<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>January 7</td>
<td>Introduction: Concepts of food safety, establishing the problems and susceptibilities within the food chain.</td>
<td>Rosenfeld</td>
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<tr>
<td>January 9</td>
<td>Food borne pathogens and outbreaks</td>
<td>Meschke</td>
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<tr>
<td>January 14</td>
<td>Food borne pathogens and outbreaks continued: seafood and shell fish, mercury and toxins</td>
<td>Meschke</td>
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<tr>
<td>January 16</td>
<td>Investigating a food outbreak in Washington State</td>
<td>Allen</td>
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<td>January 21</td>
<td>Martin Luther King Day Holiday</td>
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<td>January 23</td>
<td>Food safety: the role of the FDA.</td>
<td>Rice</td>
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<td>January 28</td>
<td>Dietary supplements</td>
<td>Averill</td>
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<td>January 30</td>
<td>Legal consequences of food outbreaks</td>
<td>Marler</td>
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<tr>
<td>February 4</td>
<td>Plastics in food: health consequences</td>
<td>Sathyanarayana</td>
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<tr>
<td>February 6</td>
<td>One health, zoonotic infections and food safety</td>
<td>Rabinowitz</td>
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<tr>
<td>Date</td>
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<td>February 11</td>
<td>Antibiotic resistance</td>
<td>Roberts</td>
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<td>February 13</td>
<td>Midterm Exam</td>
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<td>February 18</td>
<td>President’s Day Holiday</td>
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<td>February 20</td>
<td>Organic food, chemical contamination</td>
<td>Rosenfeld</td>
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<td>February 25</td>
<td>CDC’s role in food safety</td>
<td>Pappaioanou</td>
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<td>February 27</td>
<td>Climate change and food safety</td>
<td>Hess</td>
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<td>March 4</td>
<td>Genetically modified foods</td>
<td>Rosenfeld</td>
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<td>March 6</td>
<td>Food service inspections</td>
<td>Skilton</td>
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<tr>
<td>March 11</td>
<td>Over-nutrition: obesity</td>
<td>Rosenfeld</td>
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<tr>
<td>March 13</td>
<td>Class Debate and Discussion</td>
<td>Rosenfeld</td>
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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 and investigations used 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.
- Describe the criteria used for approval as USDA Organic.
- Identify the chemical contaminants of food.
- Discuss the legal consequences of the distribution and sale of unsafe food.
- Describe the causes of antibiotic resistance associated with the food supply.
- Discuss the concept of “One Health”.
- Analyze the issues surrounding biodiversity and biotechnology.
- Review the scientific foundation and safety of genetically modified organisms.
- Analyze issues in the use of locally grown foods.
- Discuss the issues related to over-nutrition, food marketing, and obesity.
- Discuss the issues related to the safety of dietary supplements.
- 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. 1. Students will submit to Canvas prior to each lecture, a 1 paragraph summary of the assigned reading for that class (10%) 2. Students will complete an in-class multiple choice midterm exam on February 13 (50%). 3. Students will write a paper (max 15 pages double spaced, due March 6) that researches any current issue related to food safety (30%). 4. Following the final class debate/discussion, 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, 10% of grade).

Grades for graduate students will be based on 5 assignments. 1. Graduate students will submit to Canvas prior to each lecture, a 1 paragraph summary of the assigned reading for that class (10%). 2. Graduate students will submit to Canvas on February 6, a 1-2 page fact sheet on a food safety related topic chosen from a list provided at the beginning of the course (15%). Graduate students can work in pairs if they choose to complete the fact sheets. The undergraduate students will review and comment on the
fact sheets. 3. Graduate students will complete an in-class multiple choice midterm exam on February 13 (40%). 4. Graduate students will write a paper (max 20 pages double spaced, due March 6) focused on any issue related to food safety (20%). 5. Graduate students will also participate as team members in a class debate on the last day of class (March 13). Teams (randomly assigned at the beginning of class) will work together to research all of the issues pertaining to the question “are we safer now than ever before” and will present a 20 minute powerpoint presentation in support of their side of the issue (15%). 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](http://www.washington.edu/cssc/student-conduct-overview/student-code-of-conduct/) (WAC 478-120). We expect you to know and follow the university’s policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](http://sph.washington.edu/students/academicintegrity/). 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](http://www.washington.edu/cssc/) website.

