Colloquium in Food Safety: Fads, Facts and Politics  
Syllabus for 11:400:422  
Dr. Tom Montville  

THIS IS NOT "THE SCIENCE OF FOOD"

Contact me in the way that works for you:  
Face to face: Rm 207 in the food science building.  
Phone: 848-932-5415. Feel free to call after hours and leave a message.  
e-mail: montville@sebs.rutgers.edu I usually respond within 24 h, but do not check Rutgers e-mail on weekends.  
Sakai: You are responsible for reading messages that come from Sakai. You can (and please do) use the chat function to discuss class material with everyone in the class. But contact me by e-mail using montville@sebs.rutgers.edu.  
Office hours: I have an open door policy, but you should call ahead to make sure that I’m in.  
Technology challenges: I’m a digital immigrant who doesn’t text, twit, Skype or i.m. with students.

Learning Objectives: The major objective of this course is to, while addressing current issues related to food safety, help you develop critical thinking skills, numerical literacy, and other skills that will be of great importance to you after graduation. In particular, the learning goals for this course course are to:

- Take responsibility for your own learning.
- Develop the skills needed to evaluate claims made in print, television, and the web.
- Work with others of diverse skills and backgrounds as part of an interdisciplinary team.
- Learn how to function in a "real world" environment where rewards, metrics, and goals are often ambiguous.
- Gain experience in the art and practice of "peer review".

About this course:  
This course provides an integrative educational experience where students from different disciplinary backgrounds work cooperatively on interdisciplinary problems related to foods. The scientific, regulatory, agribusiness, and consumer interests that interact to determine the safety of the food are examined. These include "mad cow disease", prions, the use of chemical pesticides, the use of "natural" bio-insecticides and their genetic engineering into insect-resistant plants, health foods with nutritional claims, irradiated food, and food additives. How does the average person cope with these? The laws, regulations, and codes developed for these issues are not based on the scientific facts alone. They also consider economic, political cultural, demographic, religious, and philosophical aspects of the problem. Thus, the area of food safety is ideal for a colloquium
It helps if you understand the "arc of the course." The first weeks of the course are devoted to providing an overview of the world of food safety and developing the skill set needed or the rest of the course. A number of videos are shown and newspaper articles are distributed before lecture so that you can participate in classroom discussions which critique both positions and presentations. As the semester progresses, you will receive tips on how to work in groups and be assigned to groups that present oral and written reports on current food controversies. Finally, working in multidisciplinary groups you will "take action" on some current issue in food safety.

Class Meetings:

This is a required attendance course! Participation and group work comprise a major portion of your grade. You cannot participate if you do not attend. Although several class periods have been reserved for you to work on your group projects, you will also need to work on the group projects outside of class and on your own time. Because the course format is largely experiential rather than lecture/regurgitation, what happens in the class is very much a function of all of our experiences and class interactions. You'll get out of this class what you put into it.

Grades:

Grades are earned based on:

_____% writing, _____% projects, _____% participation, and _____% exams.

A = outstanding  B = excellent  C = satisfactory  D or F = really screwed up

If you want an "A", be outstanding. If everyone is "outstanding," that would be great, but don't expect an A just because you are a senior and show up. Students have failed this course.

Projects:

A. Individuals will be assigned to a group of people that work together to investigate and critically evaluate a controversial food safety topic. This information is then presented, both in a class presentation and in written paper. Potential topics for group projects this year include:

- International Aspects of Food Safety, Conflict, Conformance and Chaos
- The Food Safety Modernization Act
- Obesity, society and the food industry
- Arsenic in Food
- Mercury in Fish, Food, and Pharmaceuticals
- Produce safety
- Raw milk

Your group will be assigned a topic. You must work in a group and may not change groups. (College graduates are hired to work in a group that is not of their own choosing).

B. In addition, there will be two writing assignments. These are "warm-ups" for the larger paper. In the first, you will be assigned a web site that deals with some aspect of food safety. Each student will be required to present a short presentation (about 5-10 minutes) (or poster) as well as a 1-2 page essay on what s/he has learned. A hard copy of the essay must be
handed in to me and e-mailed as a pdf document to the rest of the group so that we can evaluate it. Think about what organization sponsors the site? What are its goals? Are there any other opinions? If so, what are they? What do YOU think? The second writing assignment will be short and announced at a future date.

**The Written Report:**

You will be required to write a 15 page report (double spaced, 12 point type) on your area of the group project. It may cover the scientific, economic, political, social, ethical, or legal aspects of their research. The article is to be a balanced account of the issues involved and is to be written so that ordinary people can understand these issues in order to be able to make more intelligent decisions concerning the foods they ingest. (We'll discuss the option of a group paper at some later date.)

