

**FDNS 4650/6650**  
**Experimental Study of Food**  
**Spring, 2008**

**Course Description:** Functional and nutritional properties of components in food products. Techniques to evaluate food products for consumer acceptability including individual and group laboratory experimentation; computer applications.

**Course Credit:** 4 hrs

**Course Prerequisites:** FDNS 2100 and FDNS 3600/3600L and STAT 2000 or 2210; pre- or co-requisite: CHEM 2100/2100L or CHEM 2211/2211; or permission of the department

**Course Objectives:**

1. to identify and describe the major food components in food commodities and ingredients available to consumers and/or food service industry;
2. to identify the functions of the major food components in the production of desirable and acceptable foods at home or in food service facilities;
3. to examine the differences in functionality due to market forms of the ingredients in complex food systems;
4. to modify common food products to meet needs of individuals on modified diets;
5. to identify the effects of product modification on nutritional characteristics of the products;
6. to evaluate food products with sensory and objective methods;
7. to understand the research process as it applies to recipe modification;
8. to become acquainted with major scientific journals in the field of consumer foods.

**Instructor:** Dr. Ruthann Swanson, 180 Dawson Hall, 542-4834,  
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**TA:** Michael Sabrin, 176 Dawson Hall, [sabrinmd@uga.edu](mailto:sabrinmd@uga.edu)

**Class meets:** MWF 11:15-12:05  
T (lab) 2:00-6:15

**Honesty policy:** All academic work must meet the standards contained in *A Culture of Honesty*. Each student is responsible for informing him/herself about those standards before performing any academic work.

**Attendance policy:** *Be here!!!* The labs and lectures in this class are intertwined. You cannot perform successfully in the lab without the orientation and context preparation provided during lecture. Many of the labs involve the collection of data that is pooled for analysis. Your absence and/or inadequate preparation impacts not only your own learning experience but also that of your colleagues. In addition, many of the assignments are completed in class, as appropriate, based

on coverage of material; most are due at the end of the class period and late penalties apply if the assignment deadline is not met. There are no exams in this class; the grade is based on your understanding and application of material discussed in lecture to data generated in the laboratory. *The overall goal is to integrate your academic experience and to turn you into independently functioning professionals. The big, wide world awaits!*

**Cell phone use:** Cell phones must be turned off and must remain stowed throughout the class period.

**Use of name in class:** Unless I receive an email at the email address above (not via WebCT) from you by noon, Jan 8, indicating otherwise, I will use your name in class to return papers, acknowledge class contributions, etc.

**Late adds:** Late adds for this course will not be approved except on exceptional circumstances.

**Primary text:** McWilliams, M. 2005. Foods Experimental Perspectives, 5<sup>th</sup> ed., Prentice Hall, Upper Saddle River, New Jersey.

*Reading assignments unless otherwise specified will be from McWilliams. Other unassigned sections of this book will be helpful as you plan your individual project and work on lab reports.*

**Supplementary text:** Penfield, MP. And Campbell, AM. 1990. Experimental Food Science, 3<sup>rd</sup> ed., Academic Press, Inc., San Diego.

*Reading assignments from Penfield and Campbell are indicated by authors (P&C) and the appropriate chapter number. Copies of this chapter only will be found on WebCT. This book is an excellent source of additional information on many topics covered in class. It is also a good source of ideas for student-planned projects.*

**Required text:** Ignoe, RS and Hui, YH. 2001. The Dictionary of Food Ingredients, 4<sup>th</sup> ed. Aspen Publishers, Gaithersburg, MD.

This is a reference book that you need in your professional library. It will be a helpful resource for the Ingredient Assignment.

**Supplementary text:** Bennion, M. 1999. Introductory Foods, 11<sup>th</sup> ed. Merrill, Englewood Cliffs, NJ or whatever edition you have.

