

# School of Public Health

## Syllabus and Course Information



UNIVERSITY OF MINNESOTA  
Driven to Discover<sup>SM</sup>

### PubH 6906 Global Nutrition Spring 2017

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<b>Credits:</b>	<b>2</b>
<b>Meeting Days:</b>	<b>Mondays</b>
<b>Meeting Time:</b>	<b>10:10 a.m. to 12:05 pm</b>
<b>Meeting Place:</b>	<b>Mayo 1250</b>
<b>Instructor:</b>	<b>Sarah E. Cusick, Ph.D.</b>
<b>Office Address:</b>	<b>717 Delaware Building, Room 365</b>
<b>Office Phone:</b>	<b>612-625-8549</b>
<b>Fax:</b>	<b>612-625-2920</b>
<b>E-mail:</b>	<b>scusick@umn.edu</b>
<b>Office Hours:</b>	<b>By appointment</b>

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#### I. Course Description

This course is designed to survey the nature and scope of chief nutritional issues and problems throughout the world, with an emphasis on low-income countries. It includes consideration of specific nutrient deficiencies, as well as nutrition-related aspects of infectious and chronic disease. It satisfies course requirements for students interested in global health and in maternal and child health, while providing a global perspective to public health nutrition.

#### II. Course Prerequisites

None

#### III. Course Goals and Objectives

1. To gain an understanding of the nature and scope of the chief nutritional problems in low-income countries.
2. To gain an understanding of the principal environmental, cultural, socioeconomic, and political factors related to the distribution and severity of global nutritional problems.
3. To gain an understanding of the chief public-health approaches for prevention, surveillance, and relief of the global nutritional problems.

#### **IV. Methods of Instruction and Work Expectations**

The 14 two-hour class periods are divided into 28 one-hour sessions. For 23 of the sessions, the specified topics will be discussed in a lecture and discussion format, supported by the assigned readings. The general approach will be to address each of the nutrition problems following the framework of: a) Definition of the problem and health impact; b) Biological basis and manifestations; c) Assessment and indicators; d) Descriptive epidemiology [person, place, cultural context, risk factors, and distribution]; e) Prevention and treatment; and f) Related programs and policies.

Five class sessions will comprise group presentations of case studies of specific countries as examples of the general topics recently discussed in class. Students will be randomly assigned to one of five presentation groups at the beginning of the course. The group presentations will involve all members and contribute to the course grade (see attached description of group presentations).

#### **V. Course Text and Readings**

##### **To access course site in Moodle**

To access this course go to the Moodle website, <https://moodle.umn.edu/> log in, and click on PubH 6906. Supplemental required readings to augment the text and to provide examples of programs will be available from the Moodle 2.4 course site via Library Reserves. You will find a link to the reserves under "Course Readings and PowerPoint Presentations".

##### **Text**

*Nutrition and Health in Developing Countries*. (2<sup>nd</sup> Ed) RE Semba and MW Bloem (eds). Humana Press: Totowa, NJ, 2008. (Available online through the UMN Library)

##### **Readings**

Doak CM et al. Overweight and underweight coexist within households in Brazil, China and Russia. *J Nutr*. 2000;130:2965-71.

Grummer-Strawn LM et al. Use of World Health Organization and CDC Growth Charts for Children Aged 0-59 Months in the United States. *Morbidity and Mortality Weekly Report (MMWR)*. 2010;59(RR09);1-15.

Imhoff-Kunsch B et al. Wheat fortification is unlikely to benefit the neediest Guatemalans. *J Nutr*. 2007;1017-22.

Kramer MS, et al. Promotion of Breastfeeding Intervention Trial (PROBIT). A randomized trial in the Republic of Belarus. *JAMA*. 2001;285:413-20.

Meeks Gardner JM et al. Zinc supplementation and psychosocial stimulation: effects on the development of undernourished Jamaican children. *Am J Clin Nutr*. 2005;82:399-405.

Sawaya AL et al. The link between childhood undernutrition and risk of chronic diseases in adulthood: A case study of Brazil. *Nutr Rev*. 2003;61:168-75.

Sazawal S et al. Effects of routine prophylactic supplementation with iron and folic acid on admission to hospital and mortality in preschool children in a high malaria transmission setting: community-based, randomised, placebo-controlled trial. *Lancet*. 2006;367(9505):133-43.