**The Project Presentation:**

Present the findings of your research to the whole class so that the others obtain a clear understanding of the issues involved. Each group has an entire class period for their presentation. As you know, a period at Rutgers in 80 minutes long. Presentations that are shorter than 60 minutes will be penalized. The manner of the presentation will be left for each group to decide. The important thing is to plan and execute the presentation so that the rest of the class and your instructor have learned something at the end of the class period. A more creative (and highly graded) means would be to write an Op-Ed piece and submit to the New York Times, write an article for the Targum, submit "public comment" for some important piece of legislations, take some action on campus, etc.

**Books:**

Eric Schlosser, "Fast Food Nation" 2001, harper.perennial

Or (as assigned)


Both of these books are available from Amazon.com or your local bookstore for about $10. They have not been ordered through the college bookstore.
### Tentative Agenda: 11:400:422 (Subject to change)

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Topic/Activity</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1/19</td>
<td>Introduction, Survey, Exercises - Assignment- find the University’s Academic Integrity Policy and bring it to the next class.</td>
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<tr>
<td>2</td>
<td>1/23</td>
<td>- Discuss Integrity Policy as it pertains to this course. - PowerPoint presentation on critical thinking skills in food safety</td>
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<td>3</td>
<td>1/26</td>
<td>Debunking two internet sites, examples, discussion of different sources of information.</td>
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<td>4</td>
<td>1/30</td>
<td>Student Presentations on Internet Sites - 10 minutes per student</td>
<td>Start reading books</td>
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<td>5</td>
<td>2/2</td>
<td>Student Presentations Internet Sites</td>
<td>One page written impression based on someone else’s presentation</td>
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<td>6</td>
<td>2/6</td>
<td><strong>Individual Written Assignment#1 due</strong> Issues in Biotech</td>
<td>Write a 3-5 page comparison of the two books, make a conclusion</td>
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<tr>
<td>7</td>
<td>2/9</td>
<td>Issues in Biotech, continued</td>
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<td>8</td>
<td>2/13</td>
<td>“at home” time to finish reading books</td>
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<td>9</td>
<td>2/16</td>
<td>Quiz on your book. Discussion of the books. (Compare and contrast the books, in class.)</td>
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<tr>
<td>10</td>
<td>2/20</td>
<td>Discussion of the books, continued.</td>
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<td>11</td>
<td>2/23</td>
<td>Ethics and safety issues, in class exercise</td>
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<td>12</td>
<td>2/27</td>
<td><strong>Individual Written Assignment #2 due</strong> PowerPoint Primer on Microbial Food Safety</td>
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<tr>
<td>13</td>
<td>3/1</td>
<td>“How to work in a group.” Form “Project Groups” presentation dates assigned;</td>
<td>Do not blow-off class just because there is no assignment. Use the time as a “meeting” not to do the actual work.</td>
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<td>14</td>
<td>3/5</td>
<td>Start group discussions REVIEW</td>
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<td>15</td>
<td>3/8</td>
<td><strong>Exam I ☑</strong></td>
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<td>16</td>
<td>3/19</td>
<td>Work in groups</td>
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<td>17</td>
<td>3/22</td>
<td>Work in groups turn in abstracts by end of class</td>
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<tr>
<td>18</td>
<td>3/26</td>
<td>Work in groups</td>
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<td>19</td>
<td>3/29</td>
<td>Work in groups</td>
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<td>20</td>
<td>4/2</td>
<td>Work in groups</td>
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<td>21</td>
<td>4/5</td>
<td>Group 1 Presentation</td>
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<td>22</td>
<td>4/9</td>
<td>Group 2 Presentation</td>
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<td>23</td>
<td>4/12</td>
<td>Group 3 Presentation</td>
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<td>24</td>
<td>4/16</td>
<td>Group 4 Presentation All topic papers due</td>
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<td>25</td>
<td>4/19</td>
<td>Critiques of group presentations</td>
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<td>26</td>
<td>4/23</td>
<td>Critique of class</td>
<td>Not cumulative</td>
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<td>27</td>
<td>4/26</td>
<td><strong>Exam II ☑</strong></td>
<td></td>
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<tr>
<td>28</td>
<td>5/30</td>
<td>Performance Reviews</td>
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USEFUL URL’s FOR FOOD SAFETY INFORMATION

**Government**

www.fda.gov/      FDA home page  
www.vm.cfsan.gov  FDA Center Food Safety & Nutrition  
www.usda.gov/ USDA home page  
www.usda.gov/agency/fsis/homepage.htm USDA FSIS  
www.epa.gov EPA  
www.epa.gov/ORD/webpubs/endocrine/EPA info on endocrine disruptors  
www.fda.gov/opacom/laws/fdcact/fdcact4.htm Food Drug and Cosmetic Act  
http://vm.cfsan.fda.gov/~dms/eafus.html List of Food Additives  
http://www.cfsan.fda.gov/~dms/ds-savvy.html How to evaluate supplements

