Syllabus  
CHM 3120, Introduction to Analytical Chemistry  
Fall 2019

Lecture hours – Tuesday, Period 2 (8:30 – 9:20), Thursday Periods 2 & 3 (8:30 – 10:25)

Instructor – Dr. Charles R. Martin, University Distinguished Professor of Chemistry  
218 Chemistry Laboratory Building, crmartin@chem.ufl.edu

Instructor’s office hours - Thursday 12:30 - 2:30

TA – Tyler Galiber, tgaliber@ufl.edu

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

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.


Chapters Covered – Many of the chapters in your text cover material that you were taught in freshman chemistry (see "Review Chapters" list). 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.

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

The bulk of my lectures will be on the chapters in the "New Material" list here.

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 – 20 – Methods based on measurement of light

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 three 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. 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

<table>
<thead>
<tr>
<th>Sum of 2 best in-class exam scores</th>
<th>400 points max</th>
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<tbody>
<tr>
<td>Final exam score</td>
<td>200 points max</td>
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<tr>
<td><strong>Total maximum earnable points</strong></td>
<td>600</td>
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**No-drop option** - Keep all three in-class exam scores and skip the final

<table>
<thead>
<tr>
<th>Sum of 3 in-class exam scores</th>
<th>600 points max</th>
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<tbody>
<tr>
<td><strong>Total maximum earnable points</strong></td>
<td>600</td>
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**Point total & letter grade cutoffs** – Minimum points required to get the indicated grade.

- A = 525 (87.5%), A- = 507 (84.5%), B+ = 489 (81.5%), B = 465 (77.5%), B- = 447 points (74.5%), C+ = 429 (71.5%), C = 405 (67.5%), C- = 386 (64.3%), D+ = 368 (61.3%), D = 345 points (57.5%), D- = 200 (25%)

**Exam dates**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Thursday, September 26, in class</td>
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<tr>
<td>Exam 2</td>
<td>Thursday, October 31, in class</td>
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<tr>
<td>Exam 3</td>
<td>Tuesday, December 3, in class (last day of class)</td>
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<tr>
<td>Final exam</td>
<td>Wednesday, December 11, 3:00 - 5:00, in class</td>
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**UF Grading Policies** - See [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](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/](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/](http://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.