



## **BIOL 103 - Introduction to Nutrition Course Outline**

**Approval Date:** 12/01/2017

**Effective Date:** 01/30/2018

### **SECTION A**

**Unique ID Number** CCC000245893

**Discipline(s)** Biological Sciences

**Division** Science and Engineering

**Subject Area** Biology

**Subject Code** BIOL

**Course Number** 103

**Course Title** Introduction to Nutrition

**TOP Code/SAM Code** 0401.00 - Biology, General / E - Non-Occupational

**Rationale for adding this course to the curriculum** Add Distance Education, update textbook, and update course description.

**Units** 3

**Cross List** N/A

**Typical Course Weeks** 18

**Total Instructional Hours**

#### **Contact Hours**

**Lecture** 54.00

**Lab** 0.00

**Activity** 0.00

**Work Experience** 0.00

**Outside of Class Hours** 108.00

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**Total Contact Hours** 54

**Total Student Hours** 162

**Open Entry/Open Exit** No

**Maximum Enrollment**

**Grading Option** Letter Grade or P/NP

**Distance Education Mode of Instruction** Entirely Online

### **SECTION B**

**General Education Information:**

### **SECTION C**

**Course Description**

**Repeatability** May be repeated 0 times

**Catalog Description** This is a general introduction to concepts of nutrition and its relation to human health. Course topics include a study of nutrients; their use and effect in the

body; psychological, socioeconomic and geographic influences of nutritional practices; and current nutritional concerns. Calorie and nutrient analysis is considered in relation to balanced diets and weight control.

**Schedule  
Description**

**SECTION D**

**Condition on Enrollment**

**1a. Prerequisite(s):** *None*

**1b. Corequisite(s):** *None*

**1c. Recommended:** *None*

**1d. Limitation on Enrollment:** *None*

**SECTION E**

**Course Outline Information**

**1. Student Learning Outcomes:**

- A. Analyze nutrient content of a diet.
- B. Demonstrate an understanding of the role of nutrients in the functioning of the body.

**2. Course Objectives:** Upon completion of this course, the student will be able to:

- A. Develop knowledge of the components and benefits of a healthy diet.
- B. Produce a detailed analysis of the student's own diet.
- C. Apply dietary analysis criteria to obtain a balanced diet.
- D. Develop an understanding of the role of nutrients and their actions in the body.
- E. Become familiar with the techniques used to study nutrition.
- F. Develop an understanding of the significance of the social and cultural roles of food.
- G. Develop an understanding of the importance of individual variation in relation to food nutrients and additives.
- H. Develop a basic understanding of the chemical and physical processes that pertain to life.
- I. Become familiar with sources of information for continued education in nutrition.
- J.

**3. Course Content**

- A. Overview of Nutrition
  - a. Current issues in nutrition
  - b. Undernutrition and malnutrition
  - c. Sociocultural aspects of nutrition
- B. Carbohydrate
  - a. Types of carbohydrate
  - b. Carbohydrate digestion
  - c. Carbohydrate metabolism abnormalities
- C. Fat and Other Lipids
  - a. Essential lipids
  - b. Saturated and unsaturated fats
  - c. Dietary fat and body fat
- D. Protein
  - a. Composition of protein
  - b. Protein sources
  - c. Protein quality
- E. Energy Balance
  - a. Caloric value

- b. Energy balance
  - c. Fat storage
- F. Mineral Elements
  - a. Physiological role of minerals
  - b. Mineral requirements and toxicity
- G. Water
  - a. Body water compartments
  - b. Water balance
- H. Vitamins
  - a. Metabolic functions of vitamins
  - b. Fat-soluble and water-soluble vitamins
  - c. Vitamin requirements and toxicity
  - d. Vitamin deficiencies
- I. Diet Selection
  - a. Dietary standard
  - b. Adequate diets
- J. Evaluation of Nutritional Status
  - a. Nutritional assessment methods
- K. Special Nutritional Requirements
  - a. Pregnancy and lactation
  - b. Infant nutrition
  - c. Childhood nutrition
  - d. Adult nutrition: women and men
  - e. Diabetes
  - f. Nutritional considerations in aging
- L. Weight Control
  - a. Obesity
  - b. Dieting
  - c. Eating disorders
- M. Alternative Diets
- N. Social, Cultural, and Political Aspects of Nutrition
- O.

#### 4. Methods of Instruction:

**Distance Education:** Computer based lectures supplemented with instructor initiated on-line discussion with students and additional on-line resources.

**5. Methods of Evaluation:** Describe the general types of evaluations for this course and provide at least two, specific examples.

#### Typical classroom assessment techniques

Exams/Tests -- For Distance Education, the exams will be proctored.

Quizzes -- Distance Education quizzes will be administered on-line.

Projects -- Diet and nutrient analysis

Class Participation -- Distance Education the participation will use discussion boards.

Home Work -- Distance Education assignments will be submitted on-line.

Final Exam -- Distance Education exams will be proctored.

Additional assessment information:

Evaluation will be achieved through a combination of tests, written reports, notebooks, assigned activities and classroom participation.

For example: Exam 1 will cover Dietary Guidelines, food additives, carbohydrates and lipids.

Exam 2 will cover proteins, cellular metabolism and vitamins.

Letter Grade or P/NP

**6. Assignments:** State the general types of assignments for this course under the following categories and provide at least two specific examples for each section.

A. Reading Assignments

Reading assignments include approximately 500 pages of textbook material and additional handouts prepared from current nutrition journals and popular media.

For example: Read chapter 2 of the textbook in preparation to the lecture on dietary guidelines.

Read the article on expanding obesity rates in America in preparation for the class discussion on obesity.

B. Writing Assignments

Writing assignments include a book report on a nutrition book and a diet analysis summary.

Examples:

Write a book report on a nutrition book covering a topic of your choice.

Write a diet analysis summary using your food consumption data collected over a one week period.

C. Other Assignments

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**7. Required Materials**

**A. EXAMPLES of typical college-level textbooks (for degree-applicable courses) or other print materials.**

Book #1:

Author: Insel, Turner & Ross  
Title: Discovering Nutrition  
Publisher: Jones & Bartlett Publishers  
Date of Publication: 2013  
Edition: 5th

Book #2:

Author: Blake  
Title: Nutrition and You  
Publisher: Pearson/Benjamin Cummings  
Date of Publication: 2016  
Edition: 4th

**B. Other required materials/supplies.**