UW Student Conduct Code (WAC 478-120)


SPH Academic Integrity policy [http://sph.washington.edu/students/academicintegrity/](http://sph.washington.edu/students/academicintegrity/)

Community Standards and Student Conduct


**Access and Accommodation**


"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"
Classroom Climate and Inclusivity:
At the SPH, UW Nutritional Sciences Program and the Department of Environmental and Occupational Health Sciences, we value and honor diverse experiences and perspectives, strive to create welcoming and respectful learning environments, and promote ideals of equity, access, opportunity, and inclusion. It is important that we – as a community of learners – respect, honor, and explore diversity in all its forms and be willing to reconsider our own perspectives when presented with new or different evidence. Our learning spaces are the mutual responsibility of the instructors and the students; as such, we have a responsibility to engage in dialogue in a way that supports learning for all of us. We encourage students with concerns about classroom climate to talk to your instructor, your adviser, and/or the program director or department chair.

Rubrics for Research Paper

Choice of paper

Superior: Creative choice of topic but still within the broad topic areas covered in class. Provides new information that has not been covered in class.

Adequate: Less creative choice of topic. Provides new information that extends what has already been covered in class.

Inadequate: Topic is too off target. Does not provide any new information. Topic has already been extensively covered in class.

Organization of paper

Superior: Strong introduction to clearly establish the rationale for the paper. Concise but detailed descriptions of the studies included in the paper.

Adequate: Provides some introductory information to help establish the rationale for the paper. Less concise but still adequate description of the studies included in the paper.

Inadequate: Doesn’t establish the rationale for the paper. Lack of details about the studies included in the paper.

Critical Thinking

Superior: Clear understanding of the topic and any associated complex methodology. Ability to explain how data does or does not support the conclusions. Points out the strengths and limitations of the studies included in the paper.

Adequate: Some misunderstanding of the topic and any associated complex methodology. Ability to explain how data does or does not support the conclusions. Points out strengths but not the limitations of the studies included in the paper.
Inadequate: No critical thinking. Can’t explain whether data supports conclusions. Methods too complex (over the head of the student). No inclusion of strengths and limitations of the studies included in the paper.

**General Rubric for Papers** (From Ambrose et. al. (2010) How Learning Works: 7 Research-Based Principles for Smart Teaching, Exhibit C.3. (pp. 236-238))

<table>
<thead>
<tr>
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<th>Excellent</th>
<th>Competent</th>
<th>Not Yet Competent</th>
<th>Poor</th>
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<tr>
<td><strong>Creativity and Originality</strong></td>
<td>You exceed the parameters of the assignment, with original insights or a particularly engaging style.</td>
<td>You meet all the parameters of the assignment.</td>
<td>You meet most of the parameters of the assignment.</td>
<td>You do not meet the parameters of the assignment.</td>
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<tr>
<td><strong>Argument</strong></td>
<td>Your central argument is clear, interesting, and demonstrable (i.e., based on evidence, not opinion). The claims made in the body of your paper clearly and obviously support your central argument. Your arguments and claims reflect a robust and nuanced understanding of key ideas from this course.</td>
<td>Your central argument is clear and demonstrable. The claims made in the body of your paper support your central argument. Your arguments and claims reflect a solid understanding of key ideas from this course.</td>
<td>Your central argument is demonstrable but not entirely clear. A few of the claims made in the body of your paper do not clearly support your central argument. Your arguments and claims reflect some understanding of key ideas from this course.</td>
<td>Your central argument is unclear or it is not demonstrable. The claims made in the body of your paper do not support your central argument. Your arguments and claims reflect little understanding of key ideas from this course.</td>
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<tr>
<td><strong>Evidence</strong></td>
<td>The evidence you use is specific, rich, varied, and unambiguously supports your claims. Quotations and illustrations are</td>
<td>The evidence you use supports your claims. Quotations and illustrations are</td>
<td>Some of the evidence you use does not support your claims. Some of the quotations are</td>
<td>Little of the evidence you use supports your claims. Few of the quotations and illustrations are</td>
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<td>claims. Quotations and illustrations are framed effectively and explicated appropriately in the text.</td>
<td>framed reasonably effectively and explicated appropriately in the text.</td>
<td>and illustrations are not framed effectively or explicated appropriately in the text.</td>
<td>illustrations are framed effectively or explicated appropriately in the text.</td>
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<td><strong>Structure</strong></td>
<td>Your ideas are presented in a logical and coherent manner throughout the paper, with strong topic sentences to guide the reader. The reader can effortlessly follow the structure of your argument.</td>
<td>The reader can follow the structure of your argument with very little effort.</td>
<td>The reader cannot always follow the structure of your argument.</td>
<td>The reader cannot follow the structure of your argument.</td>
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<tr>
<td><strong>Clarity</strong></td>
<td>Your sentences are concise and well crafted, and the vocabulary is precise; the reader can effortlessly discern your meaning.</td>
<td>The reader can discern your meaning with very little effort.</td>
<td>The reader cannot always discern your meaning.</td>
<td>The reader cannot discern your meaning.</td>
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<tr>
<td><strong>Mechanics</strong></td>
<td>There are no distracting spelling, punctuation, or grammatical errors, and quotations are all properly cited.</td>
<td>There are few distracting spelling, punctuation, and/or grammatical errors, and quotations are all properly cited.</td>
<td>There are some distracting spelling, punctuation, and/or grammatical errors, and/or some of the quotations are not properly cited.</td>
<td>There are significant and distracting spelling, punctuation, or grammatical errors, and/or the quotations are improperly cited.</td>
</tr>
</tbody>
</table>

