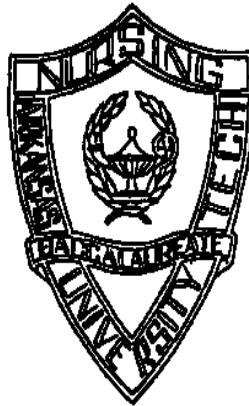


ARKANSAS TECH UNIVERSITY

DEPARTMENT OF NURSING



NUTRITION

NUR 2303

Fall 2009

STATEMENT OF UNDERSTANDING

I have read and understand the syllabus for the course NUR 2303.
I understand the requirements for this course and grading
procedures.

STUDENT SIGNATURE

DATE

ARKANSAS TECH UNIVERSITY
Department of Nursing
Fall Semester, 2009
Nutrition NUR 2303

<u>Date</u>	<u>Topic</u>	<u>Chapter</u>	<u>Instructor</u>
Aug 20 th	Orientation/ Overview	1, 2	Davis
Aug 25 th	Digestion	3	Davis
Aug 27th	Test 1	1, 2 3	Davis
Sept 1 st	Carbohydrates	4	Davis
Sept 3 rd , 8 th	Lipids	5	Davis
Sept 10 th , 15 th	Proteins	6	Davis
Sept 17th	Test II	4, 5, 6	Davis
Sept 22 ^d	Fat Soluble Vitamins	7	Davis
Sept 24 th , 29 th	Water Soluble Vitamins	7	Davis
Oct 1 nd , 6 th	Water and Minerals	8	Davis
Oct 8th	Test III	7, 8	Davis
Oct 13 th , 15 th	Energy Balance	9	Davis
Oct 20 th , 22 rd	Nutrient/Physical Activity	10	Davis
Oct 27 th	Diet and Health	11	Davis
Oct 29 th	Diet and Health	11	Davis
Nov 3rd	Test IV	9, 10, 11	Davis
Nov 5 th , 10 th	Nutrition/Mother & Infant	13	Davis
Nov 12 th , 17 th	Nutrition/Child, Teen, Adult	14	Davis
Nov 19 th	Food, Safety, Hunger	12	Davis
Nov 24 th , 26 th	Global Environment	15	Davis
Dec 1 st , 3 rd	Review		Davis
TBA	Final Exam	TBA	Davis

ARKANSAS TECH UNIVERSITY

Department of Nursing

Course: NUR 2303

Title: Nutrition

Credit Hours: 3 Semester Hours

Contact Hours: 3 clock hours per week

Placement: Fall and Spring semester, freshman or sophomore year

Faculty:

Celeste Davis, M.N.Sc., R.N.

(479) 964-0866

Email: cdavis3@atu.edu

Office Hours: Posted on bulletin boards

Web: http://www.atu.edu/nursing/faculty_davis.shtml

Syllabus and Power Points available on the above faculty page

Course Description:

The focus of this course is on the maintenance of nutritional wellness. Principles of normal nutrition at all stages of the life cycle are emphasized. Growth and development needs are incorporated into the maintenance and restoration of nutritional health and in the prevention of nutritional deficit. Exploration is conducted in the social, religious, and cultural factors which affect the family's nutritional health.

Required Textbook:

Sizer, F. S., & Whitney, E. N. (2006). *Nutrition: Concepts and controversies*. (11th ed.). Belmont, CA: Thompson Higher Education.

Required Study Guide:

Kicklighter, J. R. (2006). *Study guide to accompany Nutrition: Concepts and controversies* (11th ed.). Belmont, CA: Thompson Higher Education.

Recommended Text:

Litt, A.N. (2005). *The college student's guide to eating well on campus*. Bethesda, MD: Tulip Hill Press.

Justification/Rationale for the Course

By the completion of this course the student will progress toward program goals/outcomes 1, 2, 3, and 4.

This upper division professional nursing course provides opportunities for the student to apply knowledge and skills from the general education component and from nursing courses to the care of individuals and families.

Course Objectives:

Upon satisfactory completion of this course, the student should be able to:

1. Discuss the basic nutrients required to maintain a state of wellness.
2. Apply concepts of basic nutrition in order to modify individual dietary patterns.
3. Demonstrate an understanding of scientific concepts necessary to maintain nutritional balance.
4. Compute the caloric content of certain foods in order to establish a 24-hour balanced meal plan.
5. Discuss the significance of religious, social, and cultural influences on dietary health.
6. Recognize the impact of life cycle events that require adaptations in nutritional planning.
7. Develop strategies for health teaching that would help the individual in maintaining normal weight.
8. Explore the relationships dealing with cell energy production, the building and restructuring of tissue, and the control of cell functions exerted by water, electrolytes, vitamins, and minerals.
9. Discuss the intricate processes of digestion and absorption.

