

SPRINGFIELD COLLEGE IN ILLINOIS

Fall Semester 2005, New Horizons, Session F
Lecture: Monday, 6:00pm-10:00pm

Instructor: Mark Britton
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Bio 100-70-- Nutrition Course Syllabus (3 credit hours) IAI L1 904

I. COURSE DESCRIPTION:

A course emphasizing nutritional needs at all life stages and the part that social, economic, and other factors play in dietary habits throughout the life cycle and in some clinical settings. No prerequisite.

II. TEXTBOOK AND MATERIALS:

Insel, Turner, & Ross (2004). *Nutrition*. Sudbury, MA: Jones & Bartlett.

Mayfield, B.J. (2003). *Personal Nutrition Profile: A Diet and Activity Analysis*. MA Jones & Bartlett.

III. MISSION STATEMENT:

The mission of Springfield College in Illinois is to provide students the best liberal arts education in the Ursuline tradition of a nurturing faith-based environment. We prepare students for a life of learning and service in a diverse world.

IV. GOALS, OBJECTIVES, AND OUTCOMES:

A. GENERAL GOALS:

1. Students will understand scientifically based nutrition needs at various life stages.
2. Students will understand the role that social, economic, and other factors play in dietary habits throughout the human life cycle allowing increased awareness of health and well-being.

B. OBJECTIVES: The following Common Student Learning Objectives (CSLOs) are addressed:

- Content Knowledge (Lifelong Learning) CK-1. Know how to apply the central concepts of nutrition

- Communication Skills (Lifelong Learning) CS-1. Communicate effectively in oral and written forms
- Problem Solving Skills (Lifelong Learning) PS-2. Seek information and develop and in-depth knowledge base, grounded in research.
- Social Responsibility (Service and Leadership) SR-3. Develop good citizenship
- Global Perspective (Diversity) GP-1. Recognize the importance of diversity of opinion, abilities, and cultures.

C. **COURSE BASED STUDENT LEARNING OBJECTIVES.** *Upon completion of this course, students will demonstrate the mastery of the following learning outcomes, addressing the following CLOs (in parentheses):*

- CBSLO-1: Demonstrate the scientific method by forming and testing a hypotheses and understanding factors that limit the quality of research. This includes qualitative and quantitative methods (CK-1, SR-3, GP-1).
- CBSLO-2: Illustrate principles of nutrition, including overall health and dietary concerns of an individual and society as a whole. Also, apply case studies in this topic (CK-1, CS-1).
- CBSLO-3: Apply information from nutritional tables and the calculation of individual needs on a daily and long term basis (CK-1, CS-1, GP-1).
- CBSLO-4: Investigate the quality of nutrition relating to environmental, cultural and social factors (CK-1, GP-1).
- CBSLO-5: Investigate metabolic processes of body systems and apply body physiology to risk factors for disease (Ck-1, R-3).
- CBSLO-6: Describe the impact of food selection as related to culture, age, and tradition both in the past and present (CK-1, CS-1, SR-3, GP-1).
- CBSLO-7: Develop nutritionally based meals from a variety of food choices and daily situations (CK-1).
- CBSLO-8: Investigate and discuss how nutritional needs change throughout the life cycle (CK-1, GP-1).

V. **TEACHING METHOD/DELIVERY SYSTEM**

Course material will be developed through lecture (Power Point presentation), audio-visual material, guest speakers, and out of class assignments. Students will be asked to work together in small cooperative learning groups to complete various types of lecture assignments.

VI. **COURSE REQUIREMENTS**

- A. **ATTENDANCE:** Attendance is expected at all lectures and lab sessions. Attendance records will be kept by the instructor. Please notify your

instructor by email prior to or within 24 hours of missing a class/lab for all legitimate reasons. Attendance will be used to determine final grades in borderline situations. Students must attend at least 85% of the class (or 7 out of 8 classes) sessions to receive a passing grade for the course. Please keep in mind that attendance will also be worth 40 points (1 point per hour of class plus a bonus for perfect attendance) on your final grade. Each absence will result in a loss of points. Because of the compressed format of this class, every effort must be made to attend all scheduled lectures, even attending partial sessions if a conflict arises. Missing more than one full 4-hour session will generally result in a failing grade.

