WORK-IN-PROGRESS DOCUMENT
LOOK FOR THE LINES THAT INDICATE DIVISION BETWEEN "FINISHED" AND "UNFINISHED"
ALL DUE DATES ARE "FINAL" AS OF 1/19/03

FDNS 4600/6600 Food and the Consumer - Spring 2003

TIME: T, R 2:00-3:15 pm, Room 162-164 Dawson Hall

INSTRUCTOR: Dr. Nina Marable, Rm. 176 Dawson Hall
The easiest way to reach me is by email: **nmarable@fcs.uga.edu or via WebCT**

Teaching Assistants: Elise Kayser and Annette Cairns
Contact Elise and Annette through WebCT

DESCRIPTION:

Health, safety and policy issues related to

food consumption trends	naturally occurring toxins
nutrient composition of foods	pathogens
food labeling	pesticides
food additives	biotechnology derived foods
food allergies and hypersensitivities	irradiated foods
phytochemicals	and food laws and regulations.

COURSE OBJECTIVES:

1. Understand the interrelationships among health, safety, and policy issues concerning food consumption trends, nutrient composition of foods, food labeling, food additives, food allergies and hypersensitivities, phytochemicals, naturally occurring toxins, pathogens, pesticides, biotechnology-derived foods, irradiated foods, and food laws and regulations.

2. Through written examinations, class discussions, computer projects, and written assignments, students will provide evidence of their understanding of health, safety and policy issues concerning foods and their ingredients.

3. Develop skills to access scientific and regulatory information from MEDLINE, AGRICOLA, CAB, LEXIS-NEXIS, government sources, and Internet.

CLASS: Lecture, discussion, library research, use of computer for research, projects on food ingredients, exams.

READINGS:

1. Information from the Internet is noted on the syllabus; others will be noted in class.
2. Handouts

ATTENDANCE: Everyone is expected to attend every class period.

KEYS TO SUCCESS IN FDNS 4600/6600:
- Come to class every day, take notes, ask questions
- Read ahead, take notes from the readings
- Apply what you learn in class at the grocery store by reading food labels
- Start studying hard at least one week before each exam
- Start EARLY on your projects
- Use spell and grammar checks to prepare professional projects

EXAMS:

Cover class presentations, lectures, discussions, readings, and projects. Exams include multiple choice, short answer, and essays. Exams for graduate students include additional essay questions. Four exams will be given, but you can drop your lowest grade OR drop an exam missed because of illness, emergency, or professional or personal reason. The final Exam #4 cannot be dropped.

No make-up exams will be given because of illness, emergencies, personal travel, professional travel, funerals, weddings, balls, debuts or other foreseen or unforeseen events. The purpose of the dropped exam is to allow for any personal or professional obligations that may arise during the semester.

RECIPE PROJECT/WORKSHEET and PROJECTS #1 to 3:

For the recipe project, look on the homepage for the recipe project link.

For projects 1-3, look on the homepage for the "research" project link. Notice that the pages of specific instructions for the projects by number have a pink background on the web. These pages are the pink sheet guidelines referred to below.

For projects 1-3, your group will be assigned one of four topics. Graduate students will work independently; undergraduates will work in groups of 4 or 5. Student-written portions of projects must be submitted in the appropriate WebCT digital drop box by 1pm on the due date. A printed copy of each student-written paper, together with cover sheets and supporting materials are due at the beginning of class. Projects that are not prepared in the correct format, or have grammatical and/or typographical errors will be returned ungraded. Projects # 1 (NOT 2) may be rewritten and returned for re-grading with Project # 3 for a maximum of 90% of (e.g., 20 point project has maximum regrade of 18 points). Late projects will be penalized 50% after initial grading. Projects will not be accepted more than 48 hours after the due time. Follow the pink sheet guidelines very carefully. Exams will cover projects.

