



Independent Study | in Idaho

**FN 205
Concepts in Human
Nutrition**

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Course Guide

Independent
Study | in Idaho

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Family and Consumer Sciences 205 Concepts in Human Nutrition

University of Idaho
3 Semester-Hour Credits

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University of Idaho

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FN 205: Concepts in Human Nutrition**3 Semester-Hour Credits: U of I****Welcome!**

Whether you are a new or returning student, welcome to the Independent Study in Idaho (ISI) program. Below, you will find information pertinent to your course including the course description, course materials, course objectives, as well as information about assignments, exams, and grading. If you have any questions or concerns, please contact the ISI office for clarification before beginning your course.

Policies and Procedures

Refer to the ISI website at www.uidaho.edu/isi and select *Students* for the most current policies and procedures, including information on setting up accounts, student confidentiality, exams, transcripts, course exchanges, refunds, academic integrity, library resources, and disability support and other services.

Course Description

Nutrition principles with their application to nutrition in life cycle; nutrition problems and controversies such as weight control and nutrition for athletes; individual computerized study of student's dietary intake. U of I students: cross-listed with CORS 255.

Prerequisite: None.

Required: Internet access, calculator, access to a computer

8 graded assignments, 3 exams

Course Materials**Required Course Materials**

- e-book: Whitney, Eleanor and Sharon Rady Rolfes. *Understanding Nutrition*. 15th ed. Cengage Learning, 2019. ISBN: 978-1337392693. Purchase the digital copy of the textbook directly from Cengage at <https://www.cengage.com/c/understanding-nutrition-15e-whitney/?filterBy=Student>. Access includes flashcards, test prep, study guides and more. There are several purchase options based on the length of access. Choose between access for four months, 12 months or 24 months.

The printed, 14th edition of the textbook will also work for the course.

- Whitney, Eleanor and Sharon Rady Rolfes. *Understanding Nutrition*. 14th ed. Cengage Learning, 2016. ISBN-10: 1-285-87434-X ISBN-13: 978-1-285-87434-0

Course Delivery

All ISI courses are delivered through Canvas, an online management system that hosts the course lessons and assignments and other items that are essential to the course. Upon registration, the student will receive a *Registration Confirmation Email* with information on how to access ISI courses online.

Course Introduction

Nutrition is a part of every stage of the life cycle. Today there is a growing interest in the subject of nutrition and health. An introductory course on the subject offers a basic understanding of how it applies to one's overall health.

This course will cover the science of nutrition, which may present a challenge. You will be responsible for learning about the metabolic structure of foods and the processes upon which the body uses them. The student will be expected to learn nutrition related terms, and to understand the importance of nutrition for growth and development throughout the life cycle.

The goal of this course is to offer similar content to the on-campus FN 205 course. The campus course was used as a guide for the course content. In addition, the course was designed to maintain University of Idaho standards for the number of hours students commit to a course. The University of Idaho standards are: 15 contact hours and 30 non-contact hours per credit (such as study time). Since the ISI course does not have contact hours and it is a three-credit course, the potential time commitment for the course is 135 hours, which would include reading the text, completing the lessons, and studying for and completing the exams. The exams will consist of multiple choice, matching and short answer questions.

American Dietetic Association (ADA)

This course will address the knowledge and competencies for entry-level dietitian education programs.

Students will gain knowledge of:

1. Physical and biological sciences: nutrient metabolism and fluid and electrolyte requirements
2. Research: research methodologies and scientific method
3. Food: role of food in promotion of a healthy lifestyle
4. Nutrition: assessment and treatment of nutritional health risks

Course Objectives

- Evaluate sources of nutrition information.
- Learn about important nutrients and their functions and deficiencies.
- Demonstrate an understanding of digestion and absorption.
- Demonstrate an understanding of metabolism and energy balance.
- Gain knowledge of the influence of nutrition during physical activity and across the life cycle.
- Develop an understanding of the influence of nutrition around the globe.
- Develop a positive attitude toward nutrition and health for a lifetime.

Lessons

Overview

Each lesson may include the following components:

- lesson objectives
- reading assignments
- important terms
- lecture
- written assignment, project, or activity

This course consists of eight graded lessons. Lesson 4 is a diet analysis project. The other seven lessons involve short-answer essays and multiple-choice questions.

