



Human Nutrition
MASC 350
Southwestern College Professional Studies

COURSE SYLLABUS

I. **Course Catalog Description**

This course will provide learners fundamental knowledge of the science of nutrition. Learners will be provided with the skills to apply and critically evaluate the role of nutrition to the promotion and maintenance of health. This course will focus on the function and metabolism of nutrients in relation to the digestion, absorption, transportation, utilization, and storage in the human body. Credit: 3 hours

II. **Required and Supplementary Instructional Materials**

Schlenker, E.D. and Gilbert, J. (2015). *Williams' essentials of nutrition and diet therapy* (11th ed.). St. Louis, MO: Elsevier

III. **Learning Outcomes**

Learning outcomes describe the knowledge, skills, values, and attitudes that learners gain as the result of a particular learning experience. Southwestern College Professional Studies has [learning outcomes specific to the Nursing Program](#), as well as [institution-wide outcomes](#) related to the mission and vision of the college. Outcomes can help learners and instructors focus on the big picture of the learning experience and can help inform potential employers about a graduate's knowledge and skills.

Upon successfully completing this course, the learner will be able to:

| Learning Outcome | Related Program Outcome(s) |
|---|-----------------------------------|
| 1. Analyze the components of a healthy diet. | 1,3 |
| 2. Critically evaluate the quality of own diet through a diet analysis. | 1, 3 |
| 3. Examine scientific principles of human nutrition related to digestion, absorption and metabolism of the energy-yielding nutrients. | 1,3 |
| 4. Identify the major functions and food sources of each macronutrient (carbohydrate, protein, lipids) and micronutrient (vitamins and minerals). | 1,3 |
| 5. Devise presentations of current evidence of the role of key nutrients in the prevention of chronic diseases. | 1,2,3,9 |
| 6. Identify the nutrients of concern during human growth and development, and throughout the aging process. | 1,2,3,9 |
| 7. Create a balanced diet that meets nutrient needs according to current dietary recommendations throughout the lifecycle. | 1,2,3,9 |
| 8. Analyze food products for nutrient content and health benefits or detriments. | 1,3 |
| 9. Assess major nutrition-related disease in a global context. | 1,2,3,9 |

At the end of the course, learners may vary in their ability to achieve these outcomes. You are more likely to achieve these outcomes only if you attend class and/or online activities as required by the syllabus, complete the requirements for all assignments to the best of your ability, participate actively in class activities and group work as directed, and study diligently for exams.

IV. Course Policies

Students are expected to read and abide by the course policies found in the instructor-specific syllabus located in the Blackboard course.

V. Course Requirements:

| Requirements | Number of Assignments | Points Possible | Percent of Grade |
|---------------------------------------|-----------------------|-----------------|------------------|
| Discussions (Introduction and Weekly) | 13 | 380 | 38% |
| Fast Food Analysis | 1 | 50 | 5% |
| Case Studies | 2 | 130 | 13% |
| Nutrition Analysis Part 1 | 1 | 120 | 12% |
| Nutrition Analysis Part 2 | 1 | 120 | 12% |
| Nutrition Analysis Final Project | 1 | 200 | 20% |
| Total Points | | 1000 | 100% |

VI. Course at a Glance:

| Unit | Unit Learning Objectives | Reading & Preparation Activities | Graded Work Due | Related Learning Outcomes |
|------|--|---|--|---------------------------|
| 1 | <ul style="list-style-type: none"> Assess the effects of obesity, the aging population, the growth in ethnic and racial diversity, new food products, and genetics on nutritional needs of the population. Examine the physical characteristics of optimal nutrition. Differentiate between the food groups in the Exchange Lists for Meal Planning. Identify the anatomy of the digestive tract, and describe the major functions of each organ. Analyze the body metabolism interrelationships of protein, fat, and carbohydrates. Assess the available food assistance programs and qualifications of each. | <ul style="list-style-type: none"> Read the course syllabus Read Schlenker & Gilbert Chapters 1, 2, & 10 Review PowerPoints Review the MyPlateDaily Checklist from the USDA Watch The Obesity Epidemic video Watch The Digestive System Overview Video Review and Complete the Fast Food Analysis Assignment | <ul style="list-style-type: none"> Fast Food Analysis Assignment Introduction Discussion Unit 1.1 Discussion Unit 1.2 Discussion | 1,3,8 |

