Montgomery County Community College
ESW 206
Basic Nutrition
3-3-0

COURSE DESCRIPTION:
This course will introduce students to the study of nutrition. It will incorporate fundamental scientific principles enabling students to develop their own nutritional lifestyle compatible with these principles. The course will provide an understanding of nutrients, their function in the body, deficiency diseases, body composition, nutrition and physical activity, nutrition through the life span, food faddism, consumer issues, and an evaluation of diets. The course will encourage the intelligent application of information so to enable the students to succeed in implementing good nutrition in their own lives.

REQUISITES:
Previous Course Requirements
None

Concurrent Course Requirements
None

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Examine nutrients and their roles in the body.	Lecture Group Discussions Diet Analysis Project Written Assignments Assigned Readings Examinations Case Studies	Exam Diet Analysis Project

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
2. Identify the principles of planning and evaluating diets.	Lecture Group Discussions Diet Analysis Project Written Assignments Assigned Readings Examinations SNAP Project Case Studies	Diet Analysis Project Exam SNAP Project
3. Identify the basic physiology of digestion, absorption and transport.	Lecture Group Discussions Written Assignments Assigned Readings Examinations Case Studies	Exam
4. Discuss the relationship between diet and disease.	Lecture Group Discussions Diet Analysis Project Written Assignments Assigned Readings Student Presentations Examinations SNAP Project Case Studies	Exam Case Studies Diet Analysis Project SNAP Project

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
5. Identify nutritional needs and issues through the life cycle.	Lecture Group Discussions Written Assignments Assigned Readings Student Presentations Examinations SNAP Project Case Studies	Exam Case Studies SNAP Project
6. Critically evaluate current day topics in nutrition.	Lecture Group Discussions Written Assignments Assigned Readings Student Presentations Examinations SNAP Project Case Studies Review Mobile Applications for heath/fitness	Research Project SNAP Project Student Presentations Evaluation of Nutrition Applications Assignment
7. Accurately assess one's own dietary intake in relation to established standards	Lecture and Demonstration Diet Analysis Project Assigned Readings	Diet Analysis Project
8. Evaluate a variety of theories, patterns, and practices related to diet and nutrition.	Lecture Group Discussions Written Assignments Assigned Readings Student Presentations Examinations SNAP Project Case Studies Mobile Application Evaluation	Exam SNAP Project Evaluation of Nutrition Applications Assignment

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria*.

SEQUENCE OF TOPICS:

Introduction

1. Define the terms nutrition, malnutrition, under-nutrition and over-nutrition.
2. List the classes of nutrients and types of non-nutrients and their general functions in the body.
3. Describe the American Diet from large scale dietary surveys.
4. Describe factors which influence food choices.
5. Discuss the science of nutrition.
6. Define quackery, list sources of nutrition quackery, and explain how to assess nutrition information presented in the media.

Dietary Standards and Guidelines

1. Describe the Dietary Reference Intakes, the goals of the DRI Committee and the tools within each goal.
2. Explain the evolution of the Dietary Guidelines for Americans.
3. Explain the current Guidelines and uses of the ChooseMyPlate.gov website.
4. Explain the ways to plan a diet using the Dietary Guidelines.
5. Describe food labeling and how to read a label.
6. Describe the difference between a nutrient, health and structure-function claim on a food label.

Evaluating a Diet Plan

1. Using a computer analysis tool, explain how to assess one's own eating patterns.
2. Cite factors that may influence each student's personal nutritional intake.
3. Outline behavior changes to be considered in improving one's overall diet.
4. List ways to help a person change their lifestyle.

Digestion, Absorption and Transport

1. Summarize the anatomical parts of the digestive system and what occurs at each part.
2. Describe the fluids of digestion and where they are secreted along the system.
3. List the major site of absorption for different nutrients.
4. Discuss common medical disorders of the GI tract and diet modifications to treat these disorders.
5. Discuss the basic parts of the cardiovascular system and their involvement in the transport of nutrient through the body.

Carbohydrates

1. Classify simple and complex carbohydrates according to structure and food sources.
2. List the functions of carbohydrates.
3. Explain the normal regulation of blood glucose.
4. Describe how carbohydrate intake prevents ketosis.
5. Define dietary fiber, and describe the role of dietary fiber in health and the prevention of disease.
6. Recognize the potential impact of excess sugar consumption on health.

