



Independent Study | in Idaho

**FCS 205
Concepts in Human
Nutrition**

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The University of Idaho in statewide cooperation with
Boise State University — Idaho State University — Lewis-Clark State College

<u>Assignment Submission Log</u>				
Lesson	Projected Date for Completion	Date Submitted	Grade Received	Cumulative Point Totals
1				
2				
3				
It is time to take Exam 1.				
Exam 1				
4				
5				
6				
It is time to take Exam 2.				
Exam 2				
7				
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It is time to take Exam 3.				
Exam 3				
10				
11				
12				
It is time to make to take Exam 4.				
Exam 4				

Lesson 1

An Overview of Nutrition / Planning a Healthy Diet

Lesson Objectives

After completing this lesson, you should understand/be able to:

- 1.1 Describe how various factors influence personal food choices.
- 1.2 Name the six major classes of nutrients and identify which are organic and which yield energy.
- 1.3 Explain the scientific method and how scientists use various types of research studies and methods to acquire nutrition information.
- 1.4 Define the four categories of the DRI and explain their purposes.
- 1.5 Explain how the four assessment methods are used to detect energy and nutrient deficiencies and excesses.
- 1.6 Identify several risk factors and explain their relationships to chronic diseases.
- 1.7 Recognize misinformation and describe how to identify reliable nutrition information.
- 1.8 Explain how each of the diet-planning principles can be used to plan a healthy diet.
- 1.9 Use the USDA Food Patterns to develop a meal plan within a specified energy allowance.
- 1.10 Compare and contrast the information on food labels to make selections that meet specific dietary and health goals.
- 1.11 Develop a well-balanced vegetarian meal plan.

Reading Assignment

Understanding Nutrition, Chapter 1 - An Overview of Nutrition; Chapter 2 - Planning a Healthy Diet

Important Terms

anthropometrics	antioxidants	carbohydrate
daily values (EAR, AI, UL, RDA)	energy	fat
enriched	exchange lists	fortified
function food	nutrient density	organic
overnutrition	physical examination	placebo
processed foods	protein	refined
serving sizes	sodium	undernutrition
vitamin A	vitamin C	Water
adequacy	balance	health claims
variety	whole grain	portion sizes

Introductory Lecture

Welcome to the first lesson of this introductory nutrition course. You may feel you already have a grasp on various nutrition concepts, but don't let the latest fad diet fool you. **You will need to read your text thoroughly!** Nutrition is a complex science. On one hand we are just talking about food, but on the other hand, your food choices have an impact on your long-term and short-term health. Chapter 1 discusses the factors influencing your food choices, nutrients and their role in the body, and the science of nutrition.

Become familiar with the composition of foods, of nutrients, and of the body. You will want to practice calculating the energy available from foods (see your textbook, page 10).

Perhaps one of the most important concepts to understand in the first chapter is the science of nutrition. The foundation of nutrition science is research; for example, information such as nutrient recommendations and disease prevention are based on research. In order for nutrition claims to be valid, sound research must be presented to back up those claims. Understanding the key components of the scientific method is critical to distinguishing which claims are backed with sound research. You should be familiar with the research terms on page 13 in your textbook.

Scientific research was used to establish nutrient recommendations. You will need to understand the role of the **dietary reference intakes (DRI)**, **estimated average requirements (EAR)**, **recommended dietary allowances (RDA)**, **adequate intakes (AI)**, and the **tolerable upper intake levels (UL)**. Finally, become familiar with four methods of nutrition assessment.

The second chapter discusses planning a healthy diet. The food choices you make determine your health through your life cycle. After reading this chapter, you will realize that a healthy diet does not rely on consuming a single food or nutrient, but rather, it is the balance and variety of a number of different foods from varying food groups.

You should become familiar with diet-planning principles and the *Dietary Guidelines for Americans*. Be able to recognize food group plans and understand the role of serving sizes and nutrient density in food group plans. In addition, exchange lists are discussed as a tool for menu planning.

Be comfortable with putting the daily food guide plan into action, particularly in terms of how to purchase groceries. Food labels, ingredient lists, and the daily values can be very valuable tools in making your food choices.

Written Assignment

Before beginning the first written assignment, refer to the *Course Rules* in Canvas for your instructor's assignment requirements. If emailing assignments to your instructor, please copy the ISI office at indepst@uidaho.edu. Assignments must be sent to Canvas to be graded.

