

FOS 4310L

Experimental Food Laboratory

1 credit

Spring Semester 2022

Instructor:	Sharyn Passeretti, Teaching Laboratory Specialist II
Contact Information:	Food Science and Human Nutrition Department Room 333A, FSHN Building, Newell Drive Office Phone: 352.294.3729 Cell Phone: 386-299-9328 (text is best) Email: sharyn@ufl.edu
Office hours :	Currently by appointment only. Always available by text
Lab Time :	Section 0046 14528: Monday periods 8 - 10 (3:00PM - 6:00PM) Section 6621 14529: Wednesday Periods 5 – 7 (11:45AM – 2:45PM) Section NEW SECTION: Wednesday periods 8 – 10 (3:00PM – 6:00PM) Location: Experimental Food Lab—Located in the Pilot Plant Food Science & Human Nutrition Building 572 Newell Drive, Room 130
Course Prerequisites/ Co-requisites:	Food Chemistry (FOS 4311)
Course Description:	This course is designed to demonstrate and illustrate the chemical and physical properties of foods. The Course shows the effects that ingredient and/or processing applications can have on food applications. Students will prepare and evaluate different food products (fudge, cheese, bake goods, etc.) using various chemical, instrumental, and sensory analysis techniques. The focus is on applied food development for dietetic students.
Objectives:	<ul style="list-style-type: none"> • To integrate chemistry and biochemistry principles into real-world food science and nutritional problems. • To determine how ingredients, food components, processing, influences the quality, sensory, and physical and chemical parameters of finished food products. • To compare and contrast various food processing operations on the chemical changes of food components as they relate to food quality, nutrient composition, and safety. • To document technical and observational data during the laboratory experimentation: <ul style="list-style-type: none"> ○ All data and observations will be written into the students lab notebook, and the data will be entered into the class excel file on canvas. ○ The students will analyze the information using computer programs by tabulating data, performing calculations and statistical analyses; ○ to document laboratory exercises by submitting reports in a standard journal format; to enhance the student's ability to present written information of a scientific nature combined with the hands-on experiences.
Texts: Optional	<ul style="list-style-type: none"> • Introductory Foods, 15th Edition, Barbara Scheule Ph.D., RDN; Amanda Frye MS, RDN. Pearson ISBN-13: 9780134554891 • Experimental Foods Laboratory Manual, 9th Edition, Margaret McWilliams. Pearson ISBN-10 0-13-235328-8

GRADING

PERCENTAGE BREAKDOWN

63.6% IN LAB PERFORMANCE—broken down in to 6 sections

1. Attendance, Attitude, & Preparation 5 points
2. Quizzes 10 points
3. Dress code 5 points
4. Lab safety 5 points
5. Clean up 5 points
6. Check out 5 points

24.2% LAB REPORTS—there are 3 reports worth 40 points each.

12.1% LAB ASSIGNMENTS—there are 3 lab assignments worth 20 points each

PERCENT	LETTER GRADE
90.0 – 100.0	A
87.0 – 89.9	A-
84.0 – 86.9	B+
81.0 – 83.9	B
78.0 – 80.9	B-
75.0 – 79.9	C+
72.0 – 74.9	C
69.0 - 71.9	C-
66.0 – 68.9	D+
63.0 – 65.9	D
60.0 – 62.9	D-
0 – 59.9	E

EXTRA CREDIT—up to 10 points

- Costing the recipes you will be making in labs. I will provide the purchase receipts and costing sheets.

Examinations:

There are no written examinations for this lab class. Grading will be based solely on lab performance points and lab reports. The letter grade will be the percentage of the cumulative points.