SHOW AND TELL: Bring a food product or dietary supplement that relates to the topic being discussed in class during that week. Discuss the following about the item: 1) ingredients being discussed in class, 2) its regulatory category (e.g., see categories #1 – 10 in the readings), 3) any nutrient content descriptors or health claims, 4) who the product is being marketed to, and 5) your evaluation of the product (e.g., will probably help with weight loss, health claim has good scientific evidence, supplement may be toxic, etc). Up to 3.33 points for each product brought to class. For credit, product must be relevant to topics discussed in class and at least four of the five points above must be discussed.

PRINTING: The FACS computer lab is now charging for printing. To reduce your printing costs, all PowerPoint presentations will be posted to WebCT as PDF files. To view and print them, you need Adobe Acrobat Reader. If you are working at home, the reader is a free download. If you are working in the lab, this reader is already available.

GRADING: A=90%+, B=80-89%, C=70-79%, D=60-69%, F=<60%

POINTS:

4 Exams (@ 50 pts; drop lowest grade, but not final)	150 pts	
Worksheet: Nutrient Content Descriptors . . .	10 pts	
Project #1	20 pts	
Project #2	10 pts	
Project #3	10 pts	
Attendance (or video viewing for those with schedule conflicts	20 pts	(-1 point for each absence)
Show and tell (up to 3 times for up to 3.33 points/time)	10 pts	
TOTAL	**230 pts**	

GRADUATE STUDENTS:

All of the above + 1 lecture in class	25 pts LECTURE BY GRADUATE STUDENT -- – discuss date with Doc
TOTAL	**255 pts**

FDNS 4600/6600 FOOD AND THE CONSUMER
2003 SPRING - TENTATIVE SCHEDULE (1/9/03)

Week (T, R or R, T) 2:00-3:15	Topics and Readings *Read references marked*** and bring to class unless otherwise noted.* *Readings marked "background" are not required reading*	DATES for Exams or Projects
1) January 9, 14	**Introduction** ***** Agencies that regulate foods and supplements:** http://vm.cfsan.fda.gov/~lrd/foodteam.html *****Food laws and regulations:** Hutt, P. B. (2000). Chapter 16 US Government Regulation of Food with Claims for Special Physiologic Value. In: Essentials of Functional Foods, Schmidl, M.K and Labuza, T.P., Aspen Publishers, Gaithersburg, MD. **Milestones in food law** ******* http://www.fda.gov/opacom/backgrounders/miles.html http://vm.cfsan.fda.gov/mileston.html http://www.foodproductdesign.com/toolbar_library.html Then click on: Company and Consumer Issues Regulatory/Labeling Issues Regulating Functional Foods 2001 -- *0301FO_P* Functional Foods: Rocky Regulatory Road Ahead 2000 -- *0400CSP* **History** The long struggle for the 1906 law *** http://www.cfsan.fda.gov/~lrd/history2.html The Story of the Laws Behind the Labels http://www.cfsan.fda.gov/~lrd/history1.html http://www.cfsan.fda.gov/~lrd/histor1a.html http://www.cfsan.fda.gov/~lrd/histor1b.html A brief overview of history, food additives, etc., with fun examples of historical food adulteration http://www.sp.uconn.edu/~ns166vc/Notes/Foodsafe.htm	
2) January 16, 21	*****Summary overview on reading labels … June 2000** http://www.cfsan.fda.gov/~dms/foodlab.html *****Food labeling and nutrient content descriptors (also use with Worksheet assignment):** … May 1999 http://vm.cfsan.fda.gov/~dms/fdnewlab.html **Contains a quiz you can take and links to other interesting reading on labeling** **http://www.cfsan.fda.gov/label.html** **----------** **Health claims:** **Staking a Claim to Good Health (Nov-Dec 1998)** *******http://vm.cfsan.fda.gov/~dms/fdhclm.html **Health claims, nutrient content claims, and structure/function claims** **Claims That Can Be Made for Conventional Foods and Dietary Supplements (March 2001)** ***http://www.cfsan.fda.gov/~dms/hclaims.html **Specifics of wording of health claims: (revised 2000)** **http://www.cfsan.fda.gov/~dms/flg-6c.html** **Industry guidance for authoritative statements claims (1998)** http://www.cfsan.fda.gov/~dms/hclmguid.html **Industry guidance for qualified health claims (2002)**	