- B. **POST-CHAPTER QUIZZES:** At the end of each chapter students will be presented with a 10-question multiple choice/fill-in-the-blank quiz. The purpose of the quiz is to acknowledge that students have achieved the student learning outcomes and to encourage further investigation into the material in areas where students may need extra studying or further clarification. (CBSLO 1, 3, & 4)
- C. **LECTURE TESTS:** Lecture tests will be given according to the tentative schedule (dates may change due to various reasons-changes will be announced in class). Each test will be taken on the date assigned. If a student does not contact the instructor prior to the test, the test will be replaced with the final exam grade. Only one test can be used in this fashion. All other test will be given a zero. (CBSLO 1, 3, & 4)
- D. **FINAL EXAM:** A comprehensive final exam will be given during the final day of class. This test will mainly consist of questions from lecture tests. All students must take this test on the date that it is scheduled. Due to the short nature of this class, no final exams may be taken at any time except the scheduled time. (CBSL) 1, 3, & 4)
- E. **DIET & ACTIVITY ANALYSIS WORKBOOK:** Throughout the semester, students will be required to complete various (specifically assigned) written and oral portions of the required text Diet & Activity Analysis Workbook. It is imperative that you 'keep up' with these assignments, as they will be visually checked and a number grade recorded for each assignment at least weekly. The purpose of completing the workbook is to take nutrition one step further—not only understand nutrients, etc. but to understand how our cognition and environment often control our own individual nutritional habits. (CBSLO 2-4, and 6-8)

PLAGIARISM. Plagiarism is defined as follows: "The act of appropriating the literary composition of another, or parts or passages of his [or her] writing, or the ideas of language of the same and passing them off as the product of one's own mind. To be liable for plagiarism it is not necessary to exactly duplicate another's literary work, it being sufficient if unfair use of such work is made by lifting substantial portion thereof." *Black's Law Dictionary* 1035 (5th ed, 1979). The SCI Student Handbook lists plagiarism as a serious breach of conduct standards that will result in disciplinary action. Cheating of any form will not be tolerated. Cheating on a lecture exam will result in automatic failure for the exam and subject to disciplinary measures from the Academic Dean. Laboratory work (direct copying of report-not data from their group) will result in a zero on the report. A second cheating situation will result in disciplinary action.

VII. MEANS OF EVALUATION AND OUTCOMES

Grades will be assigned as a percentage of the total number of points earned in relation to the total number of points available for the entire semester. Points may be earned from the following:

Distribution of Points:

Chapter Study Questions	16 at 20 points each	= 320 Points
Chapter Post-Quizzes	16 at 10 points each	= 160 Points
In-Class Exercises	8 at 10 points each	= 80 Points
Class attendance/participation	1 point/32 hours plus bonus	= 40 Points
Food Diary	1 report	= 150 Points
Final Exam	1 exam	= 100 Points
<u>Diet & Activity Workbook</u>		<u>= 150 Points</u>
Total		= 1,000 Points

The grading scale is:

100-90% = A
89-80% = B
79-70% = C
69-60% = D
below 60% = E

A plus or minus indicates the upper or lower portion of the grade (89-88% = B+; 81-80% = B-).

VIII. TOPICAL COURSE OUTLINE

A. WEEK ONE: 10/17/05

Chapter 1: Why do we eat the way we do? Sensory influences: Taste, Texture, & Smell; Cognitive influences, Cultural Influences & the American Diet. Introducing the nutrients, applying science to nutrition.
Chapter 2: Linking nutrients, foods, & health; dietary guidelines, food groups and food guides, food guide pyramid & food serving sizes; exchange list, food labels.

B. WEEK TWO 10/24/05

Chapter 3: Digestion & absorption, taste & smell, the G.I. tract, circulation of nutrients, nutrition & G.I. disorders.
Chapter 4: Carbohydrates; carbohydrate digestion & absorption, carbohydrates in the body, the Atkins Diet.

C. WEEK THREE 10/31/05

Chapter 5: Lipids; Triglycerides, phospholipids, sterols, digestion & absorption of lipids; lipids in the diet.

Chapter 6: Proteins, amino acids as building blocks of proteins, functions of body proteins; protein digestion & absorption, proteins in the diet.

Chapter 9: Fat-soluble vitamins, understanding vitamins, the retinoids, carotenoids, vitamins D,E & K.

D. WEEK FOUR 11/7/05

Chapter 7: Metabolism; energy as fuel for work, key energy players, breakdown & release of energy, biosynthesis & storage; special energy states.

Chapter 8: Energy balance; energy in & energy out; body composition (understanding fatness and weight); energy balance gone awry; weight management.

E. WEEK FIVE 11/14/05

Chapter 10: Water-soluble vitamins, eight Bs and a C, thiamin, riboflavin, niacin, pantothenic acid, biotin, vitamin B6, folate, vitamin B12, vitamin C, vitamin-like compounds.

Chapter 11: Water and major minerals; water intake recommendations, major minerals, sodium potassium, chloride, calcium, phosphorus, magnesium, sulfur, major minerals and health.

Chapter 12: Trace minerals, iron, zinc, selenium, iodine, copper, manganese, fluoride, chromium, molybdenum & other trace elements.