LABORATORY SCHEDULE AND REPORT/ASSIGNMENT DUE DATE

Lab Topics	Lab Date Mon & Wed	Report Or Assignment	Due Date	POINTS
1. LAB INTRODUCTION	1/10 & 1/12	NONE	NONE	N/A
2. MEASUREMENTS & FOOD ACIDITY	1/24 & 1/26	ASSIGNMENT	2-02-22	20
3. CARBOHYDRATES I	1/31 & 2/2	REPORT	2-16-22	40
4. CARBOHYDRATES II	2/7 & 2/9			
5. LIPIDS I	2/14 & 2/16	REPORT	3-02-22	40
6. LIPIDS II	2/21 & 2/23			
7. PROTEINS I	3/14 & 3/16	REPORT	3-30-22	40
8. PROTEINS II	3/21 & 3/23			
9. LEAVENING & ENZYMES	3/28 & 3/30	ASSIGNMENT	4-06-22	20
10. PIGMENTS	4/4 & 4/6	ASSIGNMENT	4-13-22	20

LAB PERFORMANCE POINT OUTLINE

ATTENDANCE & PREPARATION

I expect from you what your employers will expect from you. The purpose of this section is to establish good working practices. Here is the outline—**each requirement is worth one point each. The quizzes are 10 points total.**

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Laboratory expectations:

1. Punctuality
 - a. Be on time for lab.
2. Be prepared for your lab—Have a notebook/laptop/tablet, phone to take pictures with, pen, hair net ready for check in.
3. Be prepared to make the recipes and perform the observation experiments with minimal direct supervision.
4. Be conscientious to your co-workers—meaning the people working in the lab with you.
5. Do not take common area items back to your station. e.g. measuring cup from the weighing table.
6. Leave the common areas neat and clean.
7. Putting things back or away in their correct location.
8. Time management: Be completed with the experiment, have bench area, and assigned cleaning duty completed and signed off by the end of your lab period.

QUIZZES—10 POINTS

There will be a quiz given to you just before you start your lab. It will cover the written and video material for the lab. **There will be 5 general knowledge lab questions worth one point each, and 1 lab recipe instruction question worth 5 points.** The format will be multiple choice, true/false, or fill in the blank. The recipe question will require you to put the cooking instructions in order for one of the recipes you will be making that day.

LABORATORY DRESS CODE—5 POINTS

NOTE: If dress code is non-compliant you can be sent home to change.

1. Only flat closed toed shoes with a nonskid sole are allowed. Sneakers, work shoes. No open toes or sandals allowed.
2. Long or short Sleeved full coverage shirts. **No sleeveless, tank tops, midriffs.**
3. Loose fitting pants (e.g. scrubs, sweat pants). **No leggings, stretch jeans or shorts.** Loose fitting clothing prevents hot items from sticking to the skin, which can help prevent burns from happening.
4. Hair coverings are required. You are issued a hair net at the beginning of the semester with a plastic bag to store it in. Hair shoulder length needs to be tide back. Longer hair needs to be braided or bound in a bun or similar fashion.
5. Jewelry & watches should not be worn. Put them in your backpack prior to class.

FOOD LAB SAFETY—5 POINTS

1. Only writing material, cell phones for lab photos are allowed in the lab. All other items are kept on the shelf by the partition. **Phone calls and texting is prohibited during lab time. Doing So Will Result In 5 Point Lab Safety Loss for the day.**
2. Clean as you go. E.g. Wipe counters, clean dishes as you cook/bake, wipe up spills.
3. Proper use of kitchen equipment E.g. Handling of sharps (knives/scissors), proper stove top and/or oven heat applications. E.g. not heating oil on high rather than level 3
4. Proper handling of food. E.g. Proper cooling of hot foods, labeling foods for storage with item description, date, person's name
5. Proper use of gloves in preparation. Hot pads/oven mitts. Nitrile gloves during cold preparation. **Do not use nitrile during hot preparation.**

LAB CLEAN UP—5 POINTS

1. Food Use & Storage: All Food is properly labeled, dated, initialed, and put away. Put in the refrigerator, dry storage.
2. Dishwashing: All dishes for cooking and service are properly washed, sanitized, dried & put away.
 - a. Monday & 1st Wednesday group in the station will dry and put item back to the experiment location
 - b. 2nd Wednesday group will dry and put all items back neatly in their designated areas There is an inventory sheet located by the electric box and photos on canvas and by the electric boxes in the lab.