	http://www.crsan.fda.gov/~dms/hclmgui2.html **Labeling of Dietary Supplements** **http://www.cfsan.fda.gov/~dms/ds-labl.html#qualified** **What are dietary supplements?** **http://ods.od.nih.gov/whatare/whatare.html** --- **Supplementary Information** **Recommended Dietary Allowances and Reference Daily Intakes: Numbers** http://teaching.ucdavis.edu/nut10/handouts/dri.pdf **Reference Daily Intakes** http://www.fda.gov/fdac/special/foodlabel/rditabl.html **About interpreting daily values** http://www.fda.gov/fdac/special/foodlabel/dvs.html **More recent information:** Health claim guidance for industry ... December, 2002 http://www.cfsan.fda.gov/~dms/hclmgui2.html **National Academy of Sciences Releases New Dietary Reference Intakes For Macronutrients Sept/October 2002** http://ific.org/proactive/newsroom/release.vtml?id=20964&PROACTIVE_ID=cecfcecbcbc9cbccc9c5cecfcfcfc5cececfcac6c9cccdc7c6c5cf --- **Background:** **Health claims for stanols/sterols:** http://vm.cfsan.fda.gov/~lrd/tpsterol.html **Daily value and labeling for choline**: http://www.cfsan.fda.gov/~dms/flcholin.html	
3) Januar y 23	**Dietary guidelines:** *** http://www.health.gov/dietaryguidelines *(choose the one page summary)* **Good instruction** ***http://www.pueblo.gsa.gov/cic_text/food/food-pyramid/main.htm **General reference pages for dietary guidelines and the pyramid** **http://www.nal.usda.gov/fnic/dga/** **http://www.nal.usda.gov/fnic/Fpyr/pyramid.html** **Food Guide Pyramid: more links** http://www.usda.gov/cnpp/pyramid2.htm **Interactive Healthy Eating Index calculator from USDA** http://147.208.9.133/Default.asp **Harvard research produces "better" dietary guidelines/pyramid and "Alternative Healthy Eating Index"** http://www.hsph.harvard.edu/press/releases/press11212002.html http://www.hsph.harvard.edu/now/aug24 **Harvard's Nutrition Source site** http://www.hsph.harvard.edu/nutritionsource	**2/4 Worksheet due (Nutrient Content Descriptors and Health Claims)**

Week (T, R or R, T) 2:00-3:15	Topics and Readings *Read references marked*** and bring to class unless otherwise noted.* *Readings marked "background" are not required reading*
3 and 4) January 28, 30 February 4 … class cancelled	***Accessing the Scientific Literature - Need for Project #1*** ***CAB, Medline, Agricola, ETC.; Internet, Web Search Engines*** **How to read and understand scientific studies:** *****http://ific.policy.net/proactive/newsroom/release.vtml?id=17953&PROACTIVE_ID=cecfcecbcbc9cbccc9cf** **Epidemiology: Observational and Experimental Studies … This URL is the entry page for a readable set of** ***http://www.sunmed.org/epid.html ***Use for Worksheet (this reference is also listed above)*** ******* http://vm.cfsan.fda.gov/~dms/fdhclm.html **Dietary supplements:** ***http://www.ift.org/publications/sss/dietsupp.pdf OR *Go to* *** http://www.ift.org Then click on Publications & Scientific Information Then click on Scientific Status Summaries, Then click on S-042 Dietary supplements (excellent summary) *** http://vm.cfsan.fda.gov/~dms/supplmnt.html (read frequently requested information - we'll identify key parts in class) A wonderful summary on dietary supplements … caveat … at least one statement is wrong (see lecture notes), ar you read the whole thing. ***http://www.extension.iastate.edu/nutrition/supplements Caveat: Doc says, "I do not know anything about the acceptability of this link." www.tnp.com (The Natural Pharm consumer monographs for echinacea, gingko, ginseng, garlic and St. John's wort and others) **Dietary supplements (background):** http://dietary-supplements.info.nih.gov http://www.herbmed.org (very detailed) http://www.herbs.org http://vm.cfsan.fda.gov/~comm/ds-econ2.html#1 http://www.herbalgram.org http://www.quackwatch.org/01QuackeryRelatedTopics/DSH/suppsherbs.html http://vm.cfsan.fda.gov/~dms/mwgblghb.html (ghb) http://www.seniors.gov/articles/0401/dietary-supplements.html
	End of exam 1 information
Feb. 6	**Functional foods:** *Go to* *** http://www.ift.org Then click on Publications & Scientific Information Then click on Scientific Status Summaries, Then click on S-041 Functional foods S-043 Probiotics (we'll cover briefly) *** http://www.eatright.org/adap1099.html (excellent with many examples) http://ific.org/relatives/17180.PDF (2 page summary)

