

MATERNAL AND CHILD NUTRITION (4 Units)

CHS 231

Course ID# 840 186 200

Day & Time: Tuesday & Thursday, 10:00–11:50
Room: 61-269 CHS

Instructor:	Charlotte G. Neumann (CN)	Special Reader:	Maria Koleilat
Office:	26-051A CHS, x52051	Office:	26-051A CHS
Office Hours:	Tuesday 1:00-4:00 p.m., Thursday 1:00-3:00 p.m., and by appointment	Office Hours:	TBA
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LEARNING OBJECTIVES

The course is intended to enable students:

- a. To learn about the main nutritional problems of women and children, in less technically developed countries and among disadvantaged populations in industrialized countries, and their impact on the individual and community
- b. To understand the underlying factors and those amenable to change
- c. To learn about and devise appropriate preventive and intervention programs and policies

The course can be taken separately or as the first part of a series, which includes courses on community nutrition assessment, nutrition policy, food security, and diet and chronic disease.

PREREQUISITES

The course is intended for graduate students in public health or relevant disciplines, with some bioscience courses in their backgrounds. Students without knowledge of basic nutrition are required to familiarize themselves with basic nutrition concepts by reading an introductory human nutrition text.

READINGS

1. Required

- a. A reader of required articles will be available from Course Reader Materials, 1141 Westwood Boulevard. It consists of selected articles and readings from journals, reports, and reviews. Readings are organized by lectures.
- b. Gibney MJ, Margetts B, Kearney J, Arab L. *Public Health Nutrition*. Oxford, UK: Blackwell NS, 2004.

2. Recommended for background information

- a. Pipes PL, Trahms CM. *Nutrition in Infancy and Childhood*, 7th Edition. St Louis: Mosby, 1997
- b. Worthington-Roberts BS, Williams SR. *Nutrition in Pregnancy and Lactation*, 6th Edition. Dubuque, IA: Brown & Benchmark, 1997.

The following books are highly recommended for nutrition work in developing countries:

- c. King FS, Burgess A. *Nutrition for Developing Countries*. Oxford: Oxford University Press, 1992.
- d. Semba RD and Bloem MW. *Nutrition and Health in Developing Countries*. Humana Press, New Jersey, 2001.

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The above books are on reserve in the Biomedical Library. Items 1b and 3 are for sale in the Health Sciences Bookstore.

For those students who have not completed an upper-division or graduate course in nutrition or metabolism, we expect that, within the first two weeks of the quarter, they will be required to skim through the following, which is available for purchase in the Health Sciences Bookstore:

3. Mitchell, Mary Kay. *Nutrition Across the Life Span*. WB Saunders, 2003

or a comparable introductory nutrition textbook.

ASSIGNMENTS AND EVALUATION

Appropriate reading should be completed BEFORE each class whenever possible.

Midterm: There will be a “midterm” examination (short-answer), based on class material and readings on November 16th, 2006.

Class Presentation: Each student will be expected to make a brief (15-minute) class presentation on a topic related to the class lecture. A list of suggested topics is in the syllabus; however, a student can select a topic of his/her own choosing, with guidance from the instructor. You MUST discuss your topic with the instructor prior to your presentation so that there is no duplication with the scheduled lecture. The student is to pick a topic with which they have had unique experience or a topic they wish to learn more about from the literature. The student is not to give a lecture, which the instructor has given.

Final Examination: A take-home examination will consist of a problem-solving assignment. The maximum length of the paper is 12 double-spaced typed pages. The examination will be handed out on November 16th and is due back on the last day of class, December 7th, or on December 8th.

Course grades will be approximately based on:

1. Class participation (20%)
2. Midterm examination (30%)
3. Final examination (50%)

Maria Koleilat, the Special Reader, will meet with you during her office hours or any time you need help, as will Dr. Neumann.