Entire area is washed down with soapy water and washcloth

3. Stove Breakdown: With soap water & scrubbie if needed for the entire stove meaning: stove top, control panel, oven door, pot drawer. Baked on use the bar keepers friend, then finish with glass top polisher.
4. Counter & Table Breakdown: All surface areas that are used during the cooking session are to be washed down with soap and water then sanitized with 70% ethanol and wiped with dry towel.
5. Sink Breakdown:
 - a. Wash down with barkeepers friend and scrubbie all sink and backsplash, rinse with water.
 - b. Rinse with water. Spray with 70% ethanol. Squeegee excess down drain. Dry with dish cloth.

LAB CHECKOUT—5 POINTS

1. Sanitation steward has checked out your station to make sure it's clean
2. Sanitation steward verifies the group has slip tied their apron strings together.
3. Both aprons and wash towels have been placed in the washer
4. your data entry into the canvas collaboration sheet has been verified by instructor or TA/CA.
5. You leave no clutter behind. E.g. printed handouts, data printed on paper, used gloves/masks, etcetera.

STEWARD ROTATIONS

1. Groups will be assigned kitchen steward and sanitation steward responsibilities throughout the semester. Expect to have this responsibility at least two times. There are check sheets listing the responsibilities.

LABORATORY REPORTS

To enhance the student's ability to analyze and present scientific information in a logical and acceptable written format, laboratory reports are required for each general area of study. Reports are to be written using a scientific report outline.

Report Submission: Submit through canvas by 11:59pm of the due date. Late reports will lose 5 pts for each day submitted after the deadline. Reports will not be accepted beyond 6 days late and thus will result in a 0 (zero).

FORMAT FOR WRITING LABORATORY REPORT

REPORT SECTION	SECTION DESCRIPTION	POINTS
Cover Page/File Name	Cover Page: Make sure it is properly centered. <ol style="list-style-type: none"> 1. Lab Number and title 2. Submission date 3. Your name E-file title for submission <ol style="list-style-type: none"> 1. Submission date 2. Lab Number & title 3. Your name E.G. 2-20-22 Lab 3 Carbohydrates S Passeretti There will be a 15 point penalty for not following these instructions	0
Introduction	<ol style="list-style-type: none"> 1. Introduction paragraph consisting of <ol style="list-style-type: none"> a. General information about the topic. E.g. what are carbohydrates. How does it relate to your lab? b. The learning objective(s) of the lab 	2
Procedures	<ol style="list-style-type: none"> 1. A brief overview of what you did in the lab. <ol style="list-style-type: none"> a. It doesn't have to be verbatim to the lab procedures. Just a general outline. 	1
Results & Data	<ol style="list-style-type: none"> 1. The results are your visual and sensory observations written in your lab notebooks and entered into the group excel file, pictures taken during lab 2. You will be required to perform the following statistical operations: ANOVA, mean, median, mode. You can calculate using excel or by hand if you prefer. You do need to show your work. 3. Presentation of the excel file into the report is required, and it must be neatly pasted into the report document and labeled. <ol style="list-style-type: none"> a. Unlabeled and improperly formatted tables will result in a zero for the section. 	3
Discussion Point	<ol style="list-style-type: none"> 1. A subtitle for each experiment (e.g. Fudge Cooking Section, Grains Cooking Section) 	0
	<ol style="list-style-type: none"> 2. Interpret and discuss the results from the experiment for this section—5 points for each section 	10
	<ol style="list-style-type: none"> 3. Answer the questions written in the lab sheet—There will be a total of six questions worth three points each. <ol style="list-style-type: none"> a. Typing out the question b. Answering the question. 4. Additional research will be required to answer the questions. Only professional references are allowed. * See the library page on how to search for peer reviewed articles. 	18
Conclusions	<ol style="list-style-type: none"> 1. Summarize the results of the lab. 2. What the lab has taught you about the Food Chemistry Subject 3. How you can apply it to the dietetic industry 	3
References	A minimum of three references are required and need to be written in scientific journal format. They are to be listed in the order as they are presented in the report. *Please see library page	3
Extra credit	Extra credit for well written reports	1
Total reports		40

Online Course Evaluation Process:

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

Services for Students with Disabilities:

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services, and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation: 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

Campus Helping Resources:

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*
- Counseling Services; Groups and Workshops; Outreach and Consultation; Self-Help Library; Wellness Coaching
- U Matter We Care, www.umatter.ufl.edu/
- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*