Analytical Chemistry Syllabus Spring 2013

Course Number: CHM 3120 (3 credits)  
Time: M, W, F 11:30 a.m. -12:20 p.m.

Instructor: Dr. Emily Heider  
Location: COMM 0110

Email: Emily.Heider@UCF.edu

Office Hours: M, W 12:30-1:30 in Chemistry building RM 333

Required Text:

Other materials:
A scientific calculator and access to Microsoft Excel will be required for this course. Cell phones may not be used as calculators during exams.

Course Objective:
The job of an analytical chemist is to honestly and accurately report quantitative results and errors with maximum precision. The main tools of the trade will be taught in lecture, including statistical analysis, sampling, and survey analytical techniques. Students will have an opportunity to practice these tools in problem sets and in class. Students will be tested on these tools during three midterm exams and a final exam.

Course Web Site: See Canvas (log on with your student PID)

Homework
Homework is assigned but will not be turned in or graded. Chemistry is a difficult subject, one learned only through working problems. You are expected to work all assigned homework problems. Those wishing to do better should do more problems from the book. Homework problems in the book are largely math type problems. Many of the questions for exams will look EXACTLY like problems from the homework. You are encouraged to work together to solve homework problems.

Homework Problems:
The following are homework problems you should complete. Other problems will be provided in class, generally as a worksheet. You must be present in class to collect these additional problems and solutions.

Chapter 1: 2, 3, 4-8, 11, 13, 14a, 17, 19, 21
Chapter 3: 1, 3-5, 9b-e, 11, 12b, 14a, 14b, 17b
Chapter 4: 2, 5, 6, 9, 13, 14, 16
Chapter 5: 16, 17, 20-23
Chapter 6: (1st review from Chapter 1: 27, 28, 29) then in Chapter 6: 18, 19, 21
Chapter 7: 2, 3, 4, 6, 9, 12
Chapter 12: 9, 10, 11, 14, 16
Chapter 8: 1, 3, 5, 10, 11, 13, 21, 22, 28, 34
Chapter 9: 4, 7, 8, 12a, 14, 15, 17
Chapter 10: 6, 8, 10, 20
Chapter 11: 3, 8, 9, 12, 16, 22, 27a, 27b
Chapter 13: 1, 2, 3, 4, 8
Chapter 14: 2, 5b, 8a, 11a, 12a, 14, 18
Chapter 15: 1, 2, 3, 7, 122, 14, 16
Chapter 16: 1, 3, 6
Chapter 17: TBA
Chapter 18: 1, 2, 5, 8, 10, 13, 14, 22
Chapter 19: 4, 5, 9, 12
Chapter 20: 3, 6, 7, 17a
Chapter 21: 2, 8, 10, 11, 12, 13, 19, 20, 21
Chapter 22: 2, 8, 9, 10, 13, 16, 24
Chapter 23: 1, 4, 10a, 12, 13, 16

Special Project Proposal
A semester-long writing assignment will be required for this course. A complete description of
the project is found in a separate document. The ultimate objective will be a written proposal for
the quantitative analysis of an analyte of interest. It will be broken into the following sections:
Preproposall Part I Description of Analyte (15 points)
In class revision date: Wednesday, January 23
Submission for grading date: Friday, January 25
Preproposall Part II Analytical Procedure (15 points)
In class revision date: Monday, February 11
Submission for grading date: Wednesday, February 13
Complete Special Project Proposal (30 points) – Including Parts I, II, and additional
explanation of chemical principals.
In class revision date: Monday, April 8
Submission for grading date: Wednesday, April 10

All parts of the special project listed above must be submitted as a hard copy. Email or other
electronic submission will NOT be accepted. No late assignments will be accepted. If necessary,
you may submit your assignments in advance.

Exam Policy
Exams will be given on the following schedule (although inclusive chapters are approximate):
In class Monday, 2/4 Exam 1 (Chapter 0-7, 12)
In class Friday, 3/1 Exam 2 (Chapter 8-11)
In class Wednesday, 3/27 Exam 3 (Chapters 13-17)
Wednesday, April 24th at 10 a.m. Final Comprehensive Exam
Including chapters 18-23

All midterm exams will be worth a total of 100 points each, and will be multiple choice or short
answer problems that require calculations or conceptual understanding of content. You will be
required to bring a #2 pencil and "raspberry" shaded scantron to each exam.
The tests are not graded on a curve. The final exam will be worth 200 points. If you miss an
exam for any reason, you forfeit the points; however the lowest exam score (or half of the
final score) will be dropped.
Grading Policy
The grade a student receives for this course is based upon their mastery of the subject material and not the effort that they put into the course. The grades will be assigned according to percent of the number of points earned as follows:

- **Special Project:** 60 points
- **Midterm Exams:** 200 or 300 points (the lowest exam score will be dropped)
- **Final Exam:** 200 or 100 points (if the final is the lowest score, then half will be dropped)

**Total:** 460 points

The percent of the total points that you earn will be used to determine your grade:

- A 90.00 - 100%
- B 80.00 - 89.99%
- C 67.00-79.99%
- D 50.00-66.99%
- Fail <50%

Attendance
Attendance in class will not be recorded. However, you must be present to turn in writing assignments and take exams.

Academic Integrity and Dishonesty
Each student is expected to maintain academic ethics and honesty in all its forms, including, but not limited to, cheating as defined:

*Cheating* is the act of using or attempting to use, or providing others with, unauthorized information, materials or study aids in academic work. Cheating includes distributing examination answers & questions to, or taking examinations for, someone else, or preparing or copying another’s academic work.

You are expected to write all quizzes and examinations without using study aids, lists of equations (commit them to memory), or group participation. If you become aware of quiz or exam material being circulated before or while it is being administered, you are expected to make the instructor aware of it.

Disability Accommodations
The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. Students with disabilities who need accommodations in this course must contact Student Disability Services and then the professor at the beginning of the semester to discuss needed accommodations. No accommodations will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons RM 132, email sds@mail.ucf.edu, phone (407) 823-2371 before meeting with the professor.

Important Dates

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<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>January 10</td>
<td>Swap/Drop deadline</td>
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<tr>
<td>January 21</td>
<td>Martin Luther King Jr. Day — no class</td>
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<tr>
<td>March 4-9</td>
<td>Spring Break</td>
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<tr>
<td>March 11</td>
<td>Last day to Withdraw</td>
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<tr>
<td>April 22</td>
<td>Last day of classes</td>
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The information in this syllabus may be changed at the instructor's discretion.