CHS 231: Maternal and Child Nutrition  
Syllabus, Winter, 2015  
Course # 840-186-201

LECTURE:  Mondays and Wednesdays, 1:00-2:50 pm, Room 61-262

INSTRUCTORS
Marion Taylor Baer, PhD, RD  
Office: 26-078B CHS  
Office Hours: 11-12 Mondays and Wednesdays, and by appointment (sign-up sheet outside office suite)  
Phone: (310) 825-8196  
E-mail: mtbaer@ucla.edu

Dena Herman, PhD, MPH, RD  
Office:  
Office Hours:3-4 Mondays and Wednesdays and by appointment (see email address)  
Phone: (310) 825-8196  
E-mail: dena.herman@csun.edu

LEARNING OBJECTIVES and PUBLIC HEALTH COMPETENCIES ADDRESSED
(Note: The numbered competencies refer to those published by the Association of Schools of Public Health, and available on their website.)

This course is intended to enable students to:

1) Learn about the main nutritional problems of families, with emphasis on maternal and child health (MCH) in less technically developed countries and disadvantaged populations in industrialized countries and their impact on the individual and community.  
(Competencies C3, C6, C9, G1, I1-8, J6)

2) Understand the underlying factors and those amenable to change.  
(Competencies E2,3,4,6,8)

3) Learn about and devise appropriate preventive and intervention programs and policies.  
(Competencies D8, D9, G10, J10, J11)

This course can be taken separately or as the first course of a series of nutrition courses in CHS. These courses cover topics such as community nutrition assessment; nutrition policy and programs; food security; diet and chronic disease; and social determinants of nutrition and health.

PREREQUISITES
The course is intended primarily for graduate students in public health, or relevant disciplines, with some bioscience courses in their backgrounds. Students without knowledge of basic nutrition are welcome in the class but may need to make an extra effort to familiarize themselves with basic nutrition concepts. We have selected a text that provides such information as required reading for the course (see below). Students needing some “extra” background should read/skim Chapters 1, 2 ,4 (to p.127), 5 (to p.166), 6, and 7 (to p.261). For those of you who would like a more in-depth treatment of the subject matter, we have ordered a second text, which will be available in the Student Store, and also placed on reserve in the Biomedical library: Brown JE. Nutrition through the Life Cycle, 4th edition, 2011 (see below). Certain class topics will have recommended readings from this book as additional background for those who are interested.
REQUIRED READINGS

1) Required texts:

2) Supplementary text: There will be required readings from the following supplementary text which will be available at the Biomedical Library.

3) Required articles for certain sessions will be listed on CCLE. These may include selected articles and readings from recent journals, reports, and reviews.

RECOMMENDED READINGS for more background information


All the above books should be on reserve in the Biomedical Library. In addition, Dr. Baer has copies of most and they can be “borrowed” for short periods.

LEARNING OBJECTIVES related to Regional Study/Final Report:

1. To assess the nutritional status of the MCH population in a certain World Health Organization (WHO) Region.

2. To access and utilize resources for obtaining information on MCH nutrition.

3. To present information on the chosen WHO Region and lead a class discussion of the topic.

4. To develop a Final Report that is worthy of publication.

5. To create a Public Health Tool appropriate for the Region that is innovative and introduces students to diverse technology.

ASSIGNMENTS AND EVALUATION
Readings: Assigned reading should be completed before each class.

Examination: There will be a 2/3-term examination (short-answer, true/false, multiple choice), based on class material and readings, on Monday, February 23rd. It will be preceded by a full class session devoted to a review of the materials.

Individual assignments: The class time will be divided into two 50-minute segments. The first will consist of a lecture on the topic of the day; the second will include individual student presentations relating the topic of the lecture to their Region of interest followed by a general class discussion.

A. Assignment of an area of emphasis for the quarter:

During the second hour of session 2, students will be assigned a WHO Region on which to focus their work for the quarter. The regions include 1) Africa, 2) the Americas, 3) Eastern Mediterranean, 4) Europe, 5) South-East Asia, 6) Western Pacific. See http://www.who.int/about/regions/en/index.html for details about the regions. Within the assigned region, students may elect to focus on a single country (or subdivision of that country), several countries, or the region as a whole. Students who are assigned the same region may then choose to work individually or together as a pair/group. If so, the grade for the collective report must be shared as well and group members will evaluate each other’s contribution.