**Pro business**

www.ift.org/ Institute of Food Technologists  
www.acsh.org American Council Science & Health  
http://foodsaf.ucdavis.edu/MUSIC.HTML Dr. Carl Winter, UCDavis  
www.fb.com Farm Bureau  
www.qpca.com Jellineck, Schwartz & Connolly (attorneys)  
http://www.fple.edu/RISK/rskarts.htm Franklin Pierce Law Center  
www.food-irradiation.com Foundation For Food Irradiation Education  
www.ificinfo.health.org International Food Information Council  
http://foodsaf.ucdavis.edu/trimen21bw2_cg194.gif UC Davis Extension  
http://www.ceresnet.org/foodsafeprogram.htm Center for Food and Nutrition Policy  
http://www.gmabrands.com/pubpolicy/irradiation/index.cfm Pro-irradiation site

**Activist**

http://www.pbs.org/wgbh/harvest/coming/coming.html PBS on GM foods  
www.ewg.org/ Environmental Working Group  
www.nrdc.org Natural Resources Defense Council  
www.ncamp.org/ National Coalition Against Misuse of Pesticides  
www.cspinet.org/ Center for Science in the Public Interest  
www.efn.org/~ncap/ NW Coalition vs. Pesticides  
www.efn.org/~ncap/other.html Links to many other activist sites  
www.gn.apc.org/pesticidetrust/ Pesticide Action Network (Dr. Epstein)  
www.greenpeace.org Greenpeace  
www.osf-facts.org/ World Wildlife Fund (estrogen disruptors)  
www.truthinlabeling.org/ anti-MSG organization  
www.igc.apc.org/mothers/ Mother’s & Others  
www.pure-food.com/ anti-pesticides; anti-irradiation  
www.notmilk.com/new/notmilk2.jpg milk, biotech  
www.consumerscouncil.org/ccc/about.htm Consumer’s Choice Council  
www.icta.org/projects/cfs/index.htm International Center for Technology Assessment  
www.prwatch.org/PRW_logo.gif Center for Media and Democracy  
www.tao.ca/~ban/ar.htm Action Speaks Louder Than Words
How to work in a group

(Jelena Mirkovic, University of Southern California.)

Group work is essential for a good research. Very few people have been able to work well in isolation. Working in a group facilitates exchange of ideas and brainstorming and leads to better results. But sometimes it may be challenging. It frequently happens that some group members do a lot more work than others. This cannot always be prevented - sometimes you will simply work with someone who will not have the same priorities. For instance, you are working together with another student on a class project, but he/she is happy with a B and will do sloppy work. The best approach in this case is to talk to this student, and, if this doesn't work out, to talk to the teacher and adjust the project description so you can work on pieces alone and be graded separately. Otherwise, you'll have to grin and bear it. However, many times a timely discussion of the problem, clear work division and frequent checkpointing can help you work smoothly in a group. Here are a few tips to help you along:

- Do your best to work well within the group. OK, maybe you think that other group members are a bit annoying, or lazy, or stupid. Don't give up on them. Try to work out the problems and you may get to be very good friends by the end.
- Divide the work clearly and make sure you understand how it will fit together and everybody is happy with what they've got to do.
- Meet frequently with your group members. Don't just divide the work and meet a night before submission to merge things together. It won't work. Ideally you want to merge things as early as possible so you have time for necessary adjustments.
- If your group members don't work as fast or as well as you think they should, discuss this with them. Chances are they have some problem they cannot overcome alone. Help them out. Although it is tempting to take things into your own hands and do all the work, negotiating this with them instead can bring many benefits. First, they will learn how to do this themselves. Second, you will have more time to concentrate on your own work. And third, your partners may surprise you and do a really good job if you just help them out a bit.

Working in a group for a class project prepares you for collaboration in your future research projects. Collaborating with other students and other research groups (companies, universities) can be very fruitful. No one of us knows everything. Rather than learning, say, a lot of discrete math because you need to prove some things in your protocol, it will work better if you team up with someone from a Mathematics Department, and delegate the work. You may get acquainted with lots of researchers and industry people when attending a conference. Don't hesitate to initiate collaboration if you spot that you have common research interests. You can do this without your advisor and inform them when you come back. They will likely be happy and support this initiative.
Colloquium in Food Safety - Student Survey

Name ____________________________

Phone ________________

Are you a _____ junior _____ senior?

Dorm or off-campus address _________________

e-mail address ____________________________

Major __________________

Advisor ______________________

Skills: How would you rank your skills in the following areas?

Computer
World Wide Web
Library (literature searching)
Writing
Oral presentation

Courses: Taken? Year

Y or N

The Science of Food ☃

General Microbiology

Food Microbiology

General Biochemistry

Organic Chemistry

Other courses that you think are relevant (list):

What do you hope to get out of this course? Do you have any special requirements or concerns?

Grade weighting: (each must be worth at least 20%, please use 5% increments)

Writing_____ Projects_____ Participation_____ Exams_____