

College of San Mateo
Official Course Outline

1. COURSE ID: BIOL 310 **TITLE:** Nutrition

Units: 3.0 units **Hours/Semester:** 48.0-54.0 Lecture hours

Method of Grading: Letter Grade Only

Recommended Preparation:

Eligibility for ENGL 838 or 848 or ESL 400 and completion of or concurrent enrollment in any READ 400 level course.

2. COURSE DESIGNATION:

Degree Credit

Transfer credit: CSU; UC

AA/AS Degree Requirements:

CSM - GENERAL EDUCATION REQUIREMENTS: E5a. Natural Science

CSM - GENERAL EDUCATION REQUIREMENTS: E5d. Career Exploration and Self-Development

3. COURSE DESCRIPTIONS:

Catalog Description:

Comprehensive introduction to the scientific principles of nutrition and the interrelationships of metabolism. Examines nutrient functions, food sources, and functions in the body, as well as health consequences of nutrient excesses, deficiencies and diet related chronic conditions. Analysis of special nutritional requirements and needs during the life cycle. Evaluation of personal dietary habits using current dietary guidelines and nutritional assessment methods.

4. STUDENT LEARNING OUTCOME(S) (SLO'S):

Upon successful completion of this course, a student will meet the following outcomes:

1. Apply principles of nutrition to everyday life to make decisions based upon scientifically proven facts about foods and nutrition.
2. Analyze their diets to determine their nutritional profile using dietary analysis software and databases.
3. Develop a personal plan for food consumption that incorporates dietary guidelines and current nutrition recommendations.
4. Discuss important problems in nutrition such as obesity, under nutrition, food mis-information, and fads.
5. Explain nutritional needs for pregnant mothers, infants, children, athletes, older adults, and chronic disease.
6. Explain nutrient function, digestion, absorption, and metabolism.

5. SPECIFIC INSTRUCTIONAL OBJECTIVES:

Upon successful completion of this course, a student will be able to:

1. Apply principles of nutrition to everyday life to make decisions based upon scientifically proven facts about foods and nutrition
2. Analyze their diets to determine their nutritional profile using dietary analysis software and databases.
3. Develop a personal plan for food consumption that incorporates dietary guidelines and current nutrition recommendations.
4. Discuss important problems in nutrition such as obesity, under nutrition, food misinformation, and fads.
5. Explain nutritional needs for pregnant mothers, infants, children, athletes, older adults, and chronic disease.
6. Explain nutrient function, digestion, absorption, and metabolism.

6. COURSE CONTENT:

Lecture Content:

1. The Role of Nutrition in Our Health (1 week)
2. Designing a Healthful Diet (1 week)
3. The Human Body: Are We Really What We Eat? (1 week)
4. Carbohydrates: Bountiful Sources of Energy and Nutrients (1 week)
5. Fat: An Essential Energy-Supplying Nutrient (1 week)
6. Proteins: Crucial Components of All Body Tissues (1 week)
7. Metabolism: From Food to Life (2 weeks)
8. Nutrients Involved in Energy Metabolism (1 week)
9. Nutrients Involved in Fluid and Electrolyte Balance (1 week)
10. Nutrients Involved in Antioxidant Function (1 lecture)

11. Nutrients Involved in Bone Health (1 lecture)
12. Nutrients Involved in Blood Health and Immunity (1 lecture)
13. CAchieving and Maintaining a Healthful Body Weight (1 week)
14. Nutrition and Physical Activity: Keys to Good Health (2 lectures)
15. Disordered Eating (1 lecture)
16. Food Safety and Technology: Impact on Consumers (1 lecture)
17. Nutrition Through the Lifecycle: Pregnancy and the First Year of Life (1 lecture)
18. Nutrition Through the Lifecycle: Childhood and Adolescence (1 week)
19. Nutrition Through the Lifecycle: Adulthood and the Later Years (1 week)
20. Global Nutrition (1 week)

7. REPRESENTATIVE METHODS OF INSTRUCTION:

Typical methods of instruction may include:

- A. Discussion
- B. Other (Specify): Lectures accompanied by computerized demonstrations and presentations, and other supplementary materials. Study guides Videos Case studies Writing assignments like journal keeping or summarizing current news articles Research project -on current topics in human nutrition or issues in nutrition and food sources.

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

Writing assignments like journal keeping or summarizing current news article.

Research project on current topics in human nutrition or issues in nutrition and food sources.

Reading Assignments:

Typical reading assignments are reading the textbook, journal articles, newspaper and internet articles.

Also students may be assigned reading from governmental nutrition sites and other valid internet nutrition sites.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

- A. Exams/Tests
- B. Several exams consisting of multiple choice, and/or true/false, and/or matching questions. Short answer and essay questions. Quizzes Research project may take form of paper, web presentation, oral report, or poster Assignments graded on accuracy, use of critical thinking skills, writing.

10. REPRESENTATIVE TEXT(S):

Possible textbooks include:

- A. J . Thompson, M. Manore, and L. Vaughan.. *The Science of Nutrition.*, ed. Benjamin Cummings, 2008

Origination Date: May 2015

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Course Originator: Theresa Martin