	http://www.ag.uiuc.edu/~ffh/health/cfar_ffh/slide1.html (slide show of functional foods) **Functional foods (background):** http://vm.cfsan.fda.gov/~lrd/fr000908.html (stanols) http://www.annals.org/issues/v133n6/nts/200009190-00004.html (garlic) http://www.flaxcouncil.ca (flaxseed) http://www.flaxcouncil.ca/flaxnut1.htm

Week (T, R or R, T) 2:00-3:15	Topics and Readings *Read references marked*** and bring to class unless otherwise noted.* *Readings marked "background" are not required reading*	DA
5, 6) February 11, 13	**REVIEW FOR FIRST TEST**	**2/1**
6 and 7) February 18, 20	**Food additives (antioxidants, antimicrobials, nitrites, sulfites, enzymes):** ***http://www.agnr.umd.edu/MCE/Publications/Publication.cfm?ID=108 ***http://vm.cfsan.fda.gov/~lrd/foodaddi.html http://vm.cfsan.fda.gov/~dms/fdpreser.html http://vm.cfsan.fda.gov/~dms/fdsulfit.html **Nitrites** *Go to* http://www.ift.org/govtrelations/statements/safety.shtml?L+mystore+ G-079 Nitrite and nitrate … but this IFT link is not working … 2/21/03 I'm looking for another reference. **Background: probably you don't need to read this!** http://www.fao.org/es/esn/jecfa/index_en.stm **----------** **Soy health claim:** http://vm.cfsan.fda.gov/~dms/fdsoypr.html **Soy and heart disease:** http://www.soyfoods.com/Anderson.html **Soy and cancer:** http://www.talksoy.com/pdfs/cancer.pdf **Soy is not totally a wonder food:** http://www.mayo.edu/proceedings/2000/nov/7511sc1.pdf **Soy (background):** http://www.talksoy.com/pdfs/ReadyMadePresentation.ppt http://www.ag.uiuc.edu/~stratsoy/soyhealth/ http://www.ag.uiuc.edu/~food-lab/soy/soy.html http://soyfoods.com/SimplySoy/index.html http://www.talksoy.com/	**2/1**
Feb 25	***Library Resources for Regulations - Need for Project #2***	

FINISHED

UNFINISHED

Week (T, R or R, T) 2:00-3:15	Topics and Readings *Read references marked*** and bring to class unless otherwise noted.* *Readings marked "background" are not required reading*	DATES for Exams or Projects
8) February 27, March	**Food allergies and asthma:** *Go to*	

