

**Bossier Parish Community College
Master Syllabus**

Course Prefix and Number: BLGY 203

Credit Hours: 3

Course Title: Basic Nutrition

Course Prerequisites: BLGY 101 or BLGY 110 or BLGY 230

Textbook: Nutrition: Concepts and Controversies, 15th Edition
Author: Frances Sizer and Ellie Whitney

Course Description:

Principles of nutrition for nursing, allied health, and science majors with an emphasis on underlying physiological processes with application to health and physical fitness.

Learning Outcomes:

At the end of this course, the student will

- A. integrate concepts of chemistry and physiology to describe the roles of nutrients in the diet;
- B. apply the science of nutrition to people through the life cycle; and
- C. evaluate nutrition information and misinformation.

To achieve the learning outcomes, the student will

- 1. list several reasons that people make the food choices that they do. (A,C)
- 2. define an essential nutrient and list the six classes of nutrients. (A)
- 3. state the nutrients that yield energy and calculate energy available from foods. (A)
- 4. define the types of research studies and methods to acquire valid nutrition information. (C)
- 5. describe DRI and Acceptable Macronutrient Distribution Ranges (AMDR). (A)
- 6. describe nutrition assessment methods used to detect malnutrition. (A)
- 7. describe risk factors and their relationships to diet-related chronic disease. (B)
- 8. evaluate nutrition information on the Internet, in the news, and from nutrition experts. (C)
- 9. describe diet-planning principles and the *Dietary Guidelines for Americans*. (A,B)
- 10. list the five food groups in the Daily Food Guide and identify several nutrient-rich foods typical of each group. (A)
- 11. evaluate nutrition information, including Daily Values, on a food label. (A)
- 12. discuss the advantages and risks of a vegetarian diet. (A)

13. describe food digestion and absorption. (A)
14. describe common digestive problems and corrective diet recommendations. (B)
15. describe the structure of and dietary recommendations for carbohydrates, including monosaccharides, disaccharides, and polysaccharides. (A)
16. describe carbohydrate digestion and absorption. (A)
17. describe the role of glucose in the body and two types of diabetes. (A)
18. describe the role of carbohydrates in weight management. (B)
19. describe three classes of lipids found in the body and in foods. (A)
20. describe fatty acids and triglycerides and discuss how they influence heart disease. (A)
21. identify the steps in fat digestion, absorption, and transport. (A)
22. describe factors that influence LDL, HDL, and total blood cholesterol. (B)
23. describe high-fat but heart-healthy foods. (B)
24. describe the structure of amino acids, how their sequence affects the proteins' shapes, and list the essential amino acids. (A)
25. discuss the processes of protein digestion and absorption. (A)
26. describe protein structure and metabolism. (A)
27. describe the roles proteins play in the human body and compare marasmus and kwashiorkor. (A)
28. discuss quality of dietary protein and how vegans can meet their protein needs. (B)
29. calculate recommended protein intakes. (A,B)
30. describe cellular metabolism and how ATP is created and used in cells. (A)
31. define coenzymes and describe their role in metabolism. (A)
32. describe how macronutrients are metabolized during feasting and fasting under aerobic and anaerobic conditions. (A)
33. discuss how the body makes ketone bodies in absence of carbohydrate. (A)
34. describe alcohol metabolism and its impact on health. (A)
35. describe how hunger, appetite, satiation and satiety influences food intake. (A)
36. describe energy expenditure and factors that influence BMR. (A)
37. compare body weight and body composition. (A)
38. define, compare and contrast eating disorders. (B)
39. describe how body fat develops and factors that contribute to obesity. (B)
40. evaluate risky and aggressive ways to lose weight. (B)
41. identify common alternative sweeteners. (A)
42. describe strategies for successful weight gain. (B)
43. evaluate weight-loss diets. (C)
44. describe general differences between fat- and water-soluble vitamins. (A)
45. list water-soluble vitamins' chief function in the body, characteristic deficiency symptoms, and significant food sources. (A)
46. list the risks that are associated with high doses of certain vitamins. (A)
47. evaluate vitamin and mineral supplements. (C)
48. list fat-soluble vitamins' chief function in the body, characteristic deficiency symptoms, and significant food sources. (A)
49. evaluate the role of antioxidant nutrients in disease prevention. (C)