B. Class Preparation (Bibliographies/Discussions):

1) For each class session, an annotated bibliography shall be submitted for each WHO region that describes an aspect of the current state of MCH nutrition in the context of the class topic scheduled for that day (e.g. vitamin A status among children in the Region of interest). Each bibliography must include at least two articles. Bibliographies will be collected beginning with Session 3, January 12th. Students assigned to a given region will alternate as the designated responder for the class topic of the day each week. The weekly findings will be useful for individual presentations as well as the results section of the Final Report. The bibliographies should be posted in the discussion forum of our class website for each topic.

2) For the discussion period in each class, ALL students should be prepared to share the findings for their Region of interest on the class topic of the day, but the designated responder will be responsible for sharing the findings in their annotated bibliography. The idea is to promote learning about global issues related to nutrition by comparing/contrasting the status of a variety of countries and analyzing the reasons for similarities/differences.

C. Class Presentations/Discussion Leadership:

Each student will be required to do at least one class presentation on the current state of MCH nutrition in the context of the Region of interest that is related to the topic of the class scheduled for that day. At least one week prior to the presentation, students will consult with one of the instructors about the planned content to avoid duplication with the lecture (e.g. the functions of Vitamin A) and to strategize about leading the class discussion. Each student will be allotted 15-20 minutes to present the content and answer questions. The presenter will then lead a class discussion on the topic. This will include a brief summary of the findings for each Region by the designated responder so that the class understands the issues worldwide and can think critically together about underlying causes and
proposed solutions. Students are encouraged to use these data and feedback in writing their Final Report.

A sign-up sheet will be circulated at the 2nd meeting of the class (Jan. 7).

D. Final Report (Instructions to be distributed separately)

E. Final Exam: There will be no final exam. Instead, at the scheduled date and time for the final exam, students will present the recommendations outlined in their Final Report for their Region and the public health tool that they have developed to implement one or more of those recommendations.

Grades: Course grades will be approximately based on:

1) Class participation (35%)
   a. Discussion participation = 10%
   b. Weekly bibliography = 10%
   c. Class presentation/response/discussion leadership = 15%
2) 2/3 term examination (25%)
3) Final report on the assigned Region (40%)
# CLASS SCHEDULE

**CHS 231**  
**Winter 2015**

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**Topic/Readings (others may be assigned before the lectures)**

- **Introductions/ discussion of course mechanics**
- **Introduction to MCH Nutrition and the MCH Life Course Perspective**

**Readings:**

- **Stein**: Chs. 1 *Introduction to Public Health Nutrition*; 5 *Public Health Nutrition Inequalities: the Global Context*
- Fine A, & Kotelchuck M. *Rethinking MCH: The Life Course Model as an Organizing Framework*, DHHS, HRSA, MCHB. September, 2010

**Recommended background reading:**


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**Fetal Programming / Intergenerational Effects of Nutrition**

**Readings:**

- Gibney: Ch. 18, *Maternal Nutrition, Fetal Programming and Adult Chronic Disease*

**Recommended:**


**3 1/12 Herman**

**Maternal Nutrition**

**Readings:**

**Insel:** Ch. 12, *Life Cycle, Maternal and Infant Nutrition: Pregnancy* pp. 500-512

Semba: Ch. 2, *Maternal Mortality in Developing Countries*, section 2.6 *Nutrition and Maternal Health* pp. 41-51

**Recommended:**

Gibney: Ch. 17, *Adverse Outcomes in Pregnancy* pp. 283-301

Semba: Ch. 3, *Low birth weight and neonatal mortality*

Brown: Chs. 4 & 5 *Nutrition during Pregnancy*

**4 1/14 Herman**

**Assessment of Nutritional Status**

**Readings:**

**Stein:** Ch. 2 (pp. 17-20)

Gibney: Ch. 3, *Assessment of Nutritional Status in Individuals and Populations*

**Recommended:**

Brown: Ch. 1, *Nutritional Assessment* pp. 39-41
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<th>Date</th>
<th>Visiting Lecturer</th>
<th>Topic</th>
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<tr>
<td>1/19</td>
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<td>Semba: Ch. 5, <em>Child growth and development</em> pp.113-128</td>
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Stein: Ch. 9 *Global Perspectives on the Promotion, Protection, and Support of Breastfeeding*  
IOM. 2011 *Early Childhood Obesity Prevention Policies: Ch. 4 Healthy Eating* (Breastfeeding pp. 83-90)  
Recommended:  
Brown: Ch. 6 *Nutrition during lactation* |
| 1/26 | Hope Wills       | Infant Feeding: Formula, Food, Fads | Insel: Ch. 12 *Life Cycle, Maternal and Infant Nutrition: Lactation* pp. 521-532  
IOM. 2011 *Early Childhood Obesity Prevention Policies. Ch. 4 Healthy Eating* (Bottle Feeding pp. 90-92)  
Recommended:  
Brown, Ch. 8 *Infant Feeding*  
Gibney: Ch.16 *Infant Feeding* |
Stein: Ch. 15 *Children’s Dietary Needs and the Role of School Meals*  
IOM. 2011 *Early Childhood Obesity Prevention Policies. Ch. 4* |
Healthy Eating (Complementary Feeding, etc. pp. 92-101)

