CHM 2095 – Chemistry for Engineers 1 – Fall 2011

Sections: 04AA, 04AB, 04AC, 04AD, 04AE, 1552, 1565, 1572, 1581, 1590, and 1612

Lectures: MWF Period 2 (8:30-9:20 AM) in CLB C130. Concurrent enrollment in CHM 2045L and MAC 2311 is suggested.

Tuesday Sessions: Tuesday classes will start during the second week of class on August 30th. Consult your schedule for the period and room location. Again, these sessions do not meet in the first week

Instructor: Dr. Jeffrey Keaffaber, Office: FLI 251; Phone: 392-1087; Email: jjk@chem.ufl.edu
Email is the recommended form of contact.

Office Hours: MW Period 7-8 (1:55-3:50 PM), TR Period 4 (10:40-11:30 AM) No Friday office hours.
If these times don't work for you, please make an appointment.

Teaching Assts: Several TAs will be assigned to this course. Identities and office hours will be announced on Sakai as soon as they are available. TA office hours are held in general chemistry learning center (GCLC) in FLI 257.

Text: *Engineering Chemistry University of Florida CHM 2095*, Brown, Holme, with contributions by Keaffaber, Cengage Learning Purchase site: http://www.cengagebrain.com/micro/ufchem

Description: CHM 2095 is the first semester of the CHM 2095 – 2096 sequence. Topics include stoichiometry, energy and thermodynamics, atomic and molecular structure, the states of matter, reaction rates, and an introduction to chemical equilibria. All of these topics are taught in an engineering case-study context. While it may seem that chemical, material science, biological, environmental, civil, and even mechanical engineers benefit most from this course, all engineering majors benefit from the critical thinking skills that a course in chemistry offers. It will also instill a strong work ethic that is an absolute must in the engineering profession!

Prerequisites: CHM 1025 (grade of C or higher), or passing score on the chemistry readiness assessment (ChRA).

Attendance: Attendance will not be taken, but it is highly recommended that you attend every lecture and TA session. Remember that Dr. Keaffaber writes the exams. Therefore, concepts emphasized in lecture and Tuesday sessions should be given top priority. Staying home, "reading" the textbook , and cramming for exams will not work in CHM 2095! 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 given to your TA at the beginning of each Tuesday class. 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 a four (4) point scale: 4 = flawless; 3 = good but not perfect; 2 = average effort; 1 = poorly presented; 0 = incomplete or not submitted.

Mini-Exams: Fourteen (14) mid-semester progress mini-exams with be administered on Wednesdays at 8:30 AM sharp! These exams will be 20-25 minutes in length. Three (3) progress mini-exams will be dropped. Each mini-exam will cover the material presented in lectures on Wednesday (after your mini-exam), Friday, Monday, and in your TA session on Tuesday. If one of these days is a UF holiday, you will still have your Wednesday mini-exam covering less material. Each mini-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: A missed mini- exam (for whatever reason) will count as a drop. Plan your schedule so that you are present.

Final Exam: A two-hour, cumulative (covering the entire semester) final exam is scheduled in Exam Group 13C on **Tuesday, December 13th at 12:30-2:30 PM!** The final exam is mandatory and may not be dropped.

Final Exam Make-up Policy: If extraordinary circumstances arise, contact Dr. Keaffaber in advance of the final exam and a make-up final exam will be provided at a mutually agreeable time.

Calculators: Calculators are **NOT** permitted on mini-exams or the final exam unless otherwise announced, in advance, by Dr. Keaffaber.

Cell Phones: Cell phones **must** be turned **OFF** during lectures, TA sessions, office hours, and exams!

Grading: Your letter grade will be based on a total of 210 points.

14 progress mini-exams (3 drops)	110
Final exam	60
12 homework (2 drops)	40
TOTAL	**210**

Minimum Targets: 189 (90%) A-; 168 (80%) B+; 147 (70%) B; 126 (60%) B-; 105 (50%) C+; (40%) C; 63 (30%)D

UF Transcript 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-; 0.00 E For more information: http://isis.ufl.edu/minusgrades.html

Sakai: http://lss.at.ufl.edu This is the course management system where homework and exam scores are posted to your accounts. Look for course announcements here as well. Do not email Dr. Keaffaber in Sakai. Please use jjk@chem.ufl.edu.

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
Introduction, Atoms, and Molecules	1-2	1	8/22-8/26	**8/23 No TA Session**
				8/24 No Mini-Exam
Molecules, Moles, Chemical Equations	3	2	8/29-9/2	**8/30 Start TA Session**
				8/31 Mini-Exam 1
Stoichiometry	4	3	9/5-9/9	**9/5 No Classes**
				9/7 Mini-Exam 2
Stoichiometry and Gases	4-5	4	9/12-9/16	**9/14 Mini-Exam 3**
Gases	5	5	9/19-9/23	**9/21 Mini-Exam 4**
Periodic Table and Atomic Structure	6	6	9/26-9/30	**9/28 Mini-Exam 5**
Atomic and Molecular Structure	6-7	7	10/3-10/7	**10/5 Mini-Exam 6**
Chemical Bonding and MO Theory	7 + Notes	8	10/10-10/14	**10/12 Mini-Exam 7**
Molecules and Materials	8	9	10/17-10/21	**10/19 Mini-Exam 8**
Energy and Chemistry	9	10	10/24-10/28	**10/26 Mini-Exam 9**
Energy, Entropy and Thermodynamics	9-10	11	10/31-11/4	**11/2 Mini-Exam 10**
				11/4 No Classes
Thermodynamics and Solutions	10 + Notes	12	11/7-11/11	**11/9 Mini-Exam 11**
				11/11 No Classes
Chemical Kinetics	11	13	11/14-11/18	**11/16 Mini-Exam 12**
Chemical Equilibrium	12	14	11/21-11/25	**11/23 No Mini-Exam**
				11/23 Lecture Meets
				11/24-25 No Classes
Equilibrium and Electrochemistry	12-13	15	11/28-12/2	**11/30 Mini-Exam 13**
Electrochemistry and Corrosion	13 + Notes	16	12/5-12/9	**12/7 Mini-Exam 14**
				12/8-9 No Classes
CUMULATIVE FINAL EXAM	**Tuesday, December 13th**			**12:30 – 2:30 PM**

***The last day to withdraw from a course with the grade of "W" is Monday, November 21st!!!**

Other Information:

Honor Code:	http://www.chem.ufl.edu/~itl/honor.html
Disabilities:	http://www.chem.ufl.edu/~itl/disabilities.html
Counseling:	http://www.chem.ufl.edu/~itl/counseling.html

Disclaimer: Dr. Keaffaber reserves the right to make minor changes or adjustments to this syllabus and course schedule as needed. Corrections will be announced as they occur.