

World Food Problems
Purdue University
Nutrition Science 590
Agricultural Economics 596
Fall 2017, 3 credits
(revised: August 20, 2017)

Instructors

Prof. Dennis Savaiano, Nutrition Science savaiano@purdue.edu 4-9709
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The instructors generally maintain open door policies, but the best approach for meeting to discuss course matters is to contact the individual by email to schedule an appointment.

Class Times and Meeting Locations

Monday	Lecture	9:30 am-10:20 am	Wilmeth 3154
Wednesday	Lecture	9:30 am-10:20 am	Wilmeth 3154
Friday	Discussion	9:30 am-10:20 am	Wilmeth 3154

I. Course Description

The goal of this course is to educate advanced undergraduate and graduate students on the multi-disciplinary challenges that exist in meeting the food and nutrition needs of a growing world population. The course aims to instill an appreciation of the importance of economics, food production and technology, trade, culture, communication, political processes and institutions, demography and related factors in determining adequate food, nourishment and health globally. Much of the focus will be on factors and interventions that can prevent or limit malnutrition.

II. Course Format

The course will meet three times per week during the semester. Typically, Mondays and Wednesdays will be devoted to faculty and student presentations and Fridays will be devoted to small group discussion. The course is writing-intensive, and a large proportion of the course grade will be based on written work.

III. Reading Assignments

Required and optional readings will be assigned in advance of class meetings. Readings will be linked on the course Blackboard site and will be referenced by the week and/or day on which they will be discussed. There is no textbook for the course.

IV. Course Learning Objectives

- Understand global food production and consumption, food trade and its history including: the major plants produced and consumed; where they are grown; patterns and extent of global food trade; major food animals and animal production systems; countries involved in food trade; urbanization and food transportation; and effects of post-harvest processing on food trade and availability.
- Understand patterns of population growth and their relationship to past and future food production and consumption locally and globally.
- Understand what malnutrition looks like, where it occurs, how it is measured, and the interactions between malnutrition (both under nutrition and obesity) and human health.
- Understand the basic economic principles that affect consumer food costs and consumption patterns globally.
- Understand how culture, communication and politics influence food availability, world food problems and malnutrition.
- Predict, based on available information, likely scenarios for the future of world food problems and malnutrition.

V. General Expectations

Respect for instructors, guest lecturers and fellow students.

Academic honesty, consistent with [Purdue's Honor Pledge](#) and [Policy on Academic Integrity](#).

Preparation, participation, effort and self-reflection.

Cooperation with fellow students during in-class activities and projects.

Communication (keeping up with the course Blackboard site and regularly checking Purdue email for any correspondence about the course).

VI. Grading

Grades will be assigned using a standard A-F grading scale that includes pluses and minuses.

Semester grades will be calculated on the following basis:

25% of grade: Attendance and participation, especially in Friday discussions. Your active participation is essential for success in this course, so do your best to be here. Please notify us in advance if you are unable to attend. If you are sick, you should not come to class, but you should let an instructor know what is going on. Full participation points will be awarded to students who are consistently prepared for class and engaged in class content and Friday discussions. Students may miss one Friday discussion without penalty or explanation.

25% of grade: Weekly written assignments. These will be assigned in class on Mondays and are due by 5:00 pm Thursdays. This schedule permits group discussion of the topic during the week and also provides the instructors with time to read the assignments before the Friday discussion. Responses should be no more than 1 typed page, single spaced, using a Times New Roman or similar 12 point font, with 1" margins throughout. Late assignments will not be accepted. Students may drop one assignment without penalty.

10% of grade: Individual and group presentations. Following the October break we will devote each Wednesday to an individual or group-led lecture topic. Instructors will be responsible for assigning groups and topics. Additional information will be provided prior to the October break.

40% of grade: Final Project/Paper. Each student will prepare a paper or complete a project of their design. The paper is due on December 8 by 5:00 pm; one half grade will be deducted for each day the paper is late, including weekend days. Papers should be 10-12 pages, not including references, tables, or figures. The instructors will provide additional information during the course, including intermediate due dates for topics, outlines, rough drafts, etc. The paper/project may take one of the following forms:

- A. White paper. Students can choose to conduct research on topic of interest and write a paper that succinctly discusses a key nutrition problem and various options and interventions to address the problem, including policy interventions. The paper should conclude with a recommendation for a particular course of action (say, to a national government or to an international organization like the UN). Examples include: Should wealthy countries provide food aid to poor countries in order to promote food security? Should developing country governments subsidize pesticides and fertilizers to boost food production?
- B. Research Proposal. Students are free to identify an interesting and important research question, undertake a review of relevant literature related to the topic, and outline a study that could investigate the question. Examples include: Are food taxes a good way to combat the obesity epidemic? Should poor farmers produce for subsistence or for the marketplace? Does animal agriculture improve nutrition in poor countries?
- C. Placing Experience in a Broad Context. Students may choose to volunteer or work in a setting pertinent to the topics of the class, and then write about the experience and how it relates to course topics. For example, a student working in a soup kitchen might interview its directors, and then write about choices kitchens must make between feeding a larger number of people cheaper foods vs. serving healthier foods to fewer individuals. Or a student working in the Food Finders in Lafayette could integrate that experience with what is known globally. The paper would discuss how

the knowledge acquired from the broader context might be used to improve local programs, or how the experience informs larger debates related to solving food problems. Students must obtain advance permission of the instructors to insure the proposed topic fits with the aim of the assignment.