4	http://www.ift.org Then click on Publications & Scientific Information Then click on Scientific Status Summaries, S-044 Food Allergies and Other Food Sensitivities **Background:** http://www.foodallergy.org/	
	Fats and fat replacers: *Go to* *www.ific.org* *Then press* *Food Safety and nutrition information* *Food safety and nutrition information* *Dietary fats and fat replacers* *Choose and print out article Q and A on Fat Replacers (4/00)* HTTP://www.eatright.org/adap0498.html *Go to* http://www.ift.org Then click on Publications & Scientific Information Then click on Scientific Status Summaries, Then click on S-040 - Fat Replacers Go to: http://www.foodproductdesign.com/toolbar_library.html Then click on: Company and Consumer Issues Regulatory/Labeling Issues Fats & Oils 2000: Challenges and Opportunities 2000 -- *0600AP*	**3/4 Last day for Show and Tell #1**
	End of exam 2 information	
9) March 6, 11	**Sugars and sweeteners:** ~~http://www.ific.org/relatives/17161.PDF~~ http://www.eatright.org/adap0598.html (excellent and detailed) http://vm.cfsan.fda.gov/~dms/fdsugar.html (not real detailed, but OK)	**3/6 Exam 2** **3/11 Project 2 Due**
10) March 13, 25	**Colors:** http://vm.cfsan.fda.gov/~dms/cos-221.html http://vm.cfsan.fda.gov/~lrd/colorfac.html **Background:** http://www.foodcolor.com/colors.htm (lists with color pictures - good for class demo) http://www.voigtglobal.com/colors.htm (price lists)	
	Flavors (required marked with a *; the rest are background): **http://www.foodproductdesign.com/archive/1999/1299de.html ("flavor tricks")*** http://www.foodproductdesign.com/toolbar_library.html Then click on: Ingredient types Flavoring Agents/Enhancers or Flavors; then choose articles such as: **Flavors in Use and Practice 1993 -- 0893CS (required reading)*** New Spins on Flavor 2000 -- 0800CS The Many Benefits of Salt 1994 -- 1094AP New Ways to Deliver Flavors 1994 -- 0694NT http://www.SensoryNet.com (for manufacturers) http://www.nysaes.cornell.edu/flavornet/ (shows chemical structures) http://www.goldcoastinc.com/ (list of many flavors for purchase) http://class.fst.ohio-state.edu/fst820/ 21CFR101.22 - Foods; labeling of spices, flavorings, colorings and chemical preservatives.	

Week (T, R or R, T) 2:00-3:15	Topics and Readings *Read references marked*** and bring to class unless otherwise noted.* *Readings marked "background" are not required reading*	DATES for Exams or Projects
SPRING BREAK March 17-21		
11) March 27, April 1	**MSG:** http://ificinfo.health.org/relatives/17660.pdf **Caffeine:** http://ific.org/food/ingredients.vtml (IFIC Review: Caffeine & Health: Clarifying the Controversies, Aug 01, 1998 **End of Exam 3 info (include caffeine on this exam)**	**4/1 Last date for Show and Tell #2**
12) April 3, 8	**Food biotechnology:** http://www.fda.gov/fdac/features/2000/100_bio.html (Q and A) http://www.aphis.usda.gov:80/biotechnology/faqs.html http://www.ift.org/govtrelations/biotech/ (required reading is the 5 sections listed under "Backgrounders") **Food biotechnology (background):** http://www.ars.usda.gov/is/br/btcorn (monarch butterflies and Bt corn) http://ificinfo.health.org (Backgrounder **Background on Food Biotechnology**, Dec 01, 2000	**4/10 Exam 3**
13) April 10, 15	**Pesticides and food:** http://www.epa.gov/pesticides/food (print out the information in the 8 side bars OR the pdf document) **Organic foods:** http://www.ams.usda.gov/oldnop/consumerbrochure.htm ~~http://www.ams.usda.gov/nop/facts/labeling.htm~~	
14) April 17, 22	**Food irradiation:** http://www.fda.gov/opacom/catalog/irradbro.html http://www.eatright.org/adap0200.html **BST (Bovine Somatotropin – used to enhance milk production in cows):** http://www.nal.usda.gov/bic/Education_res/iastate.info/bio3.html **Animal diseases:** http://ific.org/proactive/newsroom/release.vtml?id=19861 **BSE (Bovine Spongiform Encephalopathy) or "Mad Cow Disease":** http://www.aphis.usda.gov/lpa/issues/bse/bse.html (required reading on the "home page" – not necessary to go to all of the links)	