10. Utilize scientific principles in order to explain how nutrition helps the cell in adapting to changing environmental factors.

CONDUCT OF THE COURSE

Evaluation/Assessment Methods

1. Grading Scale
A = 90-100
B = 80-89
C = 75-79
D = 68-74
F = 67 and below
2. A grade of "C" or above must be achieved in every nursing course in order to progress in the nursing program. Any grade below 75% will not be rounded up.
3. A grade of "I" may be recorded for a student whose work is incomplete due to circumstances beyond the student's control. The student must take responsibility for removal of the "incomplete" grade according to the Arkansas Tech University's catalog requirements. Nursing majors must remove the "I" before progressing to the next level of nursing courses.
4. Examinations will be taken at designated times. **IF A STUDENT CANNOT TAKE THE EXAMINATION AT THE REGULARLY SCHEDULED TIME, HE/SHE IS RESPONSIBLE FOR CONTACTING THE INSTRUCTOR ON OR BEFORE THE NEXT CLASS MEETING DATE TO MAKE ARRANGEMENTS FOR THE EXAMINATION MAKE UP. ANY STUDENT NOT MAKING THE APPROPRIATE ARRANGEMENTS WILL RECEIVE AN "O" FOR THE MISSED EXAM.** Makeup examinations will be essay or objective in nature at the discretion of the instructor.
5. Test booklets and Scantron answer sheets will remain the property of the Department of Nursing. Any student failing to return either of these items after an exam will receive a "0" (zero) for that exam.

6. Course Grade

4 unit tests	60%
Study Guide	20 %
Final Exam	<u>20%</u>
	100%

Extra Credit activities may be completed for up to 5 points added to final exam grade. This is optional. Each activity is worth 1 point.

Policies

Class Attendance:

- 1 Every student will be expected to complete assignments on time.
2. **LATE ASSIGNMENTS WILL BE LOWERED ONE GRADE, IF ACCEPTED BY THE INSTRUCTOR.**
3. The faculty considers attendance at all classes to be of major importance in order to assure that the students will progress to maximum potential. The Arkansas Tech University catalog provides content concerning class attendance.
4. If a consistent pattern of absences from class develops, the situation will be dealt with by the course coordinator.

Academic Integrity

Because you are seeking to further your education you are demonstrating your willingness and responsibility for learning. We expect that all the work you do for this course will be your own. If you plagiarize or cheat on your assignments, the first offense will result in a written warning. A second offense will result in dismissal from this class. You are referred to the ATU Student Handbook <http://stuserv.atu.edu/files/currenthandbook.pdf> and a dictionary for the definition of the terms plagiarism and cheating. (www.atu.edu). We don't expect this to happen, but we do want it perfectly clear what the consequences are if it does occur. After researching the stated resources and you are still unclear as to what constitutes plagiarism or cheating, please contact an instructor for further clarification.

NUR 2303 Nutrition: Chapters 1, 2

FOCUS: Introduction, Orientation, and Overview; Food Choices and Human Health; Nutrition Tools— Standards and Guidelines

OBJECTIVES

After completion of this chapter, the student should be able to:

1. Demonstrate understanding of the course syllabus, course requirements, and conduct of the course.
2. Give a working definition of the term, "nutrition".
3. Define the term, "nutrient".
4. List the most vital nutrient, the 3 energy-yielding nutrients, and the 2-helper nutrients.
5. Describe the roles of nutrients in the body.
6. Discuss the ways that nutrition affects health.
7. List several personal life choices that affect health.
8. Describe ways that food conveys emotional satisfaction and hormonal stimuli.
9. List and explain the five characteristics of a healthy diet.
10. Explain the expression of cultural traditions and social values through food choices.
11. Describe the Dietary Guidelines.
12. Describe the research process.
13. Define Dietary Reference Intakes and the Daily Values.
14. Describe the RDI, AI, UL, EAR, and AMDR.
15. Discuss the standards used on food labels.
16. Discuss how foods are grouped in the USDA Food Guide.
17. Describe how the USDA Food Guide Pyramid provides guidance in achieving the characteristics of a healthy diet.
18. Explain the flexibility of the USDA Food Guide.
19. Explain how the Exchange System facilitates calorie control.
20. Discuss the importance of serving sizes in nutrition.