VII. Communication

Please note that the primary out-of-class method of communication will be via email to your Purdue email address. Instructors will not generally attempt to contact you at email addresses other than your Purdue email address. It is your responsibility to check for mail on a regular basis. We recommend checking your Purdue email account at least once every 24 hours.

VIII. Special Needs

If you have a disability that requires academic adjustments, please make an appointment to meet with one of the instructors during the first week of classes to discuss your needs. Please note that university policy requires all students with disabilities to be registered with [the Disability Resource Center](#) in the [Office of the Dean of Students](#) before classroom accommodations can be provided. Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at (765)494-6995 and <http://www.purdue.edu/caps/> during and after hours, on weekends and holidays, or through its counselors physically located in the Purdue University Student Health Center (PUSH) during business hours.

IX. Academic Integrity

University policy on academic dishonesty is clear: academic dishonesty in any form is strictly prohibited. Anyone found to be cheating or helping someone else cheat will be referred directly to the Dean of Students for disciplinary action. Penalties are severe and may include dismissal from the University. The risks associated with cheating far outweigh the perceived benefits. Academic dishonesty includes citing someone else's work as your own, using "cheat sheets" or sharing your answers with someone else. If you are unsure whether your planned action constitutes academic dishonesty, seek clarification from your instructors. Other information regarding your rights and responsibilities as a student is contained in the Purdue University [Code of Conduct](#). Writing assignments for this course will be checked for originality using the iThenticate software.

X. Campus Emergencies

In the unusual event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. To get information about changes in this course visit the course Blackboard page, contact one of the instructors by email, or call one of them at the phone number provided.

XI. Class Schedule (revised Aug 20, 2017 – subject to change)

Date	Topic	Instructor
21-Aug	Course Introduction	Savaiano & Shively
23-Aug	Hunger Banquet, in Stone Hall, room 232	Savaiano & Shively
25-Aug	Week 1 Discussion	Savaiano
28-Aug	Demographics: Was Malthus right?	Savaiano
30-Aug	Undernutrition	Savaiano
1-Sep	Week 2 Discussion	Savaiano & Shively
4-Sep	Labor Day (no class meeting)	
6-Sep	Agriculture, Nutrition and Health	Shively
8-Sep	Week 3 Discussion	Shively
11-Sep	The Green Revolution	Shively
13-Sep	The World Food Crisis of 2008	Shively
15-Sep	Week 4 Discussion	Shively
18-Sep	CRS & the Role of Relief Organizations	Burns
20-Sep	Nutrition Interventions	Gunaratha
22-Sep	Week 5 Discussion	Savaiano
25-Sep	Global Outlook on Food Production	Burniske
27-Sep	Sustainability and Resilience	Hallett (tentative)
29-Sep	Week 6 Discussion	Shively

2-Oct	Intensification	Burniske
4-Oct	Carrying Capacity of Our Planet	Burniske
6-Oct	Week 7 Discussion	Shively
9-Oct	October break (no class)	
11-Oct	The Science of Obesity	Savaiano
13-Oct	Week 8 Discussion	Savaiano (project topic due)
16-Oct	Culture and Food Identity	Acharya
18-Oct	<i>Does Culture Matter to Human Nutrition?</i>	Group 1
20-Oct	Week 9 Discussion	Savaiano
23-Oct	Smallholder Farms	Burniske
25-Oct	<i>Can Better Farming Save Poor Farmers?</i>	Group 2
27-Oct	Week 10 Discussion	Savaiano
30-Oct	Post-harvest interventions	Ricker-Gilbert
1-Nov	<i>Is Intervention Necessary?</i>	Group 3
3-Nov	Week 11 Discussion	Savaiano
6-Nov	Livestock in the Developing World	Ebner
8-Nov	<i>Can Animal Agriculture Improve Nutrition?</i>	Group 4
10-Nov	Week 12 Discussion	Savaiano

13-Nov	Advertising, Politics and Food Choices	Boling
15-Nov	<i>Are Consumers Free to Choose?</i>	Group 5
17-Nov	Week 13 Discussion	Savaiano (project references due)
20-Nov	<i>Why is there hunger in America?</i>	Group 6
22-Nov	Thanksgiving (no class)	
24-Nov	Thanksgiving (no class)	
27-Nov	American Food and Farm Policy	Doering
29-Nov	<i>Should America Produce More Food?</i>	Group 7
1-Dec	Week 15 Discussion	Shively
4-Dec	The Future of Global Food Supply and Demand	Hertel
6-Dec	Urbanization and the Future of Food	Group 8
8-Dec	No class meeting	due date for final paper