

# Minnesota State College Southeast

## BIOL 1226: Nutrition

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 02 - Critical Thinking, Goal 03 - Natural Science

This course covers basic principles of nutrition and their relationship to human health and normal biological function. Students are exposed to current trends in nutrition, behaviors typical of a positive nutritional lifestyle, and a lab like experience to evaluate their own nutritional status. Topics covered include an introduction to the nutrients, digestive function and metabolism, the role of physical activity, dietary standards, proper diet planning, and nutrition related diseases. (Meets MnTC Goals 2 & 3) (Prerequisite: none) (3 credits: 3 lecture/0 lab)

**B. COURSE EFFECTIVE DATES:** 07/20/2016 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Digestive processes
2. Carbohydrate, fat, lipid, protein, vitamin, mineral, and water metabolism
3. Nutritional needs at various stages of the human life cycle, during activities, weight loss, medical conditions, and lifestyle changes
4. Nutritional deficiencies/excess and links to disease
5. Diet evaluation and analysis

### D. LEARNING OUTCOMES (General)

1. Understand the role of appetite, hunger, and other influences in determining what people choose to eat
2. Explain the major trends in the North American diet and links that relate diet to disease
3. Explain the role of the USDA in nutrition education
4. Explain the digestive process including the role of all major organs and enzymes of digestion
5. Describe the structure and function of carbohydrates in the body and explain the physiology of blood glucose regulation
6. Describe the structure and function of lipids in the body and explain the role of cholesterol
7. Describe the structure and function of proteins in the body including the physiological role of enzymes
8. Explain the role of vitamins and minerals in the body and describe the symptoms of excess and deficient levels
9. Develop specific dietary recommendations to improve health based on an evaluation of typical dietary intake and exercise levels
10. List several unique dietary needs during different life stages from infancy through adulthood
11. Use the scientific method to complete a detailed dietary evaluation and analysis including formulating hypotheses, collecting data, graphical analysis, and appreciation of its sources of error and uncertainty

## **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

### Goal 02 - Critical Thinking

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

### Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

This course was previously BIOL 2526.