CHM 2045	General Chemistry Gower Sections	Fall 2012

INSTRUCTOR: Jeff Gower (jgower@ufl.edu)
Lectures: MTR 9th Per.; MTR 10th Per.. (CLB 130)
Office hours: MTR 6th and 7th Periods (CLB 314)

TEXTBOOK: **Chemistry – The Molecular Nature of Matter and Change**, by Martin Silberberg, McGraw-Hill, 6th Edition, ISBN 0077664094 (includes textbook, eBook, and CONNECT PLUS online homework access) or ISBN 9780077340162 (includes eBook and CONNECT PLUS online homework access) – follow the link below for more info: http://www.bsd.ufl.edu/textadoption/studentview/displayadoption1sect.aspx?YEAR=12&TERM=8

PREREQUISITES: Passing score on the Chemistry Readiness Assessment (6 or higher on each portion, math and chemistry) OR Grade of C or higher in CHM 1025 OR Score of 3 or higher on the AP Chemistry Exam OR Score of 4 or higher on the IB Chemistry Exam **PLUS** MAC 1140 OR MAC 1147 OR MAC 2311. Students may take the MAC prereq concurrently with CHM 2045, **but the MAC requirement MUST be met prior to taking CHM 2046**.

COURSE SCHEDULE (lecture schedule is tentative)

Dates	Topics (# of lectures)	Chapters
Aug. 23–27	Introduction and Review: Atoms, Molecules, and Ions (2)	Chap. 1–2
Aug. 28 – Sept. 6	Mass Relations and Stoichiometry (3-4)	Chap. 3
Thursday, Sept. 6	**Online Assessment Quiz #1**	**Chaps. 1–3**
Sept. 10–13	Aqueous Reactions (3-4)	Chap. 4
Thursday, Sept. 13 (8:20-10:20 pm)	**Progress Exam 1**	**Chaps. 1–4**
Sept. 17–20	Enthalpy & Calorimetry (3)	Chap. 6
Thursday, Sept. 20	**Online Assessment Quiz #2**	**Chap. 6**
Sept. 24–25	Atomic Structure (2)	Chap. 7
Sept. 27 – Oct. 4	Electron Configuration and Periodic Trends (4)	Chap. 8
Thursday, Oct. 4	**Online Assessment Quiz #3**	**Chap. 7–8**
Oct. 8–11	Chemical Bonding Models (3)	Chap. 9
Oct. 15–16	Molecular Geometry (2)	Chap. 10
Thursday, Oct. 18	**Online Assessment Quiz #4**	**Chaps. 9–10**
Oct. 18–23	Covalent Bonding Theories (3)	Chap. 11
Wednesday, Oct. 24 (8:20-10:20 pm)	**Progress Exam 2**	**Chaps. 1–4, 6–11**
Oct. 25–30	Gases (3)	Chap. 5
Nov. 1–6	Intermolecular Forces and Liquids and Solids (3)	Chap. 12
Thursday, Nov. 8	**Online Assessment Quiz #5**	**Chaps. 5, 12**
Nov. 8–19	Solutions (4)	Chap. 13
Monday, Nov. 19 (8:20-10:20 pm)	**Progress Exam 3**	**Chaps. 1–13**
Nov. 26 – Dec. 3	Chemical Kinetics (4)	Chap.16
Dec. 4	Cumulative Review (1)	Cumulative
Saturday, Dec. 8 (5:30–7:30pm)	**Final Exam**	**Cumulative**

HOLIDAYS (no classes): Sept. 3; Nov. 9,12,21-23

SAKAI (CLASS WEB SITE): Here you will find the syllabus, the Discussion Section schedule, a link to the CONNECT homework site, your gradebook for the class, selected lecture material, videos, files, end-of-chapter problem solutions, class announcements, and other pertinent info for the course. It is your responsibility to check the Class Web Site often (as well as your gradebook) to make sure that you do not miss important announcements and other information and to ensure that your gradebook is accurate. To access Sakai, go: http://lss.at.ufl.edu. To log in, you must use your GatorLink username and password. If you do not yet have one, you must obtain one. If you change your GatorLink username during the semester, you MUST inform your instructors immediately – otherwise your CONNECT scores may not transfer accurately! If you have any problems with your GatorLink name or password, you should either go on-line http://www.gatorlink.ufl.edu , contact the Help Desk at 392-HELP, or go to 520 CSE for personal assistance. For other computer assistance, visit http://helpdesk.ufl.edu/.

DISCUSSION CLASSES: The Discussion Classes meet every week (except for the first week of the semester) according to the schedule (see the Resources folder in Sakai). You may go to as many Discussion Classes that you would like to attend, so long as space is available - should space become an issue, the TAs will have to take steps to ensure that assigned students get priority seating.