Week (T, R or R, T) 2:00-	Topics and Readings *Read references marked*** and bring to class unless otherwise noted.* *Readings marked "background" are not required reading*

3:15	
15) April 24, 29	**Foot and Mouth Disease:** http://www.aphis.usda.gov:80/oa/fmd/informwp.html (USDA/APHIS Factsheet on Foot-and-Mouth Disease (text or PDF)) **Lead and mercury:** Http://vm.cfsan.fda.gov/~dms/fdalead.html Http://vm.cfsan.fda.gov/~dms/mercury.html Background: http://www.epa.gov/ost/fish/ **Diet and cancer:** http://cis.nci.nih.gov/fact/3_7.htm (very short) http://www.cancer.org/docroot/ped/content/ped_3_2x_common_questions_about_diet_and_cancer.asp?sitearea=ped (or get there by clicking on Health Information Seekers Prevention and Early Detection Cancer Prevention ACS Guidelines Common Questions about Diet and Cancer) http://www.acsh.org/publications/booklets/menu02.html (holiday dinner menu: risk/benefit)
May 2	Reading Day
Final Mon May 5 3:30-6:30 pm	

SHOW AND TELL REPORT FORM #1 - complete on or before 3/4 (before exam #2)

Discuss a food product or dietary supplement that relates to the topic being discussed in class during that week. Up to 3.33 points for each product brought to class. For credit, product must be relevant to topics discussed in class that week and at least four of the five points below must be discussed. Turn this form in to the instructor at the beginning of class on the day you make your presentation. Time limit is up to 2 minutes.

Name: Date:	
Item brought to class:	
Discuss at least 4 of the following about the food or supplement item:	
1. Topic is being discussed in class this week	
2. Any nutrient content descriptors or health claims	
3. Its regulatory category (e.g., see categories #1 – 10 in the readings)	
4. Who the product is being marketed to (e.g., children, adolescents, diet-conscious people, etc)	
5. Your evaluation of the product (e.g., will probably help with weight loss, health claim has good scientific evidence, health claim not scientifically sound, ingredient may be toxic, etc)	
Points awarded	0 1 2 3.33

Cut here: -

SHOW AND TELL REPORT FORM #2 - complete on or before 4/1

Discuss a food product or dietary supplement that relates to the topic being discussed in class during that week. Up to 3.33 points for each product brought to class. For credit, product must be relevant to topics discussed in class that week and at least four of the five points below must be discussed. Turn this form in to the instructor at the beginning of class on the day you make your presentation. Time limit is up to 2 minutes.

Name: Date:	
Item brought to class:	
Discuss at least 4 of the following about the food or supplement item:	
1. Topic is being discussed in class this week	
2. Any nutrient content descriptors or health claims	
3. Its regulatory category (e.g., see categories #1 – 10 in the readings)	
4. Who the product is being marketed to (e.g., children, adolescents, diet-conscious people, etc)	
5. Your evaluation of the product (e.g., will probably help with weight loss, health claim has good scientific evidence, health claim not scientifically sound, ingredient may be toxic, etc)	
Points awarded	0 1 2 3.33

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SHOW AND TELL REPORT FORM #3 - complete <u>on or before</u> Monday April 22

Discuss a food product or dietary supplement that relates to the topic being discussed in class during that week. Up to 3.33 points for each product brought to class. For credit, product must be relevant to topics discussed in class that week and at least four of the five points below must be discussed. Turn this form in to the instructor at the beginning of class on the day you make your presentation. Time limit is up to 2 minutes.

Name: Date:	
Item brought to class:	
Discuss at least 4 of the following about the food or supplement item:	
1. Topic is being discussed in class this week	
2. Any nutrient content descriptors or health claims	
3. Its regulatory category (e.g., see categories #1 – 10 in the readings)	
4. Who the product is being marketed to (e.g., children, adolescents, diet-conscious people, etc)	
5. Your evaluation of the product (e.g., will probably help with weight loss, health claim has good scientific evidence, health claim not scientifically sound, ingredient may be toxic, etc)	
Points awarded	0 1 2 3.33