50. list the roles and locations of water in the body. (A)
51. describe how the body uses electrolytes to regulate fluid balance. (A)
52. describe characteristics of minerals that distinguish them from vitamins. (A)
53. list major minerals' chief function in the body, characteristic deficiency symptoms, and significant food sources. (A)
54. describe osteoporosis and calcium supplementation. (B)
55. list trace minerals' chief function in the body, characteristic deficiency symptoms, and significant food sources. (A)
56. describe iron-deficiency anemia and list the symptoms. (A)
57. list the public health measures used in preventing B vitamin deficiencies, anemia, neural tube defects, simple goiter and tooth decay. (A)
58. identify the role of phytochemicals in health. (B)
59. describe benefits of cardiorespiratory conditioning and strength training. (A)
60. describe energy fuels, including ATP and CP, used in aerobic and anaerobic exercise. (A)
61. describe hydration and a healthy diet for athletic performance. (B,C)
62. evaluate supplements used as ergogenic aids by athletes. (C)
63. describe fetal development and how malnutrition during critical periods impairs fetal development. (B)
64. discuss the recommended pattern of weight gain during pregnancy for a woman at a healthy weight. (B)
65. list nutrients needs and wise food choices for the pregnant woman. (B)
66. describe high-risk pregnancies, including during adolescence, gestational diabetes and preeclampsia, and impact on infant birth weight and future health. (B)
67. discuss practices that should be avoided during pregnancy. (B)
68. discuss nutrient needs during lactation. (B)
69. describe nutrient and immunological attributes of breast milk. (A,B)
70. discuss when to introduce solid foods to infants and which are inappropriate. (B)
71. list common nutrition problems in children and adolescents and identify prevention strategies. (B)
72. describe immunity and HIV infection. (B)
73. list the major diet-related risk factors for atherosclerosis, hypertension, cancer, and diabetes. (B)
74. define metabolic syndrome. (B)
75. describe common herbal remedies and precautions for consumers. (B,C)

Course Requirements:

In order to receive a grade of "C" the student must earn 70% of the total possible points for the courses and achieve all of the following course requirements.

- minimum average score of 60% on unit tests
- minimum score of 60% on comprehensive final exam

- complete final exam; **in on-line courses, students MUST take the final exam on BPCC campus** or in a proctored environment with prior coordination and approval of the instructor
- satisfactory presentation on approved nutrition topic, as measured on a rubric
- satisfactory personal nutrition assessment, as measured on a rubric
- **in on-line classes, students MUST - have access to a computer; have software for work processing, calculations, presentations, and playing videos (such as Word, Excel, Powerpoint, and Flashplayer)**

Course Grading Scale:

- A- 90% or more of total points and a minimum of 60% on the final exam and a minimum average of 60% on tests and satisfactory presentation and personal nutrition assessment
- B- 80% or more of total points and a minimum of 60% on the final exam and a minimum average of 60% on tests and satisfactory presentation and personal nutrition assessment
- C- 70% or more of total points and a minimum of 60% on the final exam and a minimum average of 60% on tests and satisfactory presentation and personal nutrition assessment
- D- 60% or more of total points and a minimum of 60% on the final exam and a minimum average of 60% on tests and satisfactory presentation and personal nutrition assessment
- F- less than 60% of total points or a minimum of 60% on the final exam or less than 60% average on tests or unsatisfactory presentation or personal nutrition assessment

Attendance Policy: The college attendance policy is available at <http://catalog.bpcc.edu/content.php?catoid=5&navoid=369#class-attendance>

Nondiscrimination Statement

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COORDINATOR FOR SECTION 504 AND ADA

Angie Cao, Student and Disability Services Specialist

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Equity/Compliance Coordinator

Teri Bashara, Director of Human Resources

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Revised: C.D. Sandridge, Spring 2021