Recommended:
Brown: Ch. 10, Toddler and Pre-school nutrition
Semba: Ch. 30, Need, efficacy, and effectiveness of multiple vitamin/mineral supplements for young children and considerations for programs

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<td>Adolescent Nutrition</td>
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<td>Insel: Ch. 13, Life Cycle: From Childhood through Adulthood, pp. 550-555</td>
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<td>Brown: Ch. 15 Adolescent Nutrition pp. 386-394</td>
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<td>10</td>
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<td>Baer</td>
<td>Micronutrients: Iron, folate, vitamin B\textsubscript{12} (anemia-associated micronutrients)</td>
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<td>Insel: Ch. 9 Vitamins: Vital Keys to Health, pp. 340-343; 371-376 (folate; B\textsubscript{12}); Ch. 10 Water and Minerals: the Ocean Within, pp. 393-394; 409-415 (Iron)</td>
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<td>Gibney: Ch. 13, Iron-deficiency anemia</td>
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<td>Semba: Ch. 16, Iron deficiency and anemia</td>
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<td>Gibney: Ch. 17, The role of folate and related vitamins</td>
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<td>Protein-energy malnutrition: Mechanisms, etiology</td>
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<td>Stein: Ch. 13, Childhood Diarrhea and Severe Malnutrition</td>
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<td>Gibney: Ch. 10, Public Health Aspects of Undernutrition, pp. 178-191</td>
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<td>Semba: Ch. 12, Malnutrition, pp. 341-169</td>
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Micronutrients: Vitamin A, Iodine, Zinc

Readings:
- **Insel**: Ch. 9 *Vitamins: Vital Keys to Health*, pp. 340-352 (Vitamin A); Ch. 10 *Water and Minerals: the Ocean Within*, pp. 415-419 (Zinc); 421-423 (Iodine)

Recommended:
- Gibney: Ch. 11, *Vitamin A deficiency*
- Gibney: Ch. 12, *Iodine and iodine-deficiency disorders*
- Semba: Ch. 15, *Zinc deficiency*
- Semba: Ch. 13, *Vitamin A deficiency*
- Semba: Ch. 17, *Iodine deficiency disorders*

Micronutrients: Calcium, Vitamin D

Readings:
- **Insel**: Ch. 9 *Vitamins: Vital Keys to Health*, pp. 353-357 (Vitamin D); Ch. 10 *Water and Minerals: the Ocean Within*, pp. 401-403
- **Stein**: Ch. 21 *Vitamin D and Bone Health: A Nutritional Perspective on a Public Health Problem*

Recommended:
- Insel: Ch. 16 *Prevention of Osteoporosis in Children and Adolescents*
- Gibney: Ch. 22.4 *The biology of bone health*, PP.363-369
- Semba: Ch. 14, *Nutritional Rickets and Vitamin D deficiency*

Review for Examination

2/3 Examination

Other Environmental Issues Related to Child Development

Readings: TBD
Visiting Lecturer, May Wang

Overweight and obesity

Readings:

Stein: Ch. 18, *Obesity: An Ecologic Perspective on Challenges and Solutions*

IOM. 2011 *Early Childhood Obesity Prevention Policies: Ch. 4 Healthy Eating*, (pp. 101-107)


Recommended:

Gibney: Ch. 9, *Public Health aspects of overnutrition*

Semba: Ch. 21, *The rapid emergence of obesity in developing countries*


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<td>3/9</td>
<td>M</td>
<td>Visiting Lecturer</td>
<td>Kiran Saluja</td>
<td>The Best Looking 40 year-old Government Program.....that WORKS: WIC</td>
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<td>3/11</td>
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<td>Visiting Lecturer</td>
<td>Miranda Westfall</td>
<td>Other US Nutrition Programs for disadvantaged groups</td>
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