

CHM2096 – Chemistry for Engineers II – Spring 2018

INSTRUCTOR: Dr. Maria Korolev

Email (for administrative purposes): korolev@ufl.edu

Office hours: MWF periods 7 & 8 and TR period 8 in Keene-Flint 251/258

COURSE INFO: CHM 2096 and CHM 2046L constitute the second semester of the two term sequence of General Chemistry, CHM 2095/2045L - 2096/2046L. Prerequisite information and credit suitability can be found in the Undergraduate Catalog. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

COURSE SCHEDULE (the lecture schedule is tentative, but exam dates will not change)

| Dates | Topics (# of lectures) | Silberberg Chapters* |
|--|----------------------------|----------------------|
| Jan 9 – Jan 11 | Kinetics (2) | Chapter 16 |
| Jan 11 – Jan 23 | Chemical Equilibria (4) | Chapter 17 |
| Jan 25 – Jan 30 | Ionic Equilibria (3) | Chapter 19 |
| January 31st (8:20pm – 10:20pm) | Progress Exam 1 | Cumulative |
| Feb 1 – Feb 8 | Acids and Bases (4) | Chapter 18 |
| Feb 13 – Feb 15 | Buffers and Titrations (3) | Chapter 19 |
| Feb 20 – Mar 1 | Thermodynamics (5) | Chapter 20 |
| February 28th (8:20pm – 10:20pm) | Progress Exam 2 | Cumulative |
| Mar 13 – Mar 29 | Electrochemistry (8) | Chapter 21 |
| Mar 29 – April 5 | Nuclear Chemistry (4) | Chapter 24 |
| April 9th (8:20pm – 10:20pm) | Progress Exam 3 | Cumulative |
| April 10 – April 17 | Inorganic Chemistry (3) | Chapter 23 |
| April 19 – April 24 | Organic Chemistry (3) | Chapter 15 |
| April 30th (3:00pm – 5:00pm) | Final Exam | Cumulative |

*The topics that will be covered from each chapter will be selective and announced in class.

Holidays: January 15th (Martin Luther King Day), March 5th – 9th (Spring Break)

REQUIRED MATERIALS:

TopHat Subscription for in-class clicker questions

Any College Chemistry Textbook (such as Silberberg or Tro) for course material

COURSE OBJECTIVES: As both a general education requirement and major's course, CHM2096 serves to teach: the scientific method, skills for problem solving, general chemistry knowledge, and a connection to the principles that govern the natural world.

GRADES: Grades for the term will be determined as follows:

| | |
|-----------------------|------|
| 3 Progress Exams | 60% |
| Final Cumulative Exam | 25% |
| Mini-Projects | 7% |
| Homework | 5% |
| Clickers | 3% |
| TOTAL | 100% |

The following grade cutoffs will be used (these are non-negotiable):

| | | | |
|------------------|------------------|------------------|------------------|
| 90.0%-100% = A | 86.0%-89.9% = A- | 83.0%-85.9% = B+ | 80.0%-82.9% = B |
| 76.0%-79.9% = B- | 73.0%-75.9% = C+ | 70.0%-72.9% = C | 66.0%-69.9% = D+ |
| 63.0%-65.9% = D | 60.0%-62.9% = D- | < 60.0% = E | |

Information on current UF grading policies for assigning grade points can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

MINI-PROJECTS: Seven percent of the course grade will be determined by engineering projects done during your discussion sections. There will be three projects spread over the semester that will relate to material covered in lecture. Each project will be assigned over three weeks to be completed both during discussions and outside the discussions. You will be graded on the scientific merit of your work in groups. If you do not contribute to your team, then you will be taken off the team and made to work on your own. More of the details of the activities will be discussed during the first class meeting. Your attendance is required in your registrar assigned section. If you have an unexcused absence during the discussion period for a given week, then you will receive a score of zero on the assignment for that week. If you have an excused absence, then you must show documentation of your excuse to your TA and they will inform you how to receive credit for the assignment.

