

## Course Syllabus

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### Instrumental Analysis & Separation (FOS 6355C) - Summer C (every odd year)

#### • Course Description

- Separation of food chemicals; gas, high performance liquid, thin-layer, ion-exchange and molecular size chromatography; characterization via UV-visible, IR, NMR, and mass spectrometry.

#### • Specific Objectives

- To gain a basic understanding of the chemistry and physical factors involved in chemical separations.
- To become proficient in the use of chromatography for the quantitative analysis of compounds in food
- To become familiar with the basic concepts of qualitative analysis of food samples using IR, NMR, and mass spectrometry

#### • Credits

- **5 credits** (Lecture/Lab, T,TH - Periods TBA)

#### • Instructors

Maurice R. Marshall<sup>1</sup>, Paul Sarnoski<sup>2</sup>, Liwei Gu<sup>2</sup>, Yavuz Yagiz<sup>1</sup> and Bridget Stokes<sup>2</sup>

Address / Contact Information

<sup>1</sup>**Food & Environmental Toxicology Lab (Corner of Hull and Mowry Roads):** Dr Marshall, Rm 1, 352-294-3981, [martym@ufl.edu](mailto:martym@ufl.edu) (<mailto:martym@ufl.edu>); Dr Yagiz, Rm 7, 352-294-3988, [yavuzy@ufl.edu](mailto:yavuzy@ufl.edu) (<mailto:yavuzy@ufl.edu>)

<sup>2</sup>**Food Science & Human Nutrition:** Dr Sarnoski, Rm 349A, 352-392-1991 x231, [psarnoski@ufl.edu](mailto:psarnoski@ufl.edu) (<mailto:psarnoski@ufl.edu>); Dr Gu, Rm 341A, 352-392-1991 x210, [lgu@ufl.edu](mailto:lgu@ufl.edu) (<mailto:lgu@ufl.edu>); Bridget Stokes, Rm 325, 352-392-1991 x223, [blstokes@ufl.edu](mailto:blstokes@ufl.edu) (<mailto:blstokes@ufl.edu>)

#### • Office Hours

Marshall - Open Door Policy – office is located on the periphery of campus. Recommend call first before you come out.

Sarnoski -

Gu -

#### • Course Prerequisites

CHM3120, FOS 4311

#### • Required Text

*No formal text.*

*Notes and handouts will be provided online*

#### • Lecture Materials

*PowerPoint lectures will be available to students online*

#### • Grading

Lab Assignments & Homework	50%
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Papers (4)	12%
Exams (3)	38%

**Examinations** will be given in class on the assigned dates. Exams will be around every 4 weeks: **June 6 or 11, July 11 or 16, and August 6**; although these are not firm. **Note:** We can have reviews if the class would like. I will provide details as we get near each exam.

#### • Grading Scale

90 - 100%	A
87 - 89%	B+
80 - 86%	B
77 - 79%	C+
70 - 76	C
67 - 69%	D+
60 - 66%	D
Below 60%	E

#### • Classroom Policies

- Cellular phones and pagers are disruptive and must be turned off in the classroom and laboratory
- Students are expected to be on time for lectures and lab
- Attendance at lectures will not be taken, but students are expected to attend all lectures and labs
- Students are expected to be familiar with the topic to be covered in lectures

#### • Academic Dishonesty

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> (<http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>)

#### • Student 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, contact: 0001 Reid Hall, 352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/) ([Links to an external site.](http://www.dso.ufl.edu/drc/)) (<http://www.dso.ufl.edu/drc/>)

#### • University of Florida Counseling Services

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. **NOTE: You need to present these to the instructor well before the semester ends - coming to me at the end will not get you relief.**

University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu/cwc/](http://www.counseling.ufl.edu/cwc/) (Links to an external site.) (<http://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/](http://www.crc.ufl.edu/) (Links to an external site.) (<http://www.crc.ufl.edu/>)

## • 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.

## • 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> (Links to an external site.) (<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> (Links to an external site.) (<https://evaluations.ufl.edu/results>).

Date	Details
Fri May 22, 2015	<a href="https://ufl.instructure.com/courses/317650/assignments/2800036">Questionnaire (https://ufl.instructure.com/courses/317650/assignments/2800036)</a> due by 11:59pm
Mon Jun 1, 2015	<a href="https://ufl.instructure.com/courses/317650/assignments/2800019">PAPER 1 - EXTRACTION/SEPARATION (https://ufl.instructure.com/courses/317650/assignments/2800019)</a> due by 5pm
Mon Jun 29, 2015	<a href="https://ufl.instructure.com/courses/317650/assignments/2800020">PAPER 2 - SPECTROSCOPY (https://ufl.instructure.com/courses/317650/assignments/2800020)</a> due by 5pm
Mon Jul 20, 2015	<a href="https://ufl.instructure.com/courses/317650/assignments/2800022">PAPER 3 - LIQUID CHROMATOGRAPHY (https://ufl.instructure.com/courses/317650/assignments/2800022)</a> due by 5pm
Mon Aug 3, 2015	<a href="https://ufl.instructure.com/courses/317650/assignments/2800021">PAPER 4 - GAS CHROMATOGRAPHY (https://ufl.instructure.com/courses/317650/assignments/2800021)</a> due by 5pm
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800035">Lab Reports &amp; Notebook (https://ufl.instructure.com/courses/317650/assignments/2800035)</a> due by 11:59pm
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800033">Acrylamide (https://ufl.instructure.com/courses/317650/assignments/2800033)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800027">Ascorbic Acid (https://ufl.instructure.com/courses/317650/assignments/2800027)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800037">Bonus Chromatography (https://ufl.instructure.com/courses/317650/assignments/2800037)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800029">Dry Lab 1 (https://ufl.instructure.com/courses/317650/assignments/2800029)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800030">Dry Lab 2 (https://ufl.instructure.com/courses/317650/assignments/2800030)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800031">Dry Lab 3 (https://ufl.instructure.com/courses/317650/assignments/2800031)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800028">Dyes (https://ufl.instructure.com/courses/317650/assignments/2800028)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800023">Exam 1 (https://ufl.instructure.com/courses/317650/assignments/2800023)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800024">Exam 2 (https://ufl.instructure.com/courses/317650/assignments/2800024)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800025">Exam 3 (https://ufl.instructure.com/courses/317650/assignments/2800025)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800032">Fatty Acids (https://ufl.instructure.com/courses/317650/assignments/2800032)</a>
	<a href="https://ufl.instructure.com/courses/317650/assignments/2800034">Flavors (https://ufl.instructure.com/courses/317650/assignments/2800034)</a>

**Date****Details**

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[Turbochrom \(https://ufl.instructure.com/courses/317650/assignments/2814776\)](https://ufl.instructure.com/courses/317650/assignments/2814776)

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