| Unit | Unit Learning Objectives | Reading & Preparation Activities | Graded Work Due | Related Learning Outcomes |
|------|--|---|---|---------------------------|
| 2 | <ul style="list-style-type: none"> • Discuss the physical characteristics, psychosocial stage of development, and food and feeding practices appropriate for each of the childhood stages (infancy, toddler, preschooler, school-age, and adolescence) • Explain how changes in growth and psychosocial development influence eating habits • Discuss the role of nutrition in the aging process • Identify factors that contribute to malnutrition in the aging adult • Outline a procedure for assessing a patient's nutritional needs and care • Explain anthropometric measurements commonly used to assess nutritional status | <ul style="list-style-type: none"> • Read Schlenker & Gilbert, Chapters 12, 13, 16 • Review PowerPoints | <ul style="list-style-type: none"> • Unit 2 Case Study • Unit 2.1 Discussion • Unit 2.2 Discussion | 6, 7, 9 |
| 3 | <ul style="list-style-type: none"> • Identify the major functions of carbohydrates in body metabolism. • Describe the dangers of excessively high-carbohydrates and low-carbohydrates diets. • Give an overview of digestion, absorption, and metabolism of carbohydrates. • Differentiate between saturated, monounsaturated, and polyunsaturated fatty acids. • Describe lipid digestion, both physical and chemical, starting in the mouth and going through the stomach and intestines. • Describe nitrogen balance and the conditions that may result in positive and negative nitrogen balance. • Identify factors that affect dietary protein needs. | <ul style="list-style-type: none"> • Read Schlenker & Gilbert, Chapters 3, 4, 5 • Review PowerPoints • Watch How Do Carbohydrates Impact Your Health video • Watch You Are What You Eat video • Review the Nutrition Analysis Assignment • Complete Part 1 of the Nutrition Analysis Assignment | <ul style="list-style-type: none"> • Nutrition Analysis Part 1 • Unit 3.1 Discussion • Unit 3.2 Discussion | 1, 2, 3, 4, 6, 7 |

| Unit | Unit Learning Objectives | Reading & Preparation Activities | Graded Work Due | Related Learning Outcomes |
|------|--|--|---|---------------------------|
| 4 | <ul style="list-style-type: none"> • Identify the fat-soluble vitamins and water-soluble vitamins. • Differentiate between major minerals and trace elements. • Discuss the route of absorption and necessary chemicals for absorption for each vitamin and mineral. • State the potential for each vitamin and mineral to cause toxicity and the symptoms associated with toxicity. • Describe how food intake and physical activity affect energy requirements. | <ul style="list-style-type: none"> • Read Schlenker & Gilbert, Chapters 6, 7, 8 • Review PowerPoints • Watch The ABCDs of Vitamins video • Watch Nutrition-Major Minerals video • Watch Energy Balance and Body Composition video • Review the Nutrition Analysis Assignment | <ul style="list-style-type: none"> • Nutrition Analysis Assignment Part 2 • Unit 4.1 Discussion • Unit 4.2 Discussion | 1, 2, 3,4 |
| 5 | <ul style="list-style-type: none"> • Describe the cause, symptoms, and treatment for the organic intestinal diseases of diverticular disease, ulcerative colitis, celiac disease, Crohn's disease, and short-bowel syndrome. • Explain the rationale for nutritional modifications for diseases of the liver. • Analyze recommendations that may help prevent the development of CHD and essential hypertension • Discuss nutritional management for patients who have experienced stroke • Discuss risk factors that contribute to the development of coronary heart disease (CHD) • Compare and contrast the major characteristics of the different types of diabetes mellitus with respect to diagnosis, treatment, medications, and nutritional management | <ul style="list-style-type: none"> • Read Schlenker & Gilbert, Chapters 20, 21, 22 • Review PowerPoints • Watch the video on Stroke Nutrition Therapy • Review the Nutrition Analysis Assignment | <ul style="list-style-type: none"> • Nutrition Analysis Final Project (Part 3) • Unit 5.1 Discussion • Unit 5.2 Discussion | 2, 5, 8 |

| Unit | Unit Learning Objectives | Reading & Preparation Activities | Graded Work Due | Related Learning Outcomes |
|------|---|---|--|---------------------------|
| 6 | <ul style="list-style-type: none"> • Discuss causative factors, clinical symptoms, and medical nutrition therapy for acute renal failure (ARF) and chronic renal failure. • Identify laboratory tests used to monitor the protein status of an individual with renal disease. • Describe the four phases of clinical course of HIV infection • State the major nutrition problems in an HIV-infected patient, and provide a plan of action for each problem • Explain the role of nutrition in the development and progression of cancer cells and tumors • Outline dietary management for patients receiving chemotherapy or radiation | <ul style="list-style-type: none"> • Read Schlenker & Gilbert, Chapters 23, 24, 25 • Review PowerPoints • Watch the Treating Kidney Failure Through Diet video • Read American Cancer Society's guidelines on nutrition and physical activity for cancer prevention | <ul style="list-style-type: none"> • Unit 6 Case Study • Unit 6.1 Discussion • Unit 6.2 Discussion • Course Evaluation | 2, 5, 8 |

VII. Other Policies and Requirements

Follow this link to the Southwestern College Professional Studies [Standard Syllabus](#) in Blackboard. You may be required to log in.