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<th>Instructor</th>
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<td>January 5.</td>
<td>Introduction: Concepts of food safety, establishing the problems and susceptibilities within the food chain.</td>
<td>Rosenfeld</td>
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<td>January 7.</td>
<td>Food borne pathogens and outbreaks</td>
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<td>January 12.</td>
<td>Food borne pathogens and outbreaks continued: seafood and shell fish, mercury and toxins</td>
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<td>Food safety regulations: the roles of federal and state agencies.</td>
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<td>January 21.</td>
<td>Food safety preparedness: Perspective from the food industry,</td>
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<td>January 26.</td>
<td>Antibiotic resistance</td>
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<td>Organic food, chemical contamination</td>
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<td>February 2.</td>
<td>One Health, Zoonotic Infections and Food Safety</td>
<td>Rabinowitz</td>
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February 4.  Risk Perception  Faustman
February 9.  Midterm Exam
February 11.  Genetically modified foods  Rosenfeld
February 16.  President’s Day Holiday
February 18.  Class Debate and Discussion - GMOs  Rosenfeld
February 23.  Restaurant and food service inspections, food safety in the home  Easterberg
February 25.  Bioterrorism and food safety  Meschke
March 2.  Over-nutrition: obesity  Rosenfeld
Video: Supersize Me
March 4.  Legal consequences of food outbreaks  Marler
March 9.  Dietary Supplements  Averill
March 11.  Class Debate and Discussion  Rosenfeld
Are we safer now than ever before?
Course Objectives:

At the conclusion of this course the student will be able to:

- Identify the problem areas and susceptibilities within the food chain.
- Demonstrate an application of basic knowledge and skills regarding food safety, globalization of the food supply, sustainable agriculture, and biotechnology.
- Identify policy issues related to the food supply.
- Identify the major risk factors and health related consequences for food borne illness in the United States.
- Discuss the processes needed for ensuring a safe food supply.
- Identify and discuss recent food borne illness outbreaks.
- Describe the responsibilities, interactions, and limitations of international, federal and local agencies responsible for food safety.
- Discuss the issues of food safety from the perspective of the food industry.
- Discuss the legal consequences of the distribution and sale of unsafe food.
- Identify the chemical contaminants of food.
- Analyze and compare international and national distribution of food and standards for food safety.
- Identify the trends in agricultural trade.
- Describe the influence of globalization on dietary factors in developed and developing countries.
- Analyze the issues surrounding biodiversity and biotechnology.
- Review the scientific foundation of genetically modified organisms in agriculture.
- Describe the political and social factors impacting the implementation of biotechnology in agriculture.
- Identify scientific and social issues impacting consumer perceptions of biotechnology in the US and international markets regarding labeling.
- Analyze issues in the use of locally grown foods.
- Discuss the issues related to over-nutrition, food marketing, and obesity.
- Discuss the perception and analysis of risk of unsafe food.
- Describe preparedness activities related to biosecurity.
- Analyze the current structure of federal agencies involved with Homeland Security and food safety.
- Describe the food safety requirements for restaurants and food services.
- Identify the issues related to optimum food safety in the home.
Course Grading:
Grades for undergraduates will be based on 4 assignments (95%) and on attendance and participation in class discussions (5%). Each undergraduate student will complete an in-class open book midterm exam (40%) and write a paper (max 20 pages double spaced, due at the end of classes) that researches any current issue related to food safety (45%). Following the 2 class debates/discussions, one on genetically modified foods and the other on whether we’re safer now than at any time in the past, students will submit within 1 week a summary of the debate/discussion (max 5 pages, 5% each). Grades for graduate students will be based on 4 assignments (90%) and on attendance and participation in class discussions (10%). Each graduate student will complete an in-class open book midterm exam (30%) and will write a paper (max 20 pages double spaced, due on February 18) that researches the history and details of any food outbreak or life threatening chemical contamination of food that has occurred worldwide in the past (15%). A second paper of the same length (due at the end of classes) should focus on any issue related to food safety other than specific food outbreaks or chemical contaminations (15%). Graduate students will also participate as team members in two class debates (30%, 5% for each summary paper and 10% each for debate presentations). Teams (randomly assigned at the beginning of class) will work together to research all of the issues pertaining to the topic of the debate and will present a 20 minute powerpoint presentation in support of their side of the issue. After each side has presented, there will be a full class discussion of the issues.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity.

The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the University of Washington Student Conduct Code (WAC 478-120). We expect you to know and follow the university’s policies on cheating and plagiarism, and the SPH Academic Integrity Policy. Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington Community Standards and Student Conduct website.