ONLINE HOMEWORK: Five percent of the course grade will be based on online homework assignments through Canvas. Each assignment has a displayed deadline. Failure to at least access a homework assignment before its due date will result in the loss of ability to access that homework for the remainder of the semester. Students that miss a homework deadline due to an excused absence can request an extension by contacting the instructor. You will have multiple attempts to successfully answer the homework assignments. The lowest homework grade will be dropped at the end of the semester.

CLICKERS: Three percent of the course grade will be based on performance on in-class clicker questions. You can earn points in class by correctly answering clicker questions through TopHat. The first question of the day will be worth half of the day's credit and will be based on the pre-class assignment for that day. The lowest five clicker grades will be dropped at the end of the semester.

CONTACTING THE INSTRUCTOR / OFFICE HOURS: Emails are for administrative purposes only, and not for distance-instruction. All academic inquiries must be made during office hours or before/after lectures (if time permits). If this is not possible, visit the CLC (see below). Please be prepared before coming to office hours, bring specific questions and your previous work. Questions about grades will not be discussed during office hours due to privacy regulations.

CHEMISTRY LEARNING CENTER (CLC): There is free help to be had from graduate student teaching assistants in the CLC Monday through Friday in Joseph Hernandez Hall 105. Your discussion TA will have office hours in the CLC, but you may go there anytime any TA is assigned there to get help on questions pertaining to chemistry. A schedule of the TA schedules will be posted in the CLC and also online. Additionally, there is the teaching center located on the ground floor of Broward Hall, if you'd like to use that resource. Their web site is <http://www.teachingcenter.ufl.edu>.

EXAMS: Exams will be taken in the evenings outside of class and the Exam Room Assignments will be posted. You must use a non-graphing non-programmable scientific calculator on exams (with log, ln, root, and exponent (scientific notation) functions). Be sure to also bring pencils, section number, and your UF ID card. No notes, papers, cell phones or other electronic devices can be in view during exams.

No makeup ("do over") progress exams will be given for any reason. If you must be absent for an exam due to a documented and approved academic or UF athletic conflict, bring the documentation to your instructor at least *one week prior* to the scheduled exam and an early conflict exam will be scheduled for you. If you are absent for an exam due to an unpredicted documented medical reason, you must contact the instructor as soon as possible. More information regarding this policy can be found in the *General Chemistry Exam Absence Policy* document found on Canvas.

To alleviate the stress of potential issues that do not fall under officially-sanctioned absences, we've incorporated an "average/replace" policy (the lowest of the three progress exams will be replaced by the average of the three progress exams). This "average/replace" policy will help to minimize the impact of a single poor performance but it will not completely disappear.

Any and all exam grade disputes or Scantron confirmations must be performed within two weeks of the scheduled exam date. Bubbling errors will not be negotiated, and a five point penalty will be applied for failure to bubble in a form code, UFID, or not taking the exam in the assigned room.

HONOR CODE: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code

(<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>) 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.

CANVAS (<http://elearning.ufl.edu>): Here you will find the syllabus, gradebook, files, class announcements, and other pertinent info for the course. It is your responsibility to check Canvas often to make sure that you do not miss important announcements and to ensure that your gradebook is accurate. For computer assistance, visit <http://helpdesk.ufl.edu/>.

CLASS DEMEANOR: In order to have an optimal learning environment, the classroom needs to be free of disruptions. Therefore, it is expected that students come to class on time and leave only when class is concluded by the instructor, and that the class is not disrupted by student talking or cell phone noises.

DISABILITIES: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <http://www.dso.ufl.edu/drc/>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. The student is responsible for scheduling the exam dates with the DRC. Students with disabilities should follow this procedure as early as possible.

U MATTER, WE CARE: Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

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/>.

GENERAL EDUCATION REQUIREMENTS: This course satisfies the general education program requirements for the physical sciences at the University of Florida. More information regarding the program objectives, student learning outcomes, and specific goals for CHM2095/CHM2096 can be found in the *General Education Program Requirements* document found on Canvas.

DISCLAIMER: This syllabus represents my current plans and objectives. If those need to change as the semester progresses, then the changes will be communicated to the class clearly.