<u>Session</u>	<u>Date</u>	<u>Instructor</u>	<u>Topic</u>
1	9/28	CN	<u>Background Discussion of Course Mechanics</u> Concepts, philosophy, public health view of nutrition.
2	10/3	CN	<u>Determinants of Nutrition: Community Nutrition Equation</u> Analysis of community nutrition situation in relation to molding forces, including economics, education, population pressure, cultural factors, etc. The necessity for a multidisciplinary approach.
3	10/5	CN	<u>Assessment of Nutritional Status</u> Review of principal methods for assessment of nutritional status, on an individual and community basis.
4	10/10	W. Slusser	<u>Lactation and Breastfeeding</u> The physiological and psychological process involved in lactation and breastfeeding; nutritional needs of the breastfeeding mother and the breast-fed infant; The Baby-Friendly Hospital.
5	10/12	L. Lange	<u>Policies and Programs and Initiations in Support of Breastfeeding in the USA</u>
6	10/17	CN	<u>Formula Feeding</u> Infant formulas; overview of their development, composition, and utilization. Feeding the prematurely born and low-birth weight infant; role of "breast milk enhancers."
7	10/19	CN	<u>Nutrition and Reproduction</u> Overview of nutritional needs for pre-pregnancy, pregnancy, and lactation; relationship of nutritional status to pregnancy outcomes.
8	10/24	CN	<u>Problem of Fetal Malnutrition and Low Birth Weight</u> Determinants and challenge of low birth weight; long-term consequences of low birth weight for child and adult health and disease.
9	10/26	CN	<u>Protein-Energy Malnutrition: Mechanisms, Etiology</u> Special developmental, biological, psychosocial, cultural risk factors in children passing through the "weaning" or transitional period. Programmatic approaches.
10	10/31	CN	<u>Micronutrients: Vitamin A, Iodine</u>

11	11/02	CN	<u>Micronutrients: Iron, Zinc</u>
12	11/07	CN	<u>Micronutrients: B₁₂, Folate</u>
13	11/09	CN	<u>Calcium, Selenium</u>
14	11/14	CN	<u>Principles of Young Child Feeding</u> Developmental aspects of complementary feeding young children; principles of multi-mixes and development of weaning foods.
	11/16	CN	MID-TERM EXAMINATION Final Examination (take-home) handed out
15	11/21	S. Vecchiarelli	<u>Childhood Obesity: School Initiatives to Improve Nutrition and Prevent Overweight and Obesity</u>
	11/23		THANKSGIVING BREAK
16	11/28	Harris	<u>Nutrition Programs for Disadvantaged Groups in USA</u>
17	11/30	O.Galal	<u>Programs to Combat Childhood Malnutrition in Developing Countries</u>
18	12/05	TBA	<u>Functional Outcomes of Malnutrition: Cognitive Development</u>
19	12/07	CN	<u>Malnutrition: Infection/Immune Function</u>

ALL FINAL EXAMINATION PAPERS ARE DUE BY DECEMBER 8th. HAND TO DEPARTMENT STAFF IN ROOM 36-071. HAVE A GOOD WINTER BREAK AND A HAPPY NEW YEAR!!

CLASS PRESENTATION AND DISCUSSION: SUGGESTED TOPICS

Each student will make a 15-20 minute presentation followed by a brief class discussion relevant to the scheduled lecture. The presentation should be based on personal experience or on the literature. The student(s) should consult the faculty member who will be lecturing on the assigned day in advance, so as to avoid duplication. The presentation is meant to augment or illustrate the lecture material, not to be a comprehensive presentation or a rehash of the scheduled lecture. The Special Reader will also be available to help select a topic.

Following is a list of suggested topics. The student(s) may substitute a topic of their own choice, which must be cleared by the instructor. Depending on class size, there may be more than one presenter per session.

<u>Session</u>	<u>Date</u>	Topic(s)	Student(s)
3	10/05	Experiences or problems encountered with aspects of nutritional assessment	_____ _____
4	10/10	Contraindications to breastfeeding: recommendations for feeding infants of HIV-positive mothers	_____ _____
5	10/13	Self-help groups, examples: La Leche League, WABA, others	_____ _____
6	10/17	Formula marketing code	_____ _____
7	10/19	Nutritional challenges: teenage pregnancy OR gestational diabetes	_____ _____
8	10/24	The Barker Hypothesis: Consequences of intrauterine malnutrition in adulthood, OR the role of smoking, alcohol, etc. in low birth weight	_____ _____
9	10/26	Prevention of PEM; critique of nutrition rehabilitation centers	_____ _____
10	10/31	Community-based approaches to combat vitamin A deficiency, or iodine deficiency in hard-to-reach populations	_____ _____
11	11/02	Nutritional challenges of vegetarian diets for children or nursing mothers	_____ _____

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| 12 | 11/07 | Prevention of neural tube defects | _____ |
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| 13 | 11/09 | Resurgence of nutritional rickets in the USA or in developing countries | _____ |
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| 14 | 11/14 | Appropriate technology: fermentation, germination to improve weaning diets | _____ |
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| 15 | 11/21 | Obesity: personal experience with programs to prevent or treat childhood obesity | _____ |
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| 16 | 11/28 | Experiences with WIC, food stamps or other US government programs | _____ |
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| 17 | 11/30 | Critique of growth monitoring programs—PROS and CONS of food fortification | _____ |
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| 18 | 12/05 | Iron deficiency and cognitive function | _____ |
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| 19 | 12/07 | Impact of intestinal parasites on nutrition; Nutrition and HIV/AIDS | _____ |
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