World Food Program. WFP and food-based safety nets: Concepts, experiences, and future programming opportunities. Policy Issues Agenda Item 4, 2004

## VI. Course Outline/Weekly Schedule

### Schedule of class sessions and assigned readings

Date	Sess. No	Topic	Semba & Bloem (pages)	Readings (Author)
Jan. 23	1	Introduction to global nutrition	1-32	
	2	Protein-energy malnutrition	341-376	
Jan. 30	3	Child growth & development	113-137	Grummer-Strawn
	4	Guest lecturer: Dr. Cindy Howard, MD		
Feb. 6	5	Famine and emergencies	677-719	
	6	<b>PEM &amp; Growth group presentation</b>		
Feb. 13	7	Vitamin A	377-434	
	8	Iron	479-506	Sazawal
Feb. 20	9	Iodine	507-530	
	10	Zinc	455-478	Meeks Gardner
Feb. 27	11	Other micronutrients	531-576; 793-830	
	12	Micronutrient fortification <b>NGO Report due</b>		Imhoff-Kunsch
Mar. 6	13	Breastfeeding, weaning & complementary feeding		Kramer et al.
	14	<b>Vitamin/Mineral group presentation</b>		
Mar. 13		<b>Spring Break no class</b>		
Mar. 20	15	Nutrition and infection	130-178; 307-340	
	16	Nutrition and infection		
Mar. 27	17	Low birthweight and IUGR	63-86	
	18	<b>Child Health Group presentation</b>		
Apr. 3	19	Maternal/perinatal	33-62	
	20	First 1,000 Days <b>Comparison report due</b>		
Apr. 10	21	Obesity and Nutrition transition Guest lecturer: Dr. Melissa Crane, PhD	601-616, 617-638	Doak
	22	Chronic disease	577-599	Sawaya
Apr. 17	23	<b>Maternal/LBW group presentation</b>		
	24	<b>Nutrition Transition/Chronic Disease group presentation</b>		
Apr. 24	25	Dr. Barry Popkin lecture		
	26	Paper preparation		
May 1	27	Nutrition surveillance	831-857	
	28	World programs & relief efforts	677-697	WFP, 4
May 8		<b>Final paper due by 5 p.m.</b>		

## **Assignments and Expectations**

1. Each student is expected to do the assigned readings, attend class, and participate in discussions. At the beginning of each class, each student will hand in two questions related to the assigned readings for that day. This is how class roll will be taken. Attendance and participation: 15% of total points.
2. Each student will participate in the development and presentation of his/her group's country case study, and contribute to the written summary **due on the day of the scheduled presentation**. Group Presentation: 20% of total points.
3. Each student will write a 3-5 page summary describing an international non-governmental organization (NGO) and their efforts regarding international nutrition problems (**due Feb. 27**). NGO report: 15% of total points.
4. Each student will write a 3-5 page summary of a comparison of major features between the United States and a developing country around a nutrition-related policy (**due April 3**). Comparison report: 15% of total points.
5. Each student will submit an original paper considering an international nutrition problem/issue of public health importance (**due by 5:00 pm on May 8, the day scheduled for the final exam**). The paper should be submitted electronically to [scusick@umn.edu](mailto:scusick@umn.edu). Final paper: 35% of total points.
6. There will be no final examination.

## **VII. Evaluation and Grading**

**Grading:** The University utilizes plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following:

- A: 95-100 (4.0)
- A-: 90-94 (3.667)
- B+: 87-89 (3.333)
- B: 83-86 (3.000)
- B-: 80-82 (2.667)
- C+: 77-79 (2.333)
- C: 73-76 (2.000)
- C-: 70-72 (1.667)
- D+: 67-69 (1.333)
- D: 63-66 (1.000)
- D-: 60-62
- F: Below 60

The S/N option is available for this course. A grade of B- or better is required for an S.

For additional information, please refer to:  
<http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html>

This course may be taken for a letter grade (**A-F**) or on a pass/fail basis (**S/N**). If this course is being taken on a pass/fail basis, a passing grade requires that all assignments be completed, that class was attended at least 12 /15 days, and that at least 75% of the possible points be earned.

**F (or N)** – Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit; or (2) was not completed and there was no agreement between the instructor and the student that the student would be given an 'I' grade.