7. State current dietary recommendations for carbohydrate, fiber and simple sugars.
8. Contrast characteristics and uses of artificial sweeteners.
9. Discuss the disorders of carbohydrate metabolism: Diabetes and Hyperglycemia

Lipids

1. Describe the chemical composition and physical characteristics of fatty acids.
2. Define essential fatty acids and describe the effects of a deficiency.
3. Categorize fatty acids as saturated, monounsaturated, polyunsaturated, trans-fatty acids, list dietary sources and discuss how saturation affects a fatty acid.
4. Cite the functions of fat in the body and the recommended dietary intakes of fats.
5. Describe physical and chemical characteristics of sterols and phospholipids.
6. List dietary sources of cholesterol and phospholipids.
7. Explain the relationship between dietary lipid intake and heart disease.
8. Explain the transport of lipids through the body and the health implications of fats in the body.
9. Demonstrate the ability to choose lower fat alternatives to high fat foods in one's diet.

Protein

1. Describe the chemical composition and physical characteristics of amino acids.
2. Categorize amino acids as essential, non-essential and conditionally essential.
3. List the physiological functions of proteins and classify dietary sources in relation to their protein content and quality.
4. Explain the requirements for protein intake.
5. Discuss the potential hazards of consuming excessive protein.
6. Discuss Vegetarianism.
7. Evaluate credible sources of protein recommendations

Vitamins

1. Define and describe the terms vitamin and bioavailability.
2. Differentiate between water-soluble and fat-soluble vitamins.
3. List the major functions in the body and the food sources for each vitamin.
4. State the effects of vitamin deficiencies.
5. State the effect of vitamin toxicities and how they can develop.
6. Discuss the role of supplemental vitamins in the diet of healthy individuals.
7. Decipher between Natural vs. Synthetic Vitamins.
8. Evaluate credible sources of vitamin/supplement recommendations

Minerals and Water

- Describe the major functions and food sources of each mineral.
- Discuss the potential deficiency and toxicity of each mineral
- Describe the health implications of mineral-related diseases: anemia, osteoporosis, hypertension, etc.
- Describe the functions of water.
- Explain water balance in the body.

- Explain the regulation of thirst.
- Discuss the current day options for hydration and the pros/cons of each.

Body Composition and Weight Management

1. Define healthy body weight and body composition.
2. Describe tools used to measure weight and body composition
3. Demonstrate understanding/interpretation of BMI tables.
4. Define the appetite, hunger, satiety cycle and factors that influence it.
5. Define basal metabolism, physical activity and thermic effect of food.
6. Define obesity, its causes, the social implications, and treatments.
7. Describe the concerns of under-weight and methods for weight gain.

Eating Disorders

1. Define various eating disorders including: Anorexia Nervosa, Bulimia Nervosa, Binge-eating, compulsive over-eating.
2. Describe factors which might contribute to the development of eating disorders.
3. Discuss the health problems related to the various eating disorders.
4. Explain the complexities of recovery.
5. Explain the treatment options.

Physical Activity

1. Define the types of physical activity and the recommendations for activity.
2. Describe the fuels the body uses during exercise and for the different types of exercise.
3. Explain the role of fat, carbohydrate and proteins in fueling activity.
4. List dietary principles to maximize athletic performance.
5. Discuss the efficacy of dietary supplements in improving performance.

Life Cycle Nutrition

1. Pregnancy
2. Infancy
3. Childhood and Adolescence
4. Adulthood

Food Safety

1. Describe the extent of the food poisoning problem and why food poisoning is so common.
2. List food preservation methods and ways to prevent food poisoning.
3. List ways to treat food poisoning.
4. List the function of food additives.
5. Describe the role of the FDA in protecting the food supply.

Global Issues

1. Appreciate the magnitude of the world food problem.
2. List factors that contribute to under-nutrition in the United States.
3. Discuss the function of Federal Food Programs.
4. Explain the role of politics in making food available to the public.
5. List the effective and ineffective long-term strategies for solving the world food crisis.
6. Implementation of Cultural Diversity
7. Integration of Computers – A Diet Analysis Project will allow students to use computer software to assess their individual diet.

LEARNING MATERIALS:
Seated and Hybrid sections: Open Educational Resources for topics in Nutrition.

Online sections: Smith, A. and Colleen, A. (2018). Wardlaw's Contemporary Nutrition: A Functional Approach (5th ed.). New York, NY: McGraw-Hill Education

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by:		Date:	
Revised by:	Judy Ensslin, Annette Teichman, Georgette Howell, Dr. Anne Livezey	Date:	2/2009
VPAA/Provost Compliance Verification:	Dr. John C. Flynn, Jr.	Date:	9/11/2009
Revised by:	Dr. Anne Livezey	Date:	6/2012
VPAA/Provost or designee Compliance Verification:	Victoria L. Bastecki-Perez, Ed.D.	Date:	6/18/2012
Revised by:	Dr. Anne Livezey	Date:	1/8/2018
VPAA/Provost or designee Compliance Verification:		Date:	1/10/2018

This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.