LEARNING ACTIVITIES

BEFORE CLASS READ: Sizer & Whitney, Chapter 1 & 2
Complete Study Guide Chapter 1 & 2

Activity 1: Keep a 24 hour diary of what you have eaten. Make sure you date it. Using the USDA Food Guide, evaluate your 24 hour diary in comparison to the Food Guide. Where did you excel? Where were you not very successful?

Resource: <http://www.health.gov/dietaryguidelines>
http://www.ars.usda.gov/main/site_main
<http://mypyramid.gov/index.html>

NUR 2303 Nutrition: Chapter 3
FOCUS: The Remarkable Body

OBJECTIVES

After completion this chapter, the student should be able to:

1. Review the anatomy and physiology of the digestive system.
2. Identify the basic needs of cells and describe how cells are organized into tissues, organs, and systems.
3. Describe the major functions of the cardiovascular, hormonal, nervous, digestive, and excretory systems.
4. Describe the mechanical and chemical digestive processes in order of their occurrence in the body.
5. Discuss the processes of absorption, transportation, and storage of nutrients.
6. Discuss how alcohol benefits and hinders our body's health.

LEARNING ACTIVITIES

BEFORE CLASS READ: Sizer & Whitney, Chapter 3
Complete Study Guide Chapter 3

NUR 2303 Nutrition: Chapter 4

FOCUS: The Carbohydrates: Sugar, Starch, Glycogen, and Fiber

OBJECTIVES

After completion of this chapter, the student should be able to:

1. Distinguish among the various carbohydrates found in foods and in the human body.
2. Describe the body's use of glucose to provide energy or to make glycogen and fat.
3. Discuss diabetes, hypoglycemia, and lactose intolerance and their relationship to carbohydrate intake.
4. Discuss the roles of fiber-rich foods in the maintenance of the body's health and identify foods rich in fiber.
5. Evaluate the alternative sweeteners.

LEARNING ACTIVITIES

BEFORE CLASS READ:Sizer & Whitney, Chapter 4
Complete Study Guide Chapter 4

RESOURCE: <http://mypyramid.gov>

NUR 2303 Nutrition: Chapter 5
FOCUS: The Lipids: Fats, Oils, Phospholipids, and Sterols

OBJECTIVES

After completing this chapter, the student should be able to:

1. Explain the way lipids are useful, both in foods and in the body.
2. Describe the structure of a triglyceride noting the differences between saturated and unsaturated fats.
3. Summarize the processes of lipid digestion, absorption, transport, and utilization in the body, including the significance of the lipoproteins.
4. Explain why manufacturers frequently hydrogenate fats and the possible health implications of consuming the *trans*-fatty acids formed during hydrogenation.
5. List the arguments for and against the growing use of the fat replacers Simplesse and Olestra.
6. Plan a menu containing fat in the right kinds and in the recommended amounts to provide optimal health and pleasure in eating.
7. Discuss the role of fat and cholesterol on health.
8. Compare and contrast the Mediterranean diet to the American diet.

LEARNING ACTIVITIES

BEFORE CLASS READ: Sizer & Whitney, Chapter 5
Complete Study Guide Chapter 5

RESOURCE: <http://mypyramid.gov>

NUR 2303 Nutrition: Chapter 6
FOCUS: The Proteins and Amino Acids

OBJECTIVES

After completion of this chapter, the student should be able to:

1. Describe the structure of proteins and explain why adequate amounts of all the essential amino acids are required for protein synthesis.
2. Summarize the processes of protein digestion and absorption in the body.
3. Explain the roles of proteins in the body.
4. Discuss the importance of protein quality and mutual supplementation.
5. Calculate your individual protein RDA and describe how nitrogen balance studies are used in determining the RDA for protein.
6. Describe the consequences of both protein deficiency and protein excess.
7. Compare the positive health aspects of a vegetarian diet with those of a diet that includes meat and describe ways each diet can include adequate nutrients.

LEARNING ACTIVITIES

BEFORE CLASS READ:

Sizer & Whitney, Chapter 6
Complete Study Guide Chapter 6

RESOURCE:

<http://mypyramid.gov>

NUR 2303 Nutrition: Chapter 7
Focus: Vitamins

OBJECTIVES

After completing this chapter, the student should be able to:

1. Define the term vitamin and explain how vitamins are classified.
2. Describe the characteristics of fat-soluble vitamins and water-soluble vitamins and explain how they differ.
3. List the chief functions and food sources of each vitamin.
4. Describe major deficiencies and toxicity symptoms associated with each vitamin.
5. Identify groups of people who may benefit from a multivitamin-mineral supplement and discuss guidelines for choosing an appropriate supplement.
6. Describe the best method of planning a diet that is both rich in vitamins and consistent with the *Dietary Guidelines for Americans*.