### **Course Evaluation**

The SPH will collect student course evaluations electronically using a software system called CoursEval: [www.sph.umn.edu/courseeval](http://www.sph.umn.edu/courseeval). The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade in SPHGrades: [www.sph.umn.edu/grades](http://www.sph.umn.edu/grades). All students will have access to their final grades through OneStop two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are an important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

### **Incomplete Contracts**

A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an "I" requires that a contract be initiated and completed by the student before the last official day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student's college). For more information and to initiate an incomplete contract, students should go to SPHGrades at: [www.sph.umn.edu/grades](http://www.sph.umn.edu/grades).

**University of Minnesota Uniform Grading and Transcript Policy** - A link to the policy can be found at [onestop.umn.edu](http://onestop.umn.edu).

## **VIII. Other Course Information and Policies**

### **Grade Option Change** (if applicable)

For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at [onestop.umn.edu](http://onestop.umn.edu).

### **Course Withdrawal**

Students should refer to the Refund and Drop/Add Deadlines for the particular term at [onestop.umn.edu](http://onestop.umn.edu) for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Office of Admissions and Student Resources at [sph-ssc@umn.edu](mailto:sph-ssc@umn.edu) for further information.

### **Student Conduct Code**

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see: [http://regents.umn.edu/sites/default/files/policies/Student\\_Conduct\\_Code.pdf](http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf).

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

### **Use of Personal Electronic Devices in the Classroom**

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference:

<http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

### **Scholastic Dishonesty**

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code:

[http://regents.umn.edu/sites/default/files/policies/Student\\_Conduct\\_Code.pdf](http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf)) If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see:

<http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html>.

The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: <http://www1.umn.edu/oscai/integrity/student/index.html>. If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

### **Makeup Work for Legitimate Absences**

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see:

<http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html>.

### **Appropriate Student Use of Class Notes and Course Materials**

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: <http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

### **Sexual Harassment**

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy:

<http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf>

### **Equity, Diversity, Equal Opportunity, and Affirmative Action**

The University will provide equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: [http://regents.umn.edu/sites/default/files/policies/Equity\\_Diversity\\_EO\\_AA.pdf](http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf).

### **Disability Accommodations**

The University of Minnesota is committed to providing equitable access to learning opportunities for all students. Disability Services (DS) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DS at 612-626-1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations.

If you are registered with DS and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course.

For more information, please see the DS website, <https://diversity.umn.edu/disability/>.

### **Mental Health and Stress Management**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: <http://www.mentalhealth.umn.edu>.

### **The Office of Student Affairs at the University of Minnesota**

The Office for Student Affairs provides services, programs, and facilities that advance student success, inspire students to make life-long positive contributions to society, promote an inclusive environment, and enrich the University of Minnesota community.

Units within the Office for Student Affairs include, the Aurora Center for Advocacy & Education, Boynton Health Service, Central Career Initiatives (CCE, CDes, CFANS), Leadership Education and Development –Undergraduate Programs (LEAD-UP), the Office for Fraternity and Sorority Life, the Office for Student Conduct and Academic Integrity, the Office for Student Engagement, the Parent Program, Recreational Sports, Student and Community Relations, the Student Conflict Resolution Center, the Student Parent HELP Center, Student Unions & Activities, University Counseling & Consulting Services, and University Student Legal Service.

For more information, please see the Office of Student Affairs at <http://www.osa.umn.edu/index.html>.

### **Academic Freedom and Responsibility: for courses that do not involve students in research**

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.\*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

\* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

**Global Nutrition PubH 6906**  
**Guidelines for Group Presentations**  
Spring 2017

Each student will be randomly assigned into one of five presentation groups:

1. PEM & Growth Group;
2. Vitamin/Mineral Group;
3. Maternal/ LBW Group;
4. Child Health Group;
5. Nutrition Transition/Chronic Disease Group

Groups will independently meet and develop a 30-minute presentation for class discussion as a case study of an important nutritional problem or issue in a specific country. For example, the Vitamin/Mineral Group might select "Iodine deficiency in Bolivia;" or the Child Health group might choose "Weaning practices and diarrhea in Mali." Following the presentation, Dr. Cusick will moderate questions and discussion for 20-25 minutes.

There are several requirements for the group presentations.

1. The group will choose the exact nutritional problem and country and have it approved by Dr. Cusick.
2. Each group member will participate in the presentation (not just in the development of it).
3. The group members will decide on the organization and format of the presentation. If special AV equipment will be needed, please let Dr. Cusick know at least 3-4 days prior.
4. The following country factors are the kinds of things that could be included relative to the nutritional problem or issue: geography and other environment, agriculture and food, cultural practices, poverty or socioeconomic factors, distribution and severity of the problem, preventive or treatment strategies used, and any related local or national policies. Please document your presentation with data.
5. The presentation should include some practical recommendations for the country concerning next steps.
6. Each group will provide a 2-3-page case-study summary of the presentation that will be distributed to the other class members on the scheduled day of the presentation.



