

GEORGE MASON UNIVERSITY
College of Health and Human Services
Department of Global and Community Health
Nutrition and Chronic Disease, Fall 2009

Course number: GCH 423

Course Title: Nutrition and Chronic Illnesses

Course Placement: Requirement for Nutrition Certificate or Elective in other Program(s)

Faculty: Susan E. Berkow, Ph.D., CNS
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Office Hours: Robinson B 420, by appointment or telephone

Class Schedule: Mondays 1:30-4:10 pm
Innovation 205

Course Description: This course will examine the nutrient needs related to specific chronic illnesses including cardiovascular disease, cancer, obesity, diabetes and others. It will focus on the principles of nutritional therapy and prevention.

Course Objectives:

Upon completion of this course, students will be able to:

- Describe the nutrient needs regarding specific chronic illnesses covered.
- Examine the role that nutrition has in prevention of these diseases.
- Review current nutrition research and recommendations specific to nutritionally related chronic diseases.

Required Textbook: Understanding Normal and Clinical Nutrition 8th Edition
Rolfes, Pinna and Whitney, 2008
Wadsworth Publishing

- **Recommended Resource:** Diet Analysis Plus 8.0 for Windows,
<http://www.ars.usda.gov/Services/docs.htm?docid=5720> or
http://www.ars.usda.gov/main/site_main.htm?modecode=12354500

Course Requirements: GCH 295 or permission of instructor, *mandatory*

Course Evaluation Methods:

1. Nutritional assessment project and presentation of findings
2. 2 in-class exams
3. 2 take-home quizzes
4. 4 internet assignments
5. Group meal preparation activity and presentation

Course Point Distribution:

There are a total of **500** points in this class (not including the extra credit points). Please see the following table for the number of points given to each grade:

Grade	Points
A	475-500
A-	450-474
B+	435-449
B	415-434
B-	400-414
C+	385-399
C	365-384
C-	350-364
D	325-349
F	<325

Rationale: To provide a requirement for the nutrition certificate program, nutrition minor, and as an elective for health science, MPH and nursing students.

Teaching Strategies: Lecture/discussion, Guest lecturers, Video presentations, Audio/ Visual aids, Student presentations, Case study analyses

Topical Outline:

1. Review of Nutrition Concepts
2. What is good nutrition science?
3. Anemia
4. Antioxidants/Phytochemicals and disease prevention
5. Illness and Nutrition Status
6. Hunger and malnutrition
7. Nutrition Assessment
8. Obesity
9. Diabetes Mellitus

10. Disorders of Heart
11. Eating Disorders
12. Lower GI Tract Disorders
13. Osteoporosis
14. Renal Diseases/ Liver Disorders and Alcoholism
15. Cancer
16. HIV

Assignments:

I. Nutritional Assessment and Presentation of Findings (100 points). Paper due November 30th (Turn in copy of paper) and Presentation due November 30/December 7th.

For this assignment, interview a person in your community (a patient, friend, relative, etc.) who suffers from a chronic illness. Let them know that this interview is confidential! The purpose of this interview is to:

- get a general idea regarding their risk for poor nutritional status
- determine what kind of nutritional support they might receive, if any.

You will make some suggestions on how that support might (need to) be improved. Nutrition support includes:

1. individuals who might counsel or educate others about their diet.
2. people involved in preparing or purchasing food.
3. a person (persons) who is responsible for monitoring and assessing an individual's nutritional status and diet.