Accessing Journal Articles

Many of the written lessons offer students the opportunity to review a journal article pertaining to the topic of the lesson. All journal articles, magazines, and Web sites must be properly cited using the APA format style. Examples of journal articles cited using APA format are provided below:

Fletcher, J., & Branen, L. J. (1999). Feeding young children in group settings: Using scenarios for staff development. *Journal of Nutrition Education and Behavior*, 31(6), 360B.

Patrick, H., & Nicklas, T. A. (2005). A review of family and social determinants of children's eating patterns and diet quality. *Journal of the American College of Nutrition*, 24(2), 83-92.

Ziegler, P., Hanson, C., Ponza, M., Novak, T., & Hendricks, K. (2006). Feeding infants and toddlers study: Meal and snack intakes of Hispanic and non-Hispanic infants and toddlers. *Journal of the American Dietetic Association*, 106(1), s107-s123.

Here is an example of an APA Web citation:

Fletcher, J. F., & Branen, L. J. Feeding young children in group settings. Retrieved February 28, 2008, from <http://www.ag.uidaho.edu/feeding/>

Study Hints:

- Keep a copy of every assignment submitted.
- Complete all reading assignments.
- Set a schedule allowing for course completion one month before your personal deadline. An *Assignment Submission Log* is provided for this purpose.

Web pages and URL links in the World Wide Web are continuously changing. If you cannot access a link that has been listed in this study guide, use your favorite search engine (such as Google) to locate the site. To seek assistance or provide any updated information, contact your instructor.

Refer to the **Course Rules** in Canvas for further details on assignment requirements and submission.

Exams

- You must submit all assignments associated with an exam before taking the exam.
- For exam information, also refer to the **Course Rules** in Canvas.

Grading

The course grade will be based upon the following considerations:

There are a total of 590 points possible for this course. Course lessons are worth 28 percent of your grade. Successful completion of all 8 lessons is worth 160 points, with each lesson worth 20 points. Exams 1 and 2, are worth 125 points each, for 48 percent of your grade. The final exam is comprehensive and is worth 180 points, which is 24 percent of your grade.

Exams will include the following:

- The first two exams are worth 125 points **each**.
- The final exam is worth 180 points.
- The exams will consist of multiple choice, matching, and short-answer essay questions.
- Short-answer essay questions should be answered in full, complete sentences, and nutrient calculations should show all work.
- The time limit for exams 1 and 2 is two hours. The time limit for the final exam is three hours.

The grading criteria for the **Exam Short-Answer Responses** are as follows.

Responses should:

1. accurately present the material requested in the questions;
2. completely cover the breadth of issues posed in the questions;
3. refer to and integrate appropriate case examples from the textbook to illustrate concepts if necessary;
4. be written in a legible and well-organized style with concepts and illustrative examples clearly articulated.

The following grading point scale will be used:

8 Lessons	= 220 points	A = 585 – 650 = 90 – 100%
Exam 1	= 125 points	B = 520 – 584 = 80 – 89.9%
Exam 2	= 125 points	C = 455 – 519 = 70 – 79.9%
		D = 390 – 454 = 60 – 69.9%
Final Exam	= <u>180 points</u>	F = below 389 = below 59%
Total	650 points	

The final course grade is issued after all lessons and exams have been graded.

Acts of academic dishonesty, including cheating or plagiarism are considered a very serious transgression and may result in a grade of F for the course.

About the Course Developer

Hello and Welcome to *Concepts in Human Nutrition*! Over this course I hope you will learn some very important concepts in nutrition and its significance and influence on your health. I have enjoyed many years of teaching in this field. I earned a Bachelor of Science degree in Nutritional Sciences from the University of Arizona, I am a registered dietitian, and have a Master of Science degree in Clinical Nutrition from the University of New Haven in Connecticut. I currently teach for the University of Idaho as an instructor in the Department of Family and Consumer Sciences and work with the Dietetic Interns. My expertise has given me opportunities as a consultant for a wellness website, working in public health, hospitals, clinics, restaurants and providing services in my own private practice. I hope you enjoy the course! Sarah Brett, M.S., R.D., L.D.

Contacting Your Instructor

Instructor contact information is posted on your Canvas site under *Course Rules*.

<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				
8				
9				
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.