

## CHM 2096 – Chemistry for Engineers 2 – Spring 2012

**Lectures:** MWR Period 10 (5:10 – 6:00 PM) in FLI 50. Concurrent enrollment in CHM 2046L, 2054L, MAC 2311, MAC 2312, or MAC 2313 is suggested.

**Instructor:** Dr. Jeffrey Keaffaber, Office: FLI 251; Phone: 392-1087; Email: [jjk@chem.ufl.edu](mailto:jjk@chem.ufl.edu)  
Email is the recommended form of contact. Please do not email the instructor using Sakai!

**Office Hours:** MTWR Period 7-8 (1:55-3:50 PM)

If these times don't work for you, please make an appointment. No office hours on Fridays.

**Teaching Assistant:** Emily O'Neill [oneill@chem.ufl.edu](mailto:oneill@chem.ufl.edu) and Liz Muffly [muffly@chem.ufl.edu](mailto:muffly@chem.ufl.edu)  
O/Hs: To be announced.

**Text/Notes:** Custom *Chemical Principles*, Steven Zumdahl, 6<sup>th</sup> Edition, Cengage Learning w/ notes. Purchase: <http://www.cengagebrain.com/micro/ufchem> Tab down to select course: CHM2051 Honors Chemistry Soft cover custom bundle (book + notes): ISBN-10: 1-133-43216-6, ISBN-13: 978-1-133-43216-6

**Description:** CHM 2096 is a lower enrollment, a second semester of general chemistry for engineering majors requiring more depth in chemical principles. Topics include chemical equilibria, acid-base and aqueous equilibria, chemical thermodynamics, electrochemical devices, descriptive inorganic materials, transition metal coordination, and introductory organic chemistry.

**Prerequisites:** CHM 2045 or CHM 2095.

**Attendance:** Attendance will not be taken, but it is highly recommended that you attend every lecture. Remember that your instructor writes the exams. Therefore, concepts emphasized in lecture should be given top priority. Staying home and "reading" the textbook, studying the content on Sakai, and cramming for exams will not work in CHM 2096! Missing just one class is a proven effective way to be left behind.

**Homework:** Problems will be assigned from the end of the chapters. Homework will be handed in to your TA at the beginning of class on the Tuesday due date. Late work will not be accepted. There will be 12 homework assignments, and you will be allowed to drop your two lowest scores. Each homework assignment will be graded on four (4) point scale: 4 = flawless; 3 = good but not perfect; 2 = average effort; 1 = poorly presented; 0 = incomplete or not submitted.

**Mini-Exams:** Twelve (12) mid-semester 20-30 minute exams will be offered on Wednesdays at 5:10 PM sharp starting on January 25<sup>th</sup>. Two of these exams will be dropped. Each exam will be graded with a whole number on a 10 point scale: 10 = A; 9 = A-; 8 = B+; 7 = B; 6 = B-; 5 = C+; 4 = C; 3 = D; 2 = E; 1 = E; 0 = E.

**Make-up Policy:** There will be **NO** make-up exams given. A missed exam will count as a drop.

**Final Exam:** A mandatory two-hour final exam will be given during exam block 28E at 5:30-7:30 PM on Saturday, April 28<sup>th</sup>. The final exam will be worth 60 points.

**Calculators:** Calculators are **NOT** permitted on exams.

**Cell Phones:** Cell phones **must** be turned **OFF** during lectures and exams!

**Grading:** Your letter grade will be based on a total of 200 points. Point ranges are fixed will NOT be "curved." Letter grades will be available on ISIS, late night, Monday, May 7<sup>th</sup>.

12 Mini-Exams (2 drops)	100
Final exam	60
<u>12 Homework (2 drops)</u>	<u>40</u>
<b>TOTAL</b>	<b>200</b>

**Minimum Targets:** 180 (90%) A-; 160 (80%) B+; 140 (70%) B; 120 (60%) B-; 100 (50%) C+; 80 (40%) C

**Grade point values:** 4.00 A; 3.67 A-; 3.33 B+; 3.00 B; 2.67 B-; 2.33 C+; 2.00 C; 1.67 C-; 1.33 D+; 1.00 D; 0.67 D-.  
For more information: <http://isis.ufl.edu/minusgrades.html>

**Sakai:** All exam and homework scores will be under the "my grades" link in Sakai. Check Sakai frequently for content additions under the "resources" link and for class announcements. <http://lss.at.ufl.edu> Do not email the instructor in E-learning, please use [jjk@chem.ufl.edu](mailto:jjk@chem.ufl.edu) for all course-related email.

**GCLC:** The General Chemistry Learning Center, a tutoring location, can be found in Flint Hall (FLI) 257. TAs will be available during most business hours Monday-Friday. Any TA present in the GCLC is able to assist with topics from this course. If a TA is not assisting his/her students, he/she is supposed to help you. One should take serious advantage of this free resource.

### Course Schedule:

Topic	Chapter	Week	Dates	Key Dates
Chemical Equilibrium	6	1	01/09-01/13	<b>Add/Drop</b>
Chemical Equilibrium	6	2	01/16-01/20	<b>No Exam</b>
Acids and Bases	7	3	01/23-01/27	<b>Exam 1 01/25</b>
Acids and Bases	7	4	01/30-02/03	<b>Exam 2 02/01</b>
Aqueous Equilibria	8	5	02/06-02/10	<b>Exam 3 02/08</b>
Aqueous Equilibria	8	6	02/13-02/17	<b>Exam 4 02/15</b>
Energy and Enthalpy	9	7	02/20-02/24	<b>Exam 5 02/22</b>
Entropy and Free Energy	10	8	02/27-03/02	<b>Exam 6 02/29</b>
<b>Spring Break</b>		<b>9</b>	<b>03/05-03/09</b>	<b>No Class</b>
Entropy and Free Energy	10	10	03/12-03/16	<b>Exam 7 03/14</b>
Electrochemistry	11	11	03/19-03/23	<b>Exam 8 03/21</b>
Descriptive Chemistry of the Elements	18	12	03/26-03/30	<b>Exam 9 03/28</b>
Descriptive Chemistry of the Elements	18	13	04/02-04/06	<b>Exam 10 04/04</b>
Coordination Chemistry/Transition Metals	19	14	04/09-04/13	<b>Exam 11 04/11</b>
Introduction to Organic Chemistry	21	15	04/16-04/20	<b>Exam 12 04/18</b>
<b>IN-CLASS CUMULATIVE FINAL EXAM</b>	<b>6-11, 18-19, 21</b>	<b>16</b>	<b>04/23-04/27</b>	<b>Final Exam 04/28</b> <b>5:30 PM – 7:30 PM</b>

\*The last day to withdraw from a course with the grade of "W" is Friday, April 13<sup>th</sup>!!!

### Other Information:

Honor Code:	<a href="http://www.chem.ufl.edu/~itl/honor.html">http://www.chem.ufl.edu/~itl/honor.html</a>
Disabilities:	<a href="http://www.chem.ufl.edu/~itl/disabilities.html">http://www.chem.ufl.edu/~itl/disabilities.html</a>
Counseling:	<a href="http://www.chem.ufl.edu/~itl/counseling.html">http://www.chem.ufl.edu/~itl/counseling.html</a>

**Disclaimer:** The above course information is tentative and subject to change. The instructor reserves the right to make corrections, additions, and/or deletions.  
Syllabus corrections will be announced as they occur.