The interview should be about an hour. During the interview, gather the following information. (*See handout to guide you for this activity- will be available later on in semester*)

- Gather general information about the overall health history of the individual.
- Collect weight, height, and BMI data. If possible, do skinfold analysis.
- Conduct a 24-hour dietary recall to determine the person's dietary intake. Remember to ask everything that this person has consumed. Ask for the brand names, the preparation method, and the amount. Try to be as specific as possible to gather a more accurate picture of the person's diet. Remember the lessons learned doing your own assessment. Then, analyze this data with the Diet Analysis Plus, or the Food Processor programs or go to the USDA sites listed on front page of this syllabus.
- Go over the "**Checklist to determine nutritional health**" (to be provided). Calculate this individual's total nutritional score.
- Look at the "Nutrition Assessment Checklist" found at the **end of each chapter** in your text. Try to gather as much information concerning this checklist as you can.
- Ask the patient if there are any people involved in assessing and monitoring their nutritional status. If so, who does this and how often? What are their credentials?
- Ask the patient if anyone is made available to him/her regarding how to plan and prepare a nutritious diet. If so, who does this and how often? What are their credentials?

- Ask the patient if anyone talks to them, in general, about nutrition and why it is important. How often? What are the credentials of this individual?
- Does the patient want more nutritional support? If so, what kind?

After completing the interview, write-up a REPORT (total pages including questions 2-6 listed below, will be 3 pages, 12 point font, 1 inch margins) that summarizes what went on in the interview. You will also summarize what you have found and *present it to the class*. **DO NOT READ YOUR REPORT TO CLASS. THIS WILL RESULT IN A DOWNGRADE.** Remember to include the following:

1. A copy of the checklists and the analysis from the 24-hour dietary recall.
2. Give a brief synopsis of the kind of chronic condition this individual suffers and their health history.
3. From the checklists, anthropometric data, and 24-hour dietary recall, does this person have any nutritional risk? How? Be specific.
4. Summarize the questions and responses that occurred during the interview.
5. Develop at least 2 recommendations or suggestions on how this individual might improve their diet or reduce their risk for poor nutritional status.
6. Develop at least 2 recommendations or suggestion regarding how this individual's nutrition support might be improved.

The paper and the presentation are worth a total of 100 points (the presentation is 20% of the grade). Make a copy of the write up and turn it in on **November 30th**. If you like, you may keep another copy so you can present your findings to the class either **November 30th or December 7th**.

2. Two in-class exams (total =200 points)

There are 2 in-class multiple-choice exams in this class. One during the midterm and the other during the final exam period. Each exam is worth 100 points. No books allowed during exam!

Exam 1 is on October 26th

Exam 2 is on December 21st, 1:30-4:15PM (Final Exam time to be confirmed)

3. Two Take-home quizzes (total =80 points)

There are 2 take-home quizzes in the class. Each quiz will be due a week before each exam. The quizzes will consist of multiple choice, fill in the blank, and short answer questions. Each quiz is worth **40 points**.

Quiz 1 is due on October 19th.

Quiz 2 is due on December 7th.

4. Four Internet assignments (40 points)

You may choose any four of the five internet assignments listed below. Each is worth **10** points. The assignments and due dates are given below and in the schedule at the end of the syllabus.

YOU MUST TURN IN THE FOUR ASSIGNMENTS OF YOUR CHOICE ON THE RESPECTIVE DATES LISTED. FOR EXAMPLE, ASSIGNMENT 1 WILL NOT BE ACCEPTED ON THE DATE DUE FOR ASSIGNMENT 4

1. Due September 14th-Food Guide Pyramid

Learn about the Food Guide Pyramid. First go to the following website:

<http://www.mypyramidtracker.gov/>

Register to assess your food intake. Put in your food intake for one day and have it analyzed. Answer the following questions:

- i. What information does this interactive program provide?*
- ii. How does your diet compare to the Guidelines? Actually compare your diet and print out. What changes should you make? Be specific!*
- iii. Do you think this tool is useful for people trying to prevent chronic illnesses? Why or why not?*
- iv. Do you think this is a useful tool for non-nutrition students or professionals – is it easy enough to understand?*
- v. What changes would you suggest to make it more user-friendly?*
- vi. The FGP was introduced in 2005. What updates would you suggest?*
(Total all six parts - three pages)

2. Due September 21st -Dash Diet

Go online to:

http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/new_dash.pdf

- i. Read the information and summarize what the DASH diet is in your own words.*
- ii. From the information provided, come up with an example meal plan for yourself for three days that fits within these guidelines. List all foods and calculate your daily sodium intake*
- iii. Explain the usefulness of this diet to a client who is skeptical.*
(Total all three parts – three pages)

3. Due October 5th Childhood Obesity

Using these websites, please research the following questions.

