

CHM 3120, INTRODUCTORY ANALYTICAL CHEMISTRY

Summer, 2018, Section 7G96, M,W,F, 1st Period

Instructor: Dr. Kathryn R. Williams; krw@chem.ufl.edu; 392-7369
Office Hours: Mon 10-11 AM; Thurs 8:30-9:30 AM; CLB 220

Teaching Assistants: Matthew Bell; m.bell04@chem.ufl.edu; Tues/Thurs 4-5 PM; CLB 313
Jiaqiang Zhu; jiaqiang.zhu@ufl.edu; Wed 4-5 PM; Fri 3-4 PM; CLB 313
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Objectives: CHM 3120 covers the fundamental aspects of analytical chemistry, including both classical methods and a selection of instrumental methods. Students will be introduced to statistical treatment of data, calculations involving aqueous equilibrium, electrochemistry, spectroscopy, and chromatography. To become proficient in analytical methods, students are urged to take the corresponding laboratory course, CHM 3120L, either concurrently with CHM 3120 or in a future semester.

Text: Harris, D.C. *Quantitative Chemical Analysis*, 9th Ed; W.H. Freeman: New York, 2016.

Grading: Points will be distributed as follows:

Exams (4 @ 100 pts)	400
Assignments (6 @ 50 pts)	300
Attendance	50
Total	750

Grading Scale: Grades will be assigned according to the following point totals:

>675, A	640-674, A-	600-639, B+	560-599, B	520-559, B-
480-519, C+	440-479, C	400-439, C-	360-399, D+	320-359, D

Note: Chemistry majors are required to earn a minimum grade of C in CHM 3120.

Attendance: Attendance is required and will be recorded at 8:05 AM. Each unexcused absence will result in a 5-point deduction from the 50 attendance points (max point loss = 50).

Exams: There will be 4 in-class exams on the days designated on the schedule. All 4 exam grades will count towards the final grade. During exams, students may use non-programmable/non-graphing scientific calculators. Please see Dr. Williams if you have questions about your calculator. Students may not share calculators. Use of cell phones, mp3 players, personal computers, or any other electronic or wireless device is prohibited during exams.

Assignments: There will be six problem sets containing a selection of practice problems (not turned in) plus a few problems to be submitted on the designated dates. Solutions to homework assignments are expected to be individual efforts. Students may obtain help from Dr. Williams, the TAs, or any library/web reference materials. Please use pencil and write on one side only. No e-mailed assignments will be accepted.

Students with Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation.

Academic Honor Code: 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 instructor or TAs in this class.

Online Evaluations: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Lecture Schedule:

Book Chapters are for Harris 9th Ed.

Week	Topic(s)	Chapter(s)	Special Dates
5/14,16,18	Stoichiometry Review; Error Analysis; Statistics	1,3,4	
5/21,23,25	Statistics; Equilibrium; Activity	4,6,8	Fri, 5/25 Assignment 1 due
5/ 28 ,30;6/1	Acid/Base Equilibria	9,10	Fri, 6/1, Exam 1
6/4,6,8	Acid/Base Titrations	10,11	Fri, 6/8 Assignment 2 due
6/11,13,15	Systematic Treatment of Equilibria; Electrochemistry	8,14	
6/18,20,22	Redox Titrations	14,16	Mon, 6/18 Assignment 3 due Fri, 6/22, Exam 2
6/25,27,29	Summer Break		
7/2,4,6	Potentiometry; Coulometry	15,17	
7/9,11,13	Spectrophotometry; Fluorescence	18,19	Mon, 7/9 Assignment 4 due
7/16,18,20	Spectrophotometers	20	Fri, 7/20, Exam 3
7/23,25,27	Mass Spectrometry; Analytical Separations	22,23	Fri, 7/27 Assignment 5 due
7/30;8/1,3	Separations; Gas Chromatography	23,24	
8/6,8,10	Liquid Chromatography	25,26	Mon, 8/6 Assignment 6 due Fri, 8/10, Exam 4