

**Functional Foods for Health
(FST/HNFE 2544)
Fall 2009**

Course Time and Location: M, W, F, 12:20-1:05, FST 132

Course Description: Introduction to functional foods with additional value beyond basic nutrition including development of functional foods, novel sources and traditional foods with value-added health benefit, regulatory issues, and media messages. (3H, 3C, I)

Instructor: Susan E. Duncan, Ph.D., R.D.

Office Location and Contact Information:
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Office Hours: By appointment

Teaching Assistant: Marnie Rognlien, mxrogn@vt.edu

Learning Objectives:

Having successfully completed this course, the student will be able to:

1. Define what a bioactive component is and give examples.
2. Describe examples of functional foods and why those foods are considered functional for health.
3. List and describe the steps in taking a functional food to market.
4. Distinguish among categories of functional food-related health and labeling claims and distinguish from supplements.
5. Define the functional health benefits of common food commodities.
6. Relate the general relationship of bioactivity of key components in functional foods to certain health benefits.
7. Critique media messages relating to functional foods and health claims.

Recommended Text and Reading:

You do not need to purchase textbooks. Reading assignments will be available from handouts and web-based materials. You are encouraged to purchase the two textbooks that I will be using as resource materials for class lectures. These are:

Schmidl, M.K., and T. P. Labuza. 2000. Essentials of Functional Foods. Aspen Publishers, Gaithersburg, MD.

Wildman, R.E.C. 2007. Handbook of Nutraceuticals and Functional Foods. 2nd Edition. CRC Press.

Course Web Site:

The web site for the course can be accessed through Blackboard. Most of the information needed for class, such as literature for reading assignments, case study expectation and activities, etc., will be on this web site.

Assessment and Grading Scale:

ASSESSMENT		GRADING SCALE			
Quizzes (5)	20 pts each	100	A	93.0-100	C+77.0-79.9
Exam (2)	100 pts each	200			
Presentation	50 pts	50	A-	90.0-92.9	C 73.0-76.9
			B+	87.0-89.9	C- 70.0-72.9
			B	83.0-86.9	D 65.0-69.9
Final Exam		100	B-	80.0-82.9	F <65.0
Total		450			

***Extra Credit (up to 40 points) may be earned through instructor-identified activities.**

Honor Code:

The Honor Code will be strictly enforced in this course. All assignments submitted shall be considered graded work, unless otherwise noted. All aspects of your coursework are covered by the honor system. Any suspected violations of the honor code will be promptly reported to the honor system. Honesty in your academic work will develop into professional integrity. The faculty and students of Virginia Tech will not tolerate any form of academic dishonesty.

Exams and Quizzes:

There will be 5 quizzes. Each quiz is worth 20 points and will consist of 10 multiple-choice questions. The summation of the quiz scores is equivalent to 100 points. You will have 15 minutes to complete a quiz. The quiz will be administered at the beginning of the lecture.

There will be two exams worth 100 points each. Exams will include a variety of styles of test questions including multiple choice, matching and short answer, You will have 50 minutes to complete each exam.

Weeks/Date	Lecture Topic	Reading Assignment
Week 1 08/24-28	<ul style="list-style-type: none"> (M) Introduction to Functional Foods; topics of interest (W) Pretest; Defining Functional Foods, Nutraceuticals, Supplements (F) Taking Functional Foods to Market 	IFT Report
	<ul style="list-style-type: none"> 	

Week 2 08/31-09/4	<ul style="list-style-type: none"> • (M) Taking Functional Foods to Market; • (W) Health Claims and Regulatory Issues for Functional Foods • (F) Quiz 1; Web-search and discussion 	IFT Report
Week 3 09/7-11	<ul style="list-style-type: none"> • (M) Functional Dairy Foods and Ingredients • (W) Functional Dairy Foods and Ingredients • (F) Functional Dairy Foods and Health 	
Week 4 09/14-18	<ul style="list-style-type: none"> • (M) Functional Soy Foods and Ingredients • (W) Functional Soy Foods and Ingredients • (F) Quiz 2; Web-search and discussion 	
Week 5 09/21-25	<ul style="list-style-type: none"> • (M) Functional Soy Foods and Health • (W) Flax Seed as a Functional Food • (F) Lipids as Functional Foods: Omega-3 and Congugated Fatty Acids 	
Week 6 09/28-10/2	<ul style="list-style-type: none"> • (M) Lipids as Functional Foods – Olive Oil • (W) Lipids as Functional Foods – Marine Oils • (F) Exam 1 (through Week 5) 	
Week 7 10/5-9	<ul style="list-style-type: none"> • (M) Natural Antioxidants • (W) Natural Antioxidants • (F) Fall Break 	
Week 8 10/12-16	<ul style="list-style-type: none"> • (M) Phytochemicals • (W) Phytochemicals • (F) Quiz 3; Web-search and discussion 	
Week 9 10/19-23	<ul style="list-style-type: none"> • (M) Dietary Fiber • (W) Resistant Starch • (F) Web-search and discussion 	
Week 10 10/26-30	<ul style="list-style-type: none"> • (M) Prebiotics and Probiotics • (W) Prebiotics and Probiotics • (F) Quiz 4; Food sampling and discussion 	
Week 11 11/2-6	<ul style="list-style-type: none"> • (M) Grapes and grapeskins • (W) French Paradox – Wines • (F) Review and Discussion 	
Week 12 11/9-13	<ul style="list-style-type: none"> • (M) Exam 2 • (W) Tea and Coffee • (F) Discussion about presentations 	
Week 13 11/16-20	<ul style="list-style-type: none"> • (M) Chitosan • (W) Quiz 5; Food sampling and discussion • (F) Preparation for presentations 	
Week 14	<ul style="list-style-type: none"> • THANKSGIVING BREAK 	
Week 15 11/30-12/4	<ul style="list-style-type: none"> • (M) Presentations • (W) Presentations • (F) Presentations 	
Week 16 12/7-9	<ul style="list-style-type: none"> • (M) Presentations • (W) Presentations and course evaluation 	
Week 17 12/17	FINAL EXAM, 10:05-12:05	