F. WEEK SIX 11/21/05

Chapter 14: Life Cycle: Maternal and Infant Nutrition; pregnancy, lactation, infancy.

Chapter 15: Life Cycle: Childhood to Adulthood; childhood, adolescence, staying young while growing older, mature adult nutrition needs, nutrition-related concerns of mature adults, meal management for mature adults.

G. WEEK SEVEN 11/28/05

Chapter 16: Diet & health; nutrition & chronic diseases, genetics and disease, cardiovascular disease, hypertension, cancer, diabetes mellitus.

Chapter 17: Food Safety and Technology; food safety, safe food practices, seafood safety, food based bioterrorism, food preservation and genetically modified foods.

H. WEEK EIGHT 12/5/05

Final Exam, Presentations and wrap up.

IX. AMERICANS WITH DISABILITIES ACT (ADA)

Springfield College in Illinois provides individuals with disabilities reasonable accommodations to participate in educational programs, activities, and services. Students with disabilities requiring accommodations to participate in college-sponsored programs, activities, and services or to meet course requirements should contact the Director of the Resource Center as early as possible.

X. ASSESSMENT: Classroom Assessment Techniques: Instructor will use post-chapter quizzes, background knowledge probes, one-minute essays, and pre/post tests as well as other Classroom Assessment Techniques as deemed necessary in order to provide continuous improvement of instruction. Students are required to take part in all assessment measures.

XI. IAI STATEMENT

Bio 100 Nutrition has been approved by the Illinois Articulation Initiative as meeting the criteria stipulated for iTransfer Course L1 904: Human Biology (3 semester credits) as follows:

L1 904: Human Biology (3 semester hours) “Examines practical aspects of selected concepts in biology and their application to technology. Concepts may include heredity, growth, development, health and ecology. Human systems may be studied as they relate to the major topics. Emphasis will be placed on the relationship of the issues to the individual and society.”

For more information, please visit the iTransfer website at <http://itransfer.org/IAI/>

XII. OTHER: Semester calendar

October 17, 2005.

Intro, syllabus, policies/procedures

Chapter 1 “Nutrients & Nourishment”

Chapter 2 “Nutrition Guidelines & Assessment”

Post chapter quizzes for chapters 1 & 2 following completion of lecture in class.

Food Diary explained and started.

“Health Risk Assessment” and “Lifestyle Behavior Readiness Assessment” due.

October 24

Chapter 3 “Digestion & Absorption”

Chapter 4 “Carbohydrates”

In Class—Diet & Activity Analysis Workbook pp 51-55 “Eating Behavior Assessment”

Assignment—Chapters 1-4 Study Questions

October 31

Chapter 5 “Lipids”

Chapter 6 “Proteins & Amino Acids”

Chapter 9 “Fat Soluble Vitamins”

In Class – Continue Chapters 1-4 Study Questions. D&AA Workbook pp 29-37

Collect Chapters 1-4 Study Questions

November 7

Chapter 7 “Metabolism”

Chapter 8 “Energy Balance, Body Composition, and Weight Management”

In Class: D&AA Workbook pp. 44-50 “Body Weight/Energy Balance and Physical Activity Assessment”

Assignment—Chapters 5-9 Study Questions & Complete pp 18-28 in D&AA Workbook

In Class: “Spotlight on Alcohol” (pp. 284-307)

November 14

Chapter 10 “Water Soluble Vitamins”

Chapter 11 “Water and Major Minerals”

Chapter 12 “Trace Minerals”

In Class: D&AA Workbook pp. 38-43 “Fluid and Beverage Assessment”

Collect Chapters 5-9 Study Questions

Begin Chapters 10-12 Study Questions

November 21

Collect Chapters 10-12 Study Questions

Chapter 14 “Life Cycle: Maternal and Infant Nutrition”

Chapter 15 “Lifecycles: From Childhood through Adulthood”

In Class: “Spotlight on Eating Disorders” pp 544-564

November 28

Chapter 16 “Diet & Health”

Chapter 17 “Food Safety and Technology”

Collect Food Diaries

Final Exam Review

December 5

Final Exam

Return & Discuss Food Diaries

Presentations

First week assignment:

Read Chapters 1 and 2. Outline major concepts presented in the reading, paying particular attention to all the vocabulary terms defined in the yellow margin boxes. From the Diet & Activity Analysis Workbook, complete the “Health Risk Assessment” (pp13-17) and the “Lifestyle Behavior Readiness Assessment” (pp 57-61) for discussion in class.

Because of the fast pace in this course, you are encouraged to read ahead as much as possible. Write down questions that arise while reading for in-class discussions. Current events that are pertinent to nutrition will also be discussed.