performance

1. Students will research a vitamin or mineral deficiency disease and write a summary article on their findings. 2. Students will interview someone who lived in a decade prior to their birth, formulate questions regarding food availability, food cost, meal composition, and usual eating patterns. The student will compose a report comparing this information to their current lifestyle.

## Other (Term projects, research papers, portfolios, etc.)

1. Students will identify strengths and weaknesses within their eating pattern by preparing a diet analysis of dietary intakes of foods and beverages for three to five days and comparing the results to current dietary guidelines for energy and nutrient recommendations. 2. Students will be provided with a worksheet used to survey a local supermarket to identify and analyze the nutrient content of fat, sugar, fibers, sodium, additives, and product claims of various foods.

## Required Materials

- Contemporary Nutrition
  - Author: Wardlaw
  - Publisher: McGraw-Hill
  - Publication Date: 2018
  - Text Edition: 11th
  - Classic Textbook?:
  - OER Link:
  - OER:

- Understanding Nutrition
  - Author: Whitney and Rolfe
  - Publisher: Cengage
  - Publication Date: 2018
  - Text Edition: 15th
  - Classic Textbook?:
  - OER Link:
  - OER:
- Nutrition: Concepts and Controversies
  - Author:Sizer and Whitney
  - Publisher: Cengage
  - Publication Date: 2019
  - Text Edition: 15th
  - Classic Textbook?:
  - OER Link:
  - OER:

## Other materials and-or supplies required of students that contribute to the cost of the course.

Access to a dietary analysis program.