LEARNING ACTIVITIES

BEFORE CLASS READ:

Sizer & Whitney, Chapter 7
Complete Study Guide Chapter 7

Activity 1:

Complete the vitamin worksheets.

Resource:

<http://www.health.gov/dietaryguidelines/dga2005/document/>

NUR 2303 Nutrition: Chapter 8
FOCUS: Water and Minerals

OBJECTIVES

After completion of this chapter, the student should be able to:

1. Discuss the major roles of water in the body and the amount of water needed by adults.
2. Describe how the body regulates water intake and excretion to maintain water balance.
3. Compare the arguments for and against drinking bottled water.
4. Compare the processes of maintaining the body's fluid and electrolyte balance and acid-base balance.
5. Explain the role of minerals in maintaining the body's fluid and electrolyte balance and acid-base balance.
6. List the major roles and important deficiency and toxicity symptoms for each major and trace minerals.
7. List major food sources for the major and trace minerals.
8. Support claims made for calcium in preventing osteoporosis.

LEARNING ACTIVITIES

BEFORE CLASS READ: Sizer & Whitney, Chapter 8
 Complete Study Guide Chapter 8

NUR 2303 Nutrition: Chapter 9
FOCUS: Energy Balance, and Healthy Body Weight

OBJECTIVES

After completion of this chapter, the student should be able to:

- 1 List and define the three components of the body's energy budget.
2. Identify and explain the factors that affect the basal metabolic rate.
3. Estimate his or her individual total energy expenditure.
4. Discuss the problems of too much or too little body fat.
5. Discuss the role of standard weight tables and BMI in evaluating obesity.
6. Evaluate the methods used for estimating body fatness.
7. Summarize the theories that attempt to explain the mystery of obesity.
8. Explain how the body gains and loses weight.
9. Explain what happens during moderate weight loss versus rapid weight loss.
10. Summarize the recommended strategies to promote weight control and understand the role surgery and pills play in this attempt.
11. State the number of calories contained in one pound of body fat.
12. Discuss methods of losing weight that are currently fashionable, including safety factors and success rates.
13. Identify the principles one must follow in order to successfully lose weight and maintain the loss.
14. Discuss the debate over whether overweight people should diet to lose weight.
15. Define and describe eating disorders and explain the physical harm that occurs as a result of these behaviors.

LEARNING ACTIVITIES

Before Class, Read:Sizer & Whitney, Chapter 9
Complete Study Guide Chapter 9

Activity: Evaluate your risk for obesity

1. Calculate BMI
2. Waist circumference
3. Disease risk profile

NUR 2303 Nutrition: Chapter 10

FOCUS: Nutrients, Physical Activity and the Body's Responses

OBJECTIVES

After completion of this chapter, the student should be able to:

1. Explain the benefits of and guidelines for regular physical activity.
2. Summarize how the body adjusts its fuel mix to respond to physical activity of varying intensity levels and duration.
3. Discuss the effects, if any, of a high-protein diet on athletic performance.
4. Discuss the roles vitamins and minerals play in physical performance and indicate whether supplements are necessary to support the needs of active people
5. List the risks of taking ergogenic aids and steroids to enhance physical performance.
6. Describe the best way to stay hydrated before, during and after exercise.

LEARNING ACTIVITIES

Before Class, Read:Sizer & Whitney, Chapter 10
Complete Study Guide Chapter 10

NUR 2303 Nutrition: Chapter 11
FOCUS: Diet and Health

OBJECTIVES

After completion of this chapter, the student should be able to:

1. Describe the role of nutrition in maintaining a healthy immune system.
2. Define atherosclerosis and identify the risk factors for cardiovascular disease.
3. Describe the role of nutrition in maintaining a healthy cardiovascular system.
4. Discuss the strategies that can be used to reduce the risks of cardiovascular disease and hypertension.
5. Explain what is known about the effects of food constituents on cancer development.

LEARNING ACTIVITIES

Before Class, Read:Sizer & Whitney, Chapter 11
Complete Study Guide Chapter 11

Activity: Discuss your risk for developing infections and/or degenerative diseases related to your dietary intake.

