

Instructor – Dr. Charles R. Martin, University Distinguished Professor of Chemistry
Call him **The Colonel** (Honorable Order of Kentucky Colonels), crmartin@ufl.edu

The Colonel's Comments on Fall 2020 - I have never taught an online class. While I have been preparing for months, I am sure we will encounter unexpected difficulties as the semester progresses. Hence, while I present plans and schedules below, these may have to be revised.

Canvas - We will use the UF Canvas e-Learning system for course management. You access e-Learning through your myUFL portal. Please review carefully the Canvas page for this course. In particular, look over the files that I have uploaded and any "Announcements" I have made. All of the information in this syllabus is at Canvas, and a lot more.

Lectures - Lectures will be delivered in video format. Links to these lecture videos will be sent out as "Announcements" from the Canvas page. These videos can be viewed at any time.
Watching these lecture videos is essential to obtaining a good grade.

Virtual Class Meetings – The official meeting times for this class are Tuesdays, Period 3 and Thursdays, Periods 2 and 3. We will have live Zoom virtual meetings every week, Tuesday, Period 3, and Thursday, Period 3. Period 3 goes from 9:35 AM to 10:25 AM. My current plan is to use these weekly virtual meetings like office hours where I reinforce important points, answer student questions, work problems, etc.

Please note – While we will have the virtual class meeting only during Period 3, the exams will be on Thursdays (see below), and we will use both Periods 2 and 3 for the exams.

Instructor's Office Hours –Wednesdays 2:00 to 4:00 PM. Details of how office hours will be conducted will be forthcoming.

TA – Tyler Galiber, tgaliber@ufl.edu

TA's office hours – TBA

Course Information and Objective – Analytical Chemistry entails measuring the concentration of a substance (*e.g.*, a drug, DNA, pollutant, protein) in a solution (blood, water, saliva, air, *etc.*). Knowing the concentration is important because, for example, if the concentration of a pollutant in water is too high, the water is unsafe to drink. Alternatively, if the concentration of a drug in the blood is too low, it will not have the desired therapeutic effect. Analytical Chemistry is part of many disciplines and careers including medicine, pharmacology, ecology, biology, and atmospheric and environmental sciences.

Analytical Chemistry has been my life's work. For you to understand it, I must first give you background information on the concept of chemical measurements, how chemical measurements are made, and what tools and mathematics are used. With this foundation in place we will move on to the methods of chemical analysis with emphasis on electrochemical, spectrophotometric and fluorometric methods. My objective is to teach in a way that you will truly understand and appreciate this interesting and important branch of chemistry.

Text - "Quantitative Chemical Analysis", 9th Edition, Daniel C. Harris, Freeman Pub, 2016. The 10th Edition may also be used.

Chapters Covered – Chapters 6, 7, 9, and 10 of your text cover material that you were taught in freshman chemistry. I do not intend to teach this material to you again. However, material from these chapters will be discussed as needed and could appear on an exam. I advise you to read these review chapters.

The bulk of my lectures will be on material from these chapters. As noted in this list, for some chapters, not all of the sections in the chapters will be covered.

Chap 0, “The Analytical Process” - Entire chapter is covered
Chap 1, “Chemical Measurements” - Section 1-4 is not covered
Chap 2, “Tools of the Trade” - Sections 2-9, 2-10 and 2-11 are not covered
Chap 3, “Experimental Error” - Entire chapter is covered
Chap 4, “Statistics” - Entire chapter is covered
Chap 5, “Quality Assurance and Calibration Methods” - Entire chapter is covered
Chap 8, “Activity” - Sections 8-4 and 8-5 are not covered
Chap 14, “Fundamentals of Electrochemistry” - Section 14-7 is not covered
Chap 15, “Electrode and Potentiometry” - Sections 15-7 and 15-8 are not covered
Chap 17, “Electroanalytical Chemistry” - Sections 17-5 and 17-6 are not covered
Chap 18, “Fundamentals of Spectrophotometry” - Entire chapter is covered
Chap 19, “Applications of Spectrophotometry” - Only section 19-5 is covered
Chap 20, “Spectrophotometers” - Only sections 20-1, 20-2 and 20-3 are covered

Exams - There will be three during-semester exams and a final exam.

During-semester exams

Exam 1	Thursday, October 1, Periods 2 and 3 (8:30 AM - 10:25 AM)
Exam 2	Thursday, October 29, Periods 2 and 3 (8:30 AM - 10:25 AM)
Exam 3	Thursday, December 3, Periods 2 and 3 (8:30 AM - 10:25 AM)
Final Exam	Wednesday, December 16, 5:30 PM - 7:30 PM

My plan at this time is to give the exams through Canvas “Quizzes.”

Grading –All four of the exams are worth 200 points each. You have two options.

Option 1 - Drop one during-semester exam and take the final, in which case

Sum of 2 best during-semester exam scores	400 points max
Final exam score	<u>200 points max</u>
Total maximum earnable points 600	

Option 2 - Keep all during-semester exams and skip the final, in which case

Sum of 3 during-semester exam scores	600 points max
Total maximum earnable points 600	

Because one of the during-semester exams can be dropped, no make-up exams will be offered.

This means if you miss one of the during-semester exams, you default to Option 1.

However, if you have a sanctioned absence (*e.g.*, religious observance, sanctioned university 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.

Letter Grade Cutoffs, Percent of maximum (600) points

A 100 to 90 %, A- 89 to 86 %, B+ 85 to 83 %, B 82 to 79 %, B- 78 to 76%, C+ 75 to 73%
C 72 to 69 %, C- 68 to 66 %, D+ 65 to 63%, D 62 to 57 %, D- 56 to 50 %, F 49 to 0%

Reporting Exam Scores to You – Our goal is to get the exam scores to you as soon as possible after the exam. But to be more concrete, we anticipate that the latest date we would get scores back to you would be the Tuesday following the Thursday exam.

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.

Chapters Covered for Each Exam – See above for specific sections of each chapter covered.
This schedule is tentative and may be revised as the semester progresses.

Exam 1 – Chaps 0 through 4 (maybe some of Chap 5)

Exam 2 - Chaps 5, 8, 14, and 17 (maybe some of Chap15)

Exam 3 – Chaps 15, 18, 19, and 20

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

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 at www.dso.ufl.edu/drc/ or call 352-392-8565.

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.

Permission statement – I am obliged to give you this statement.

“Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who unmute during class and participate verbally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.”

A final note from The Colonel – I do not intend to use the Zoom “chat” feature this semester.