UW Student Conduct Code (WAC 478-120)
Disability Resources for Students (DRS) offers resources and coordinates reasonable accommodations for students with disabilities. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu or disability.uw.edu"

Recommended Readings:

Concepts of food safety, establishing the problem(s), susceptibilities within the food chain

Institute of Medicine: *Addressing Foodborne Threats to Health*” Web Summary. 2006

Mead PS, et al.; Food-Related Illness and Death in the United States, Emerging Infectious Diseases Vol. 5; CDC, Atlanta, Georgia, USA, 1999


DeWaal, CS and Plunkett, DW. Building a Modern Food Safety System. CSPI White Paper 2009
Food borne pathogens and outbreaks, seafood and shell fish, mercury and toxins

Todd, E.C.D. Challenges to global surveillance of disease patterns

Preliminary FoodNet Data on the Incidence of Infection with Pathogens Transmitted Commonly Through Food --- 10 States, 2008. MMWR April 10, 2009 / 58(13);333-337

Cavallaro, E. et al. *Salmonella* Typhimurium Infections

Germany’s E-Coli Nightmare. Food Quality Aug/Sept 2011


Jeffery, B. et al., Amnesic shellfish poison. Food and Chemical Toxicology 42 (2004) 545–557


FDA (1) What You Need to Know About Mercury in Fish and Shellfish 2004
FDA (2) Mercury Levels in Commercial Fish and Shellfish 2006


Food safety regulations: the roles of federal, state, and international agencies

http://www.fda.gov/Food/FoodSafety/FSMA/default.htm

S 510 Food Safety Modernization Act 2009 Summary


CDC: Overview of CDC food safety activities and programs
Food safety preparedness: Perspective from the food industry


USDA: Guidebook for preparation of a HACCP

Ensuring Safe Food: A HACCP Based Plan. Ohio State University Extension Bulletin

Moss M: Food companies are placing the onus for safety on consumers. NYT May 15, 2009.

Hormones and antibiotics: antibiotic resistance, contamination of foods


Marilyn C. Roberts. The Evolution of Antibiotic-Resistant Microbes in Foods and Host Ecosystems In: From Food-Borne Microbes: Shaping the Host
Organic food, chemical contamination of food


Risk perception and analysis


Globalization, sustainable agriculture, local food networks, slow foods

HEALTHY LAND, HEALTHY PEOPLE: BUILDING A BETTER UNDERSTANDING OF SUSTAINABLE FOOD SYSTEMS FOR FOOD AND NUTRITION PROFESSIONALS: A PRIMER ON SUSTAINABLE FOOD SYSTEMS AND EMERGING ROLES FOR FOOD AND NUTRITION
PROFESSIONALS. American Dietetic Association Sustainable Food System Task Force. March 16, 2007


Bittman, M. Sustainable Farming, Can We Feed the World? NYT Editorial 2010

De Schutter, O. On the right to food. Report to the UN General Assembly submitted by the Special Rapporteur. Dec. 20, 2010


Organic Agriculture: USDA Economic Research Service Briefing Room

Mayo Clinic: Organic foods: are they safer? more nutritious?


WHO: Understanding The Codex Alimentarius, 3rd Ed. 2006 WHO/FAO


GAO: Agencies need to address gaps in enforcement and collaboration to enhance safety of imported food. Sep 2009. GAO-09-873.

Genetically modified foods.


FAO Focus: Weighing the GMO Argument: Against

The Hidden Health Hazards of Genetically Engineered Foods
Food Safety Review. THE CENTER FOR FOOD SAFETY

Smithson, S, “Eat, Drink, and Be Wary”: Genetically modified animals could make it to your plate with minimal testing and no public input. Grist Magazine, July 30, 2003


Restaurant and food service inspections, food safety in the home

Public Health Seattle & King County (PHSKC) Food Inspection Program: Restaurant Inspections on Line.

PHSKC Restaurant Inspection Form


**Bioterrorism and food safety**


FDA: AN OVERVIEW OF THE CARVER PLUS SHOCK METHOD FOR FOOD SECTOR VULNERABILITY ASSESSMENTS


**Over-nutrition: food marketing, supersizing, obesity**


Cynthia L. Ogden, Molly M. Lamb, Margaret D. Carroll, and Katherine M. Flegal, Obesity and Socioeconomic Status in Adults:United States, 2005–2008. NCHS Data Brief No. 50 December 2010


Drewnowski, A. The cost of US foods as related to their nutritive value. Am J Clin Nutr 2010; 92(5):1181-8

**Legal consequences of food outbreaks**

http://www.marlerclark.com/


**Dietary Supplements**

**DIETARY SUPPLEMENTS**
FDA May Have Opportunities to Expand Its Use of Reported Health Problems to Oversee Products: Report to Congressional Requesters March 2013 GAO-13-244 United States Government Accountability Office


Dietary Supplements Red Flags – What You Need to Know to Stay Safe and Avoid Fraud. Human Performance Resource Center