NUR 2303 Nutrition: Chapter 13
FOCUS: Life Cycle Nutrition: Mother and Infant

OBJECTIVES

After completion of this unit, the student should be able to:

1. Discuss influencing factors unique to specific life cycle conditions. Maternal nutrition before, during, and after pregnancy.
2. Discuss maternal physiological adjustments that occur during pregnancy and explain how they influence energy and other nutrient requirements.
3. Identify specific nutritional needs of the pregnant adolescent.
4. Explain why abstinence from smoking and drugs, avoiding dieting, and moderation in the use of caffeine are recommended during pregnancy.
5. Discuss the effects of alcohol on the development of the fetus and describe the condition known as fetal alcohol syndrome.
6. Specify changes that need to be made in the diet of the lactating woman.
7. Outline specific nutritional needs during the infancy period.
8. Compare the merits of breast milk to formula preparations.
9. Discuss the addition of solid food to infant diets.

LEARNING ACTIVITIES

Before Class, Read:Sizer & Whitney, Chapter 13
Complete Study Guide Chapter 13

Activity: Interview a woman who is pregnant. Discuss her nutritional needs according to previous nutritional habits and how she changed when she found out she was pregnant.

NUR 2303 Nutrition: Chapter 14
FOCUS: Child, Teen and Older Adult

OBJECTIVES

After completion of this unit, the student should be able to:

1. Discuss nutritional needs of early childhood in conjunction with normal developmental stages.
2. Identify appropriate feeding practices including such issues as choking, portion sizes, and snacks.
3. Describe the nutritional needs of the school-age child.
4. Discuss nutritional related concerns of children, including the link between diet and behavior, the problem of lead, and the impact of television on nutrition.
5. Discuss special nutritional needs and concerns of teenagers, including the effect of diet on PMS and acne.
6. Describe the special nutritional needs in the older adults and the suspected connection between diet and disease.
7. Outline common difficulties in meeting nutritional needs in the older adult.

LEARNING ACTIVITIES

Before Class, Read:Sizer & Whitney, Chapter 14
Complete Study Guide Chapter 14

Activity: Interview an older adult, who is on a fixed income. Discuss their health risk and the medications they take. How does the cost of health care and medication impact their nutrition.

NUR 2303 Nutrition: Chapter 12
FOCUS: Food Safety and Technology

OBJECTIVES

After completing this chapter the student should be able to:

1. List and prioritize the five hazards in our food supply identified by the Food and Drug Administration.
2. Discuss how microbial food poisoning can be prevented and indicate which foods are particularly troublesome.
3. Describe the risks, if any, of the following in foods: natural toxins, environmental contaminants, pesticides, and hormone residues.
4. List four major food processing techniques and explain the effect they have on the nutrient content of foods.
5. Discuss the regulations concerning food additives and identify the special roles of the major classes of additives.
6. List the arguments for and against the use of new food technologies.

LEARNING ACTIVITIES

Before Class Read: Sizer & Whitney, Chapter 12
Complete Study Guide Chapter 12

NUR 2303 Nutrition: Chapter 15
FOCUS: Hunger and the Global Environment

OBJECTIVES

After completing this chapter the student should be able to:

1. Discuss some of the problems facing the global environment and how human uses of resources and energy are largely responsible.
2. Distinguish between following terms: hunger, food, insecurity, food poverty, and food shortage.
3. List some of the U.S. government programs designed to relieve poverty and hunger and discuss their effectiveness.
4. Compare the causes of hunger in the U.S. and in developing countries and explain the roles played by food shortages, chronic hunger, and the diminishing world food supply.
5. Explain how relieving poverty and overpopulation will help alleviate environmental degradation and hunger.
6. List some of the environmentally conscious food shopping and cooking activities consumers can choose to minimize the impacts on the environment.
7. Discuss some of the environmental and social costs of agriculture and the food industry and indicate possible solutions that would enable both agribusiness and the environment to survive.

LEARNING ACTIVITIES

Before Class Read:Sizer & Whitney, Chapter 15
Complete Study Guide Chapter 15

Activity: How has the study of nutrition impacted your life style, shopping habits, food preparation habits, eating habits, and your view of the global affects on our food and food safety.

VITAMIN WORKSHEET

	A	D	E	K
FUNCTION				
SOURCES				
DEFICIENCY				
TOXICITY				
DOSAGE				

VITAMIN WORKSHEET

	B-1 Thiamin	B-2 Riboflavin	B-6 Pyridoxine	B-3 Niacin	Folate	B-12 Cobalmin	Biotin	Pantothenic Acid	C
Function									
Sources									
Deficiency									
Dosage									