Helpful Hints

- You may find it easier to read the questions before and after you read the textbook.
- If this is your first time taking a self-paced course, you may find reading the textbook to be difficult at first. Don't give up. You'll find that learning to read a textbook is an invaluable skill.

Answer the following questions.

The lesson contains short-answer essays and multiple-choice questions, and is worth 30 points.

Submit this assignment on Canvas.

Short-Answer Questions (10 points: 2 point each)

(Length: Some responses may be 1-2 paragraphs while others may require 3-5 paragraphs for a complete response. The key is to make sure a response is provided for all parts of the question.)

1. Give several reasons (and examples) why people make the food choices they do. What is generally the primary reason people choose to eat the foods they do?
2. What is a nutrient? Name the six classes of nutrients found in foods. What is an essential nutrient? Which nutrients yield energy and how much energy do they yield?

3. What is the science of nutrition? What is a placebo? Describe three types of research studies used in acquiring nutrition information.
4. What are the DRI? Who develops the DRI? To whom do they apply and how are they used? In your description, identify the four categories of DRI and indicate how they are related.
5. Find a news clip or magazine article and evaluate the published nutrition information.
 - a. Summarize the basic idea of the article.
 - b. List the credentials of the author.
 - c. Has their scientific research been stated?
 - d. Does the research support the claim that is made in the article?
 - e. State your opinion of the article.
6. Name diet-planning principles and briefly describe how each principle helps in diet planning.
7. What recommendations appear in the 2005 *Dietary Guidelines for Americans*?
8. What is meant by the term “nutrient dense food”? Give three examples of high density foods and three examples of low density foods.
9. What are the daily values? Calculate a set of daily values for a person on a 3,000 kilocalorie (kcalorie) diet.
10. Visit www.choosemyplate.gov and describe what information you find useful at this site. My plate will appear which is the latest information from the USDA.

Multiple Choice (10 points: 1 point each)

Identify the letter of the choice that best completes the statement or answers the question.

_____ 1. The diet-planning principle that provides all the nutrients, fiber, and energy in amounts sufficient to maintain health is called _____.

- a. variety
- b. adequacy
- c. moderation
- d. kcalorie control
- e. nutrient density

_____ 2. Which of the following is an example of a macronutrient?

- a. protein
- b. calcium
- c. vitamin C
- d. vitamin D

- _____ 3. By chemical analysis, what nutrient is present in highest amounts in most foods?
- a. fats
 - b. water
 - c. proteins
 - d. carbohydrates
- _____ 4. Which of the following is an organic compound?
- a. salt
 - b. water
 - c. calcium
 - d. vitamin C
- _____ 5. What is the chief reason most people choose the foods they eat??
- a. cost
 - b. Taste
 - c. Convenience
 - d. Nutritional value
 - e. Habit
- _____ 6. What is the meaning of a double-blind experiment?
- a. both subjects take turns getting each treatment
 - b. neither the subjects nor researchers know which subjects are in the control or experimental group
 - c. neither group of subjects knows whether they are in the control or experimental group, but the researchers do know
 - d. both subject groups know whether they are in the control or experimental group, but the researchers do not know
- _____ 7. The Dietary Reference Intakes may be used to
- a. treat people with diet-related disorders.
 - b. assess adequacy of all required nutrients.
 - c. plan and evaluate diets for healthy people.
 - d. assess adequacy of only vitamins and minerals.
- _____ 8. Which of the following is **NOT** a feature of the Adequate Intake (AI) and the Recommended Dietary Allowance (RDA)?
- a. both values exceed the average requirements
 - b. AI values are more tentative than RDA values
 - c. the percentage of people covered is known for both values
 - d. both values may serve as nutrient intake goals for individuals
- _____ 9. What mineral is added to refined flours in the enrichment process?
- a. iron
 - b. iodine
 - c. calcium
 - d. magnesium
 - e. copper

- _____ 10. Information that must be lawfully provided on food labels includes all of the following **EXCEPT** for the
- a. amount recommended for ingestion each day.
 - b. amounts of specified nutrients and food components.
 - c. net contents expressed by weight, measure, or count.
 - d. name and address of the manufacturer, packer, or distributor.