**PubH 6906: Global Nutrition  
Guidance for NGO Summary  
Spring 2017**

**NGO Summary**

1. Each student will develop a 3-page summary describing an international non-governmental organization (NGO) and their efforts regarding international nutrition problems (**due on February 27**).
2. The intent is to have each student investigate the activities of an NGO that works on nutrition issues internationally for NGOs that have multicomponent activities the report focus should be on nutrition-related activities. The most likely resources will probably be found online, although libraries often have directories of international organizations as well.
3. Submit your choice to Dr. Cusick for approval. For multiple students picking the same NGO: first come, first served.
4. For your summary, briefly describe the scope and nature of the NGO.  
Examples of some questions you should try to address include the following. In which areas of the world do they work? Do they focus on particular nutrition problems or specific approaches to solving them? At what level do they work, e.g., agriculture, foods, household, food preparation, complementary feeding, supplementation, etc.? Who is their target population? What proportion of their funds go to administrative costs?
5. Include a brief personal evaluation of your sense of the philosophy and practices of the NGO.
6. You need not include any references beyond a website URL, but list them if you use them.
7. If the assignment is submitted after the due date, 5% will be deducted for each day it is late.

**PubH 6906: Global Nutrition**  
**Guidance for US Comparison Report**  
Spring 2017

1. Each student will develop a 3-5-page summary report comparing major features between national-level nutrition-related policies in the USA with corresponding policies in a developing country (other than the country used in the group presentation). Policies may be related to any nutrition or food policies related to health, as examples: food safety, labeling requirements, nutrient fortification, targeted marketing, nutrient supplements, nutrition-related public assistance, access to nutrition information, international trade, access to nutrition-related services.
2. Most of the examples given are huge topics, so in your summary focus on a specific aspect to make the comparisons more manageable and meaningful. So, for example “Policies and practices related to iron fortification in the USA and Bolivia” may be a more appropriately focused topic.
3. Topics are to be approved by Dr. Cusick.
4. In your comparisons, include the basic nutrition or other rationales for the policies, issues of those opposed to the policies, history and implementation of the policies, evidence for success or failure of the policies and apparent reasons for these outcomes. Also, include your personal evaluation of the usefulness of the policies, if they should be continued, and how they should be modified to be more effective. If you present the comparisons in a table, make sure you discuss the issues involved.
5. List references using a conventional citation format.
6. Submit the US Comp Report summary by **April 3**. If it is submitted after the due date, 5% will be deducted for each day it is late.

**Global Nutrition PubH 6906**  
**Guidelines for Final Paper**  
Spring 2017

1. Each student is required to submit an original paper considering a global nutrition problem or nutrition issue of public health significance. The topic does not need to have been included in class discussions. The topic can either be couched in terms of a worldwide nutrition problem or issue, or as one of particular significance in a particular region or country. Please have your topics approved by Dr. Cusick.
2. The topic should not just be a descriptive piece; rather, it should address a specific aspect or issue related to the nutrition problem. So, for example, a paper like "Iodine Deficiency" is not acceptable, but a paper like "Problems related to implementation of India's national policies concerning iodine-fortification of salt" would be acceptable. This means you will need to read-up on topics of interest to you and understand the issues involved. The textbook may provide some leads, and searching on Google or PubMed for topics of interest should provide good starting points.
3. The organization of the paper should derive from the problem or issue addressed. Make sure you provide sufficient background to understand the problem. Please include your own opinion concerning how the problem might have better been dealt with or how it might be dealt with in the future and explain why you think so. One purpose of the paper is to get a sense of your views concerning the problem or issue.
4. The paper should be 10-12 pages in length, double-spaced. Please do not extend it beyond 12 pages of text. Make sure references are cited appropriately in the text and listed at the end. Any of the more conventional forms of reference citation are acceptable.
5. The paper is **due by 5:00 PM on May 8**, the day and time scheduled for the final exam in the class. The paper should be submitted electronically ([scusick@umn.edu](mailto:scusick@umn.edu)). Papers received after this time and date will be considered late and will be docked 10% for each day late. No papers will be accepted after May 12; a zero grade will be entered for this assignment.