CONTACTING THE INSTRUCTOR / OFFICE HOURS: Emails are for administrative purposes only, and not for distance-instruction (my experience has shown that it is almost impossible to adequately teach chemistry via email). All email queries about information covered in the syllabus or announced in lecture will be disregarded. 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 consult the online chapter solutions (if applicable) before coming to office hours.

CHEMISTRY LEARNING CENTER (CLC): There is free help to be had from graduate student teaching assistants in the CLC Monday through Friday 2nd through 11th periods in Flint Hall 257. 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 corridor outside the CLC and also on Sakai.
And, 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.

CONNECT (ON-LINE) HOMEWORK: CONNECT assignments for each textbook chapter will be due on the dates listed in CONNECT – it is up to students to be aware of CONNECT due dates. Do NOT wait until the last minute to attempt to complete online assignments, because computer issues can arise at any time, and you don't want to be left at the last minute not being able to complete your assignments on time due to some technical error.
CONNECT access is free with the purchase of a new textbook or e-Book (the exact ISBN must be purchased as per http://www.bsd.ufl.edu/textadoption/studentview/displayadoption1sect.aspx?YEAR=12&TERM=8), or you can purchase the CONNECT separately for $50.
To access CONNECT, go to:
http://connect.mcgraw-hill.com/class/gower_fall2012sections.
Do not email instructors regarding online-homework problems – come to office hours.

EXAMS: No graphing or programmable calculators are allowed during exams.
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, information sheets, or cell phones allowed.
No makeup progress exams will be given for ANY reason. Since unavoidable situations (illnesses, accidents, emergencies, etc.) do arise occasionally, we've incorporated a dropped-exam policy (the best 2 of 3 progress exams will be counted toward your grade - see under "GRADES" below). 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 **beforehand** (at least a week prior to the scheduled exam). Planned or emergency trips home or elsewhere are not approved conflicts.

Student bubbling errors on exam scantrons are not negotiated, and a penalty of nine (9) points will be applied to any exam scantron that has to be tracked down and identified due to incorrect student identity bubbling.

Checking your Scantron: Out of the tens of thousands of exam scantrons that have been scored while I've been at UF, not one has been scored incorrectly. Any discrepancies have always been due to student bubbling error. So checking your scantron has been repeatedly proven to be an exercise in futility. However, scantrons may be checked during the TWO established intructor office hour sessions following the posting of the exam score in your Sakai gradebook, after which no further scantron checking will be accomodated.

ONLINE ASSESSMENT QUIZZES: There will be five (5) online assessment quizzes given via the Sakai web site for this course. To access the assessment quizzes, click on "Assessments" in Sakai. The quizzes are scheduled as indicated above in the course schedule. The quizzes will be opened for you to take them on the days listed, and the time period you'll be able to take the quiz is anytime during the 24-hour period that defines that particular day. **No makeup quizzes will be given for ANY reason.** Computer issues that may arise will not be negotiated. To accommodate unavoidable conflicts or computer issues that may arise, we offer a dropped-quiz policy (the best 4 of 5 quizzes counting toward your grade – see under "GRADES" below). It is suggested that you do the assessments early enough in the day to avoid last-minute time or computer issues. If you must be absent for a quiz due to a **documented and approved academic or UF athletic conflict**, bring the documentation to your instructor **beforehand** (at least a week prior to the scheduled quiz). Planned or emergency trips home or elsewhere are not approved conflicts.

HONOR CODE: The UF Student Honor Code (ctrl+click to open link) applies to all exams and assessments given in this course. Please understand that absolutely NO leniency will be extended in any case of academic dishonesty.

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

Progress Exams (best 2 of 3 @ 250 pts)	500 pts
CONNECT (On-line) Assignments	80 pts
Online Assessment Quizzes (best 4 of 5 @ 30 pts)	120 pts
Final Exam	300 pts
TOTAL	1000 pts

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

900-1000 = A 860-899 = A- 830-859 = B+ 800-829 = B 760-799 = B-
730-759 = C+ 700-729 = C 660-699 = C- 630-659 = D+ 600-629 = D
< 600 = E (a grade of C or higher is required to take CHM2046; a C- does not count)

NOTE: No quiz or exam scores are "dropped" until AFTER the last day of classes. Do not think in terms of "I will drop this-or-that exam or quiz" until then, because you never know when an unavoidable situation will arise that will result in your missing another exam or quiz. Also, do not make the very common mistake of thinking "I have an A going into the Final Exam" if that "A" is due to a "dropped" exam or quiz score – think instead in terms of your PERFORMANCE level going into the Final Exam, which is reflected in ALL of your exam and quiz scores (including those that you think will be "dropped"). You will likely perform on the Final Exam at the level reflected by ALL of your scores unless you go back and address any deficiencies reflected in so-called "dropped" exams first.

