

CHM 3120

Syllabus

Introduction to Analytical Chemistry

Fall 2018

Instructor: Dr. Alex Jacobs, Leigh 202A (office is inside the lab)
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Office Hours: ????
If the door to Leigh 202 is open, you can come in

Graduate TAs: Jiajing "Jake" Zhu
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Office Hours: TBA

Undergraduate TA:

Lectures: T Periods 3 (9:35 am-10:25 am)
R Periods 2-3 (8:30 am-10:25 am)

Room: Flint 50

Required textbook: Quantitative Chemical Analysis, 9th edition, Daniel C Harris,
Freeman, 2016

Course Objectives

In this course, you will be introduced to the basics of analytical chemistry and how analytical techniques are used to make quantitative measurements. Lectures will emphasize both classical and modern techniques, with a greater focus on modern methods and recent developments. Statistical analysis and interpretation of data will also be covered. Some topics of quantitative analysis will be covered as well.

Grades

Grades will be determined by a point distribution:

Participation	50 pts
Exams (100 pts each 3 total)	300 pts
Final Exam (100 pts)	100 pts
Total	450 pts

Grades in this course will be on a straight scale as shown below. A curve may be applied at the end of the term if the professor deems it necessary.

<u>Letter Grade</u>	<u>Percentage</u>	<u>Letter Grade</u>	<u>Percentage</u>	<u>Letter Grade</u>	<u>Percentage</u>
A	≥93	B-	≥80	D+	≥67
A-	≥90	C+	≥77	D	≥64
B+	≥87	C	≥73	E	<60
B	≥83	C-	≥70		

Exams:

In class exams will be given throughout the semester, 3 regular exams and 1 final. Exams will be multiple choice questions. You will be allowed to use calculators on the exam (Graphing calculators must be memory wiped before the exam).

Grading:

If you believe there was an error in grading, please see myself or the TA within 1 week of having the exam returned to you. We do our best to ensure that the grading is fair for all students.

Attendance:

You should plan to attend all lectures. Powerpoint lectures may not contain 100% of the information provided in class. If you must be absent due to sporting events, family matters, religious obligations, etc. please let me know as soon as possible. If you are sick, please stay home and rest up. Inform me by email of your impending absence and if possible, provide a note from a doctor or medical professional when you return. Make up exams will only be given if appropriate documentation is provided. If you are going to be late, please enter the classroom quietly.

Participation will be awarded through the use of Top Hat. Activation code will be provided soon. Participation will consist of multiple choice questions randomly throughout the lecture.

Classroom Accommodations:

Students needing classroom accommodations must first register with the Dean of Students office. The DSO will provide documentation to the student who must then provide this documentation to me when requesting the accommodation.

Canvas:

All lectures, grades, practice exams and other files will be posted to Canvas. Lecture powerpoints will be posted under "Files"

Academic Honesty:

The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructors or TAs in this class.

Tentative Schedule

Date	Topic	Lab*	Chapter(s)
Aug 28 th (T)	Introduction, Course overview and units		0 and 1
Aug 30 th (R)	Chemical Measurements Tools and Safety		1,2
Sep 4 th (T)	Errors and sigfigs	Lab 1	3
Sep 6 th (R)	Statistics		4
Sep 11 th (T)	QA and Calibrations	Lab 2	5
Sep 13 th (R)	Fundamentals of Spectroscopy		18
Sep 18 th (T)	Fundamentals of Spectroscopy	Lab 2 cont.	18
Sep 20 th (R)	Exam 1		(Chapters 0-5)
Sep 25 th (T)	Spectroscopic Instrumentation	Lab 3	20
Sep 27 th (R)	Instrumentation cont./Atomic Spectroscopy		20,21
Oct 2 nd (T)	Atomic Spectroscopy	Lab 3 cont.	21
Oct 4 th (R)	Applications of Spectroscopy		19
Oct 9 th (T)	Fundamentals of electrochemistry	Lab 4	14
Oct 11 th (R)	Exam 2		(Chapters 18-21)
Oct 16 th (T)	Fundamentals of electrochemistry	Lab 4 cont.	14
Oct 18 th (R)	Electrodes and Potentiometry		15
Oct 23 rd (T)	Redox Titrations	Lab 5	16
Oct 25 th (R)	Electroanalytical Techniques		17
Oct 30 th (T)	Electroanalytical Techniques	Lab 6	17
Nov 1 st (R)	Separations		23
Nov 6 th (T)	Separations	Lab 7	23
Nov 8 th (R)	Exam 3		(Chapters 14-17)
Nov 13 th (T)	Gas Chromatography	Lab 8	24
Nov 15 th (R)	Gas Chromatography/Liquid Chromatography		24,25
Nov 20 th (T)	Liquid Chromatography		25
Nov 22 nd (R)	No Class-Thanksgiving		
Nov 27 th (T)	Other Chromatography/Separations	Lab check out	26
Nov 29 th (R)	Mass Spectrometry		22
Dec 4 th (T)	Mass Spectrometry		22
Dec 6 th (R)	No Class-Reading Days		
Dec 14 th (F☺)	Final (Not Comprehensive) (12:30-2:30)	Room TBA	(Chapters 22-26)

*Monday labs will be off-set due to holidays. The Monday section will check out Dec 3rd.