*Bennion was the text used in FDNS 3600. Sections of this book will be helpful as you think about standard products, mixing methods, product form, etc.*

**Non-test assigned reading:** *Typically these are articles from the recent literature that receive limited coverage in the text; they provide needed background for the writing of lab reports and occasionally for lectures. These articles can be found on WebCT.*

**Calculator:** A scientific calculator that can do means and standard deviations is required. It is not necessary to have a graphing calculator. If you don't have one, **(be sure that you can find the instruction booklet or that you download a copy)** a Texas Instrument (TI-30IIX) is recommended. This calculator is among the easiest to use and is relatively cheap. It will save you hours of frustration, I promise.

**Grading...** There are no exams in this class.

**Components...**

*Assignments:* 395 points

*Lab reports:* 575 points

*Individual project:* 350 points

**Grading scale...**

Scale	Point Range	% Range
A	1228-1320	93 - 100
A-	1188-1227	90 - 92.9
B+	1148-1187	87 - 89.9
B	1096-1147	83 - 86.9
B-	1056-1095	80 - 82.9
C+	1016-1055	77 - 79.9
C	924-1015	70 - 76.9
D	790-923	60 - 69
F	below790	Below 60

**Assignments:** During the semester, assignments (both in- and out-of-class activities) will be made. These will be due as indicated when the assignments are made, unless specified on the syllabus. The objective of the assignments is to facilitate student synthesis and application of material presented in class. Grades on assignments turned in late will be lowered by 5% per day.

**Laboratories:** Laboratory handouts will be distributed no later than the lecture period prior to that in which the lab is held. Students are expected to have the handout in a three-ring notebook in lab and to record all data on the forms provided. Student planned laboratories are the exceptions; data will be recorded on forms developed by the student. Students also are expected to be familiar with the laboratory procedure prior to the laboratory. ***Missed laboratories cannot be made-up.***

For each lab, all data or personal observations should be recorded on the lab sheet (in ink) as collected in lab (eg not written in from scratch paper after the lab; no white-out is allowed on lab sheets). In the event an error is made, cross-out the error and write-in the correct data or observation.

Non-text reading specific to each lab will be assigned and available via WebCT.

**Written lab reports will be required.** Due dates are indicated on the course syllabus. Grades on lab reports turned in late will be lowered by 5% per day.

**Laboratory report evaluations** will be based on accuracy and completeness of content, use of references, adherence to format, and clarity and quality of writing.

In general, use a technical writing style—avoid the use of first person, contractions, colloquial and literary styles.

**It is assumed that you can perform simple statistical analyses:** frequency, means, and standard deviations. Instruction and assistance will be provided for more complicated statistical analyses by the TA. In some cases, statistical analyses will be performed for you.

The **required general outline is attached**; any deviation will be indicated on the lab handout— follow the deviations specified. The ability to follow the guidelines will be important to you as a professional and will influence your grade in this course.

**The text of the written reports must be computer-generated, and double spaced in font size 12. Tables should be generated using the word processing program. Figures may be handwritten; however you are strongly encouraged to learn to use the graphing function of the word processing program to generate figures.** Appropriate word processing software is available in the computer lab in Dawson.

Computer lab hours: M-R 8am-7pm  
F 8am-5pm

Computer lab software contains both grammar and spell-check programs. USE THEM!!! These programs do not catch everything and some suggestions made may be inappropriate; however, they are extremely helpful. They will help you identify strengths and weaknesses in your writing. Hopefully, they will help you improve your writing. Reports with major problems will be returned for rewriting prior to grading.

**Individual Project:** This is really just a lab experience that you plan and conduct. You will repeat it twice. The final paper is simply an additional lab report. You will also be required to do a poster presentation. On the poster, you should identify the problem area, your objectives, methods and present your results and conclusion. You should be able to answer questions about your project. Quality of visuals is important!! Poster presentations will be during the final exam period. Specifics including how-tos will be available via WebCT to guide you through the poster preparation process. Printing consultants will be available.