Syllabus **CHM 3120, Introduction to Analytical Chemistry Spring 2020**

Lecture hours – M, W, F, Period 2 (8:30 – 9:20 am)

Instructor – Dr. Anna Brajter-Toth, Associate Professor of Chemistry
My research area is Analytical Chemistry
228A Sisler Hall, atoth@chem.ufl.edu

Instructor's office hours - Thursday 12:30 - 2:30 pm

TA –Jiaqiang (Jake) Zhu, jiaqiang.zhu@chem.ufl.edu

TA's office hours – Monday 1:30 - 3:00 pm, Wednesday 2:30 - 4:00 pm, Hernandez Hall 203

Course Information and Objective – This course is focused on the most practical and most practiced part of chemistry, which is chemical analysis. Major developments in analytical chemistry have been recognized with Nobel prizes because of their significance. This part of chemistry contributes to the quality of daily life, to safe drinking water and clean air standards, and life-saving blood and drug tests. I will be teaching the science behind the measurements, while focusing on practical applications in health and environmental sciences. This course should be of very broad interest and is important to all future practitioners.

Text - "Quantitative Chemical Analysis", 9th Edition, Daniel C. Harris, Freeman Pub, 2016

PLEASE NOTE: Many of the chapters (see Review Chapters list) in the text cover background material that you were taught in freshman chemistry. I do not plan to teach this material again. But, this material will be discussed as needed, with the new material, and could appear on an exam. I advise all to read the Review Chapters.

Review Chapters
Chap 6 – Chemical equilibrium
Chap 7 – Titrations
Chap 9 – Monoprotic acids
Chap 10 – Polyprotic acids

Bulk of the course material that will be covered can be found in the New Material chapters. I will refer to the book often. But some of the material that will be covered in the lectures is not covered in the text so class attendance is important (see below).
New Material
Chaps 0 - 5 – Essential background information
Chap 8 – The concept of chemical activity
Chaps 14, 15, 17 – Electrochemistry and electrochemical methods
Chaps 18 – 21 – Methods based on measurement of light

Exam dates

Exam 1	Friday, January 31, in class
Exam 2	Wednesday, February 26, in class
Exam 3	Friday, March 27, in class
Exam 4	Monday, April 22, in class (last day of class)
Final exam	Friday, May 1, 7:30- 9:30 am, in class

For **EXAM 1** – The material will cover **Chaps 0 - 5** – which is Essential background information.
EXAM 2 – will cover **Chap 8** – The concept of chemical activity and **Chaps 14, 15, 17 –** Electrochemistry and electrochemical methods.
EXAM 3 and 4 – will cover **Chaps 18 – 21** – Methods based on measurement of light.
NOTE: The chapters listed above will give you the information that will be covered on each exam. There may be some overlap between the material covered on each exam. The lecture material covered up to the exam date will give the best information about the material that will be covered on each given exam.

Class attendance – I will not necessarily follow the order used in your text, and I will often explain things in a very different way. **Therefore, attending every class is essential.**

Grading – There will be four in-class exams and a final exam. All exams, in-class and final, are worth 200 points each. To accommodate any emergency that might arise, you will be allowed to drop your lowest in-class exam score. As a result, no make-up exams will be offered for non-sanctioned absences (see the following). However, if you have a sanctioned absence (*e.g.*, religious observance, sanctioned sporting event) you will be allowed to take an exam before, not after, the rest of the class. You must inform your TA and me at least two weeks in advance of a sanctioned absence.

At the end of the semester you may choose either of these grading options.

Normal option – Drop lowest in-class exam score and take the final exam

Sum of 3 best in-class exam scores	600 points max
Final exam score	200 points max
	Total maximum earnable points 800

No-drop option - Keep all four in-class exam scores and skip the final

Sum of 4 in-class exam scores	800 points max
	Total maximum earnable points 800

Point total & letter grade cutoffs – Minimum points required to get the indicated grade.
A = 700 (87.5%), A- = 676 (84.5%), B+ = 652 (81.5%), B = 620 (77.5%), B- = 596 points (74.5%), C+ = 572 (71.5%), C = 540 (67.5%), C- = 514 (64.2%), D+ = 490 (61.2%), D = 460 (57.5%), D- = 267 (33%)

UF Grading Policies - See https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Disputing a Score – To dispute a score send an e-mail message to your TA and me. You have 48 hours after posting to dispute a score. After that, all scores are final.

e-Learning - We will use the UF Canvas e-learning system for course management. Here you will find the syllabus, your grades, which only you may see, class announcements, and other pertinent information for the course. All documents are posted under “Files.” Access e-Learning through your myUFL portal.

Academic Honesty - I believe that honesty is one of the most important of human virtues. Being honest keeps you out of trouble, and honesty provides the best path forward in any situation. Exams are given under the provisions of the University of Florida Honor Code. Any student caught cheating will receive a failing grade in the course. Review the Honor Code here. https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

Other Information

Students wanting disability accommodations, please contact the Disability Resource Center DRC at www.dso.ufl.edu/drc/ or call 352-392-8565. Any accommodations that you require will be arranged by DRC. Please remember to follow the guidelines provided by DRC. Please confirm with your instructor in advance of the exam that you will be using the disability accommodations for the exam.

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations. Students will be notified when evaluations are required.