Websites:

American Obesity Association www.obesity.org

The Center for Disease Control www.cdc.gov/nccdphp/dnpa/obesity

The Center for Disease Control www.cdc.gov/brfss

National Heart, Lung, and Blood Institute www.nhlbi.nih.gov/health/public/heart/obesity

Healthier US www.healthierus.gov

1. *What are overall obesity trends among children and adolescents in the U.S.?*
2. *How have obesity trends changed in children the U.S. since 1990?*
3. *How does Louisiana compare in overall (adults as well as children) obesity trends to other states across the U.S. and to the national average?*
4. *Compare childhood obesity trends in Non-Hispanic Whites, African Americans and Hispanics in both girls and boys.*
5. *Discuss the health risks/health consequences to children of being overweight or obese. (Do not simply list)*

4. Due November 9th- College-age Drinking

Go online to:

<http://www.collegedrinkingprevention.gov>

- i. *Go through the interactive body and read about alcohol myths. Did any of this information surprise you? Type your response.*
- ii. *Read an article from the newsroom and summarize it. What did you learn from this article?*
- iii. *Discuss three ways to disseminate this information on college campuses.*
- iv. *Discuss three challenges to convincing college students to follow your information.*

(Total all four parts – three pages)

5. Due November 23rd-smoking.

Go to:

www.lung.ca

- i. *Click on “lung diseases” at the far left on the top. Chose one disease and summarize in one page in your own words.*
- ii. *Then scroll down the headings on the left side of the page. Click on “smoking and tobacco”. Read the links under “smoking and tobacco”. Summarize what you have read, in one page.*

iii. *What did you learn about the barriers to quitting and the benefits of quitting? Discuss how you would help a friend stop smoking. What other suggestions do you have? (one page)*

5. Group dish preparation activity and Presentation (60 points). These are due throughout the semester. We will draw for dates and topics on the first day of class.

For this assignment, you will divide into groups of two and prepare a dish that is suitable for someone with a chronic illness. Prepare enough so that everyone can have a taste. On the date of your presentation, be sure to bring plates, utensils, etc. You will choose the chronic illness and date of presentation in class.

Write-up the following information for me and be prepared to present what you have found in class:

1. Briefly describe the chronic illness and the general nutrient needs of persons with this illness.
2. Describe what you have prepared and its nutrient content.
3. Explain why this dish is suitable for the individual with the chronic illness.
4. How do you think this dish will be received? Think in terms of taste preference, culture, and ethnicity, age.
5. Prepare copies of the recipe with the nutrient information and cost per serving for the entire class.
6. **Remember, do not simply read your report to the class, this will be downgraded. Be familiar enough with your material so you can discuss it.**
7. Bon appetite!!

These will be presented throughout the semester. You will be graded on the written portion, suitability of dish for your disease and the presentation. Both partners will receive the same grade.

7. Journal – **20 points** - you are to maintain a journal of what is discussed in class each week including lecture, videos, guest speaker or other presentations. This is to be handed in on the last day of class (**December 7**). I prefer it to be typed, but legible handwritten journals will be accepted. Remember, this is a summary. Do not turn in your whole semester's notes.

8. Extra Credit. Extra Credit is due by December 7th.

There are two possible ways to receive extra credit in this class.

