

Food Chemistry Lab Syllabus

Spring 2014

Credit

1 credit

Instructor(s)

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TAs

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Course Prerequisites/Corequisites

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 of processing, ingredients, and storage on food quality and food nutrient retention. Students will prepare and evaluate different food products using various chemical, instrumental, and sensory analysis techniques.**

Objectives

- To integrate chemistry and biochemistry principles into real-world food science and nutritional problems.
- To see how ingredients, food components, processing, storage, etc. influences the quality, sensory, and physical and chemical parameters of finished food products.
- To test the foods using various analyses and compare and contrast how ingredients, processing, storage influence the finished products; to be able to explain each test performed in the laboratory as to why, how, and when they are used, and for what 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 acquire technical data and information for inclusion into a laboratory notebook while performing laboratory experimentation; to analyze the information using computer programs by tabulating data, performing calculations and statistical analyses, and presenting graphic interpretation; 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.

Grading

Assignment	Points	Due Date
Laboratory Participation*	100 (24%)	Each week during lab
10 labs x 10 pts		
*based on chart below		
Laboratory Reports	180 (43%)	Roughly 2 weeks after lab completed*
6 reports x 30 pts		
2 reports x 60 pts	120 (28%)	
Laboratory Notebooks	20 (5%)	Each week at end of lab
10 labs x 2 pts		

Total: 420 pts (100%)

*Labs are due at various times throughout the semester. Check under assignments for correct dates.

- Grading Scale

A 100 - 90 (378 pts)	C 74.9 - 70
A- 89.9 - 88	C- 69.9 - 68
B+ 87.9 - 85	D+ 67.9 - 65
B 84.9 - 80	D 64.9 - 60
B- 79.9 - 78	D- 59.9 - 58
C+ 77.9 - 75	E Below 58

- [Lab Participation Points Scale](#)

Items	Points	Explanation
Set-up	2	Student prepared, organized
	1	Student needs improvement, not organized
	0	Obviously unprepared, unfamiliar with lab
Equipment use	2	Student prepared, handles equipment properly
	1	Needs improvement in handling equipment
	0	Obviously unprepared, misuse/abuse of equipment
Safety	2	Practices good safety habits; conscious of others
	1	Poor safety habits; need improvement
	0	Unsafe practices; also puts others at risk
Clean-up	2	Areas well cleaned; cleans general use areas
	1	Some areas overlooked or not properly cleaned
	0	Areas left unclean and unorganized
Attendance	2	Student present; made-up missed lab
	1	Extremely late; left lab too early
	0	Unexplained absence with no make-up - Note: This will usually result in a zero for the lab report as well.
Group Data	-5	Most laboratories require each group to submit data for the entire class to use. This is usually collected before you leave the lab. Failure to submit all your data will result in -5 pts being deducted from each group member's laboratory participation score.

- [Lab Notebooks](#)

Notebooks must be some type of bound book, i.e., laboratory notebook, computation book, spiral bound notebook, etc. It does not have to be expensive but should contain at least 150 pages. Individual labs and experiments will be outlined in the notebook **before coming to lab** (this will be checked by the TA). Changes in procedures, notes, all data accumulated and other information should also be included. Suggestions about how to enter data may be given from time to time (check lab handouts). Notebooks will be checked at the end of each class period by the instructor or TA. They will review, sign and date the work. **It is the student's responsibility to make certain their work has been signed.** The purpose of requiring notebooks is to acquaint students with GOOD LABORATORY PRACTICES they will encounter in their field of study. Proper data accumulation, organization and review are necessary to validate information and form a basis for decisions made in the food industry and health professions.

[Lab Notebook Format](#)

- A personal information page (or cover sheet) must contain 1) your name, 2) laboratory day, 3) group number, and 4) the names of all laboratory partners.
- Individual labs should be labeled by lab number and title.
- Individual experiments within each lab are to be identified.

- Each experiment should be outlined. It is left up to the individual how they wish to do this (outline form, flow chart or numbered steps are all acceptable). However, it should be written so that others can also follow your method if there was a case that they needed to reenact the experiment. Leave some space in the notebook so that changes in the procedure can be noted here.
- Results are to be written as tables of data, visual or sensory observations, or other forms appropriate for the procedure.
- Additional information sheets can be taped, stapled or glued inside the notebook.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.

In addition you are on your honor to register Turningpoint responses only for yourself. This means you personally must be in class and register your own answers. *Registering responses for someone else or having someone register responses for you is considered a form of cheating.* If you are caught cheating the system, you and the other party(ies) involved will, at minimum, forfeit all of your points for the semester, and could be prosecuted through Student Honor Court.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being 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

Training Programs

Community Provider Database

- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*

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/