For further information on UF's Grades and Grading Policies, go to
http://www.registrar.ufl.edu/staff/grades.html#grading

HOW TO SUCCEED IN COLLEGE CHEMISTRY: Success in college-level chemistry requires both a strong conceptual understanding of the material and a competent proficiency with the quantitative problem-solving strategies that are required to successfully answer word problems that are typical on quizzes and exams. You will **not** excel in this course without both the conceptual and the competence aspects of the material. This means that you **MUST PRACTICE** most of the End-Of-Chapter problems in your textbook so that you can diagnose your own strengths and weaknesses with the material. Do not make the common mistake of thinking that the CONNECT problems alone constitute enough practice. The more practice with problems that you do, the more likely you will recognize and know how to approach and work through the same kinds of problems (with the fewest errors and avoidable missteps) that you will see on quizzes and exams. **FOCUSED AND EFFICIENT PRACTICE IS ESSENTIAL – FOLLOW CAREFULLY THE STRATEGY BELOW:**

PROBLEM-SOLVING PRACTICE STRATEGY (VERY IMPORTANT!!):

1) attempt each of the end-of-chapter problems one at a time;

2) consult the posted worked-out solutions (Silberberg solutions in Sakai) after attempting each problem to see if you got the correct answer (anything less than the absolute correct answer in bold print is an incorrect answer!) – if you didn't get the absolute correct answer the first time without looking at the solution, read over the solution carefully and try to understand where you made the error;

3) take detailed notes (keep a notebook for these notes) regarding the exact mistakes you make during each problem so that you will identify your own particular weaknesses and be able to "red-flag" where you are likely to make mistakes;

4) if you succeeded in getting the correct answer the first time without looking at the solution, check off that problem in the book, and if you did not succeed in getting the correct answer the first time without looking at the solution, circle the problem number and study the solution in the solutions manual;

5) revisit the circled problems the next day or a few days later, keeping in mind your own "red-flags" to watch out for, to see if you get the correct answer without looking at the solution;

6) repeat step **4)**; and

7) repeat steps **5)** and **6)** if necessary.

Never assume that you have understood or succeeded at a problem until you have obtained the CORRECT answer all on your own without looking at the solution first to do so, and do not merely look at the solutions and say "oh yeah, I see what I did wrong", and move on. ALWAYS go back and be sure that you can do each problem on your own successfully. Otherwise, you will most likely make the same errors on exams. Be sure to take DETAILED and PRECISE NOTES as you do problems, indicating your weaknesses and strengths and where you made specific mistakes, so that you will be able to be on the lookout for when these "red flag" types of situations arise in the future!

IMPORTANT: ALWAYS be assessing yourself – at the end of every problem-practice session, count the number of problems you did correctly the FIRST time without looking at the solution, and the number you did not do correctly the first time – the percentage of problems you did correctly will be your "grade" for that session, which is a very good approximation of your performance level – ALWAYS BE ASSESSING YOURSELF, AND DO NOT WAIT UNTIL YOUR INSTRUCTORS ASSESS YOU ON EXAMS, AFTER WHICH IT IS TOO LATE TO DO ANYTHING ABOUT IT. Merely "doing all the problems at the end of the chapters" does not equal "doing all the problems at the end of the chapters correctly". HARD WORK DOES NOT NECESSARILY EQUAL PRODUCTIVE WORK!! Do not make this very very common mistake. Giving yourself a "grade" after each session will keep you mentally on track regarding how you are performing at that time – without this information,you WILL NOT have any real idea of how well you are doing and how well you are prepared for exams.

DISABILITIES: If you are applying for disability resource status come see me the first week of class. Students requesting classroom and exam accommodations should contact the Dean of Students Disability Resources Center at http://www.dso.ufl.edu/drc/ and obtain the proper forms that need to be turned in to me during the first week of class. It is the student's responsibility to schedule and arrange accomodations with the DRC.

COURSE INFO: CHM 2045 and CHM 2045L constitute the first semester of the two term sequence of General Chemistry, CHM 2045-2045L-2046-2046L. This sequence is suitable for all science and engineering majors. To continue into CHM 2046, you must earn a grade of C or higher in CHM 2045 and have MAC 1140 or MAC 1147 or Calculus 1 or the equivalent of these or higher completed (Statistics does not count). If you drop your math class and do not have MAC 1147 or the equivalent or higher you will not be able to go on to CHM2046 even if you pass CHM2045 (you will be ejected from CHM2046 even if the system allows you to register).
Students with disabilities may request special classroom accommodation. See http://www.chem.ufl.edu/~itl/disabilities.html.
Students may seek mental health counseling at any time. See http://www.chem.ufl.edu/~itl/counseling.html.

GENERAL EDUCATION CREDIT: This course is available for general education credit. This course introduces students to fundamental concepts of chemistry including bonding, atomic and molecular structure, chemical reactions, states of matter, and reaction rates. The scientific method and the place of chemistry in the everyday world are emphasized.