**Communication Skills:**
Sometimes students do not have adequate communications skills and may need remedial help. Below is a list of resources both at the UW and on-line that can help you improve your communication skills.

UW Resources:

Odegaard Writing and Research Center (http://depts.washington.edu/owrc/)

OWRC English language support (http://depts.washington.edu/owrc/english-language-support)

UW Libraries: Campus Writing Resources (http://guides.lib.washington.edu/content.php?pid=529582&sid=4411788)

UW Speaking Center (http://www.com.washington.edu/speaking-center/)

CLUE late night writing center (http://webster.uaa.washington.edu/asp/website/get-help/clue/writing-center/)

UW International and English Language Programs (http://www.ielp.edu/)

Foundation for International Understanding through Students (FIUTS) (http://www.fiuts.washington.edu/)

Speech and Hearing Sciences course – SPHSC 111: The American English Sound System (http://www.washington.edu/students/crscat/sphsc.html)

Language Learning Center (https://depts.washington.edu/llc/)

Center for Teaching and Learning website, “Academic support for international and multilingual students” (http://www.washington.edu/teaching/teaching-resources/inclusive-teaching-at-uw/teaching-im-students/academic-support-for-im-students/)

Online Resources:

Purdue Online Writing Lab (OWL) (https://owl.purdue.edu/owl/purdue_owl.html)

The Purdue Online Writing Lab: “ESL Students” (https://owl.purdue.edu/owl/english_as_a_second_language/esl_students/index.html)

“Advice on Academic Writing” (University of Toronto) (http://advice-writing.utoronto.ca/)

“Advice on Academic Writing: Using Sources” (http://advice-writing.utoronto.ca/using-sources/)

“Online resources for writers” (Amherst) (https://www.amherst.edu/academiclife/support/writingcenter/resourcesfor-writers/)
Required and Recommended Readings (weekly required readings are highlighted with an asterisk * and are available on the course website):

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

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

* 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, investigating an outbreak.

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

*Scallan, E. et al., Foodborne Illness Acquired in the United States—Unspecified Agents. Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 17, No. 1, January 2011*


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

Organic food, chemical contamination of food


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

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

Risk perception and analysis


One health, 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

Pimentel, D., Hepperly, P., Hanson, J., Douds, D., Seidel, R. Environmental,
ergetic, and economic comparisons of organic and conventional farming

Pimentel, D., Harvey, C., Resosudarmo, P., Sinclair, K., Kurz, D., McNair, M.,
Crist, S., Shpritz, L., Fitton, L., Saffouri, R., Blair, R. Environmental and
Economic Costs of Soil Erosion and Conservation Benefits. Science 267, 1117-


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

Pollan M. “No Bar Code”, Excerpt from: The Omnivore's Dilemma. 2006

Coley D, et al., Local food, food miles and carbon emissions: a comparison of

Organic Agriculture: USDA Economic Research Service Briefing Room

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

Kimball, AM. "The Global Express" In: Risky Trade: Infectious Disease in the
Era of Global Trade. Ashgate Publishing Co. Burlington VT. 2006.; Chapter 1:

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

2008.

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


http://www.foodsafety.gov/
Safe Minimum Cooking Temperatures
Meat and Poultry Roasting Chart
Storage Times for the Refrigerator and Freezer
Fresh Eggs: Playing It Safe
Egg Storage Chart
The Dangers of Raw Milk
Fresh Produce Safety
Two Simple Steps to Juice Safety
Sprouts: What You Should Know


**Bioterrorism and food safety**


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


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


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/