1. *Exams*: Each exam will have a short answer question(s) that will be based on extra credit readings.
2. *Interview*: You can receive up to 10 points by conducting an interview with a nutrition expert (not me) or an expert in chronic illnesses who has had considerable experience

working with clients with chronic illnesses. Summarize the interview into a 3- page report. The minimum information that you should obtain, is:

1. Who is this person? Where do they practice? What are his/her credentials? How long has he/she been working as a nutrition expert?
2. What kind of chronic illnesses does he/she find most common?
3. What kinds does he/she find to be most affected by diet?
4. Does he/she find that most people adhere to his/her advice?
5. What are most common problems when counseling people with chronic illnesses?
6. What, if any, insurance barriers does he/she face?

ATTENDANCE:

Attendance (*including tardiness*) and class participation will be taken into account to evaluate your grade. **You are expected to attend all classes and participate in class discussion.** For example, if you have missed any classes and/or have been late, or have not participated in class discussion, your grade will be **downgraded** from a B+ to a B. If you have a LEGITIMATE reason to miss class or be tardy, documented illness, family emergency, etc. please email me before class. **IF YOU ARE RUNNING MORE THAN 10 MINUTES LATE, YOU WILL NOT BE ALLOWED TO ENTER THE CLASSROOM, unless prior arrangement has been made.**

Cell phones and pagers:

Please refrain from using and turn-off cell phones and pagers during lecture.

Late assignment policy:

I will accept late assignments however; they will be docked 5% for each day late. I will **NOT** accept assignments any later than 2 weeks past the due date. I will **NOT** accept assignments in my mailbox or via email. You may give them to me on Monday and Wednesday, 1:30PM Innovation Hall room 205.

DATES OF NOTICE:

First Day of class	August 31
Labor Day, university closed	September 7
Last day to add classes –	September 15
Last day to drop classes (no reimbursement)	October 2
Columbus Day	October 12
Classes meet Tuesday Oct. 13	
Thanksgiving recess	November 25-29
Last Day of Class	December 12
Exams	December 14-21

Schedule: Please note that this schedule is subject to change.

DATE	TOPIC	ASSIGNMENTS & READINGS
August 31	Go over syllabus Introductions Overview of Nutrition Pick presentation groups	Chapters 1- 12(these are only for review,) except as noted below) Internet assignment #1
September 14	Illness and nutrition state Anemia Internet assignment #1 due	Read Chapter 17 Review pp. 338-344, 657-660 Internet assignment #2
September 21	What is good nutrition science? Video “Fat and Happy” (?) Early development of chronic illnesses Internet assignment #2 due	Highlights Chapters 1 & 15
September 28	Obesity - Movie: “Supersize Me” (?)	Read Chapter 8 p258-267; Chapter 9 Internet assignment # 3
October 5	Hunger and malnutrition The Face of Hunger 60 minutes video (?) “Walk the line” Internet assignment # 3 due	Highlights Chapter 16
October 13	Antioxidant, Phytochemicals and other Nutrients in disease prevention Nutritional assessment Review Diet Analysis plus	Read Highlights Chapter 11 Read Chapter 17, pp595-599 Do quiz # 1
October 19	Diabetes Mellitus Turn in Quiz # 1	Read Chapter 26, Chapter 4 124-127 Study for Exam 1
October 26	Disorders of the Heart Exam I	Read Chapter 27
November 2	Eating disorders guest speaker TBA	Read Chapter 9 Highlight internet assignment #4
November 9	Lower GI tract disorders Internet assignment # 4 due	Read Chapter 24
November 16	Renal Disease Liver Disorders	Read Chapter 28 Read Chapter 25 Internet assignment # 5
November 23	Osteoporosis Cancer Internet assignment # 5 due	Read Highlight Chapter 12 Read Chapter 29 Finish nutritional assessment
November 30	HIV AIDS Nutritional Assessment paper due (turn in copy and keep a copy) Presentation of findings to class	Complete quiz # 2 Finish extra credit Finish journal

December 7	Complete presentation of nutr'l assessment findings to class Journal due Extra credit due Quiz # 2 due	Study for final!!!!
	FINAL EXAM, DEC 21, 1:30-4:15PM (to be confirmed)	