CHM 2046	General Chemistry 2 Gower Sections	Spring 2012

INSTRUCTOR: Jeff Gower (jgower@ufl.edu)
Lectures: MWF 8th Per. (CLB 130)
Office hours: MWF 4th and 6th Periods; R 7th and 8th Periods in CLB 314

TEXTBOOK: **Principles of General Chemistry**, 2nd Edition, Martin S. Silberberg, McGraw-Hill – You should also obtain a spiral bound self-assessment notebook

PREREQ: Grade of C or higher in CHM 2045 plus MAC 1140 or MAC 1147 or MAC 2311.

LECTURE AND EXAM SCHEDULE (lecture schedule is tentative)

Dates	Topics	Chapters
Jan. 9 – Feb. 8	Chemical Equilibrium; Acids and Bases; Acid/Base Equilibria	Chaps. 17 – 19.2
Thursday, Feb. 9 (8:20 – 10:20 pm)	**Progress Exam 1**	Cumulative
Feb. 10 – Mar. 14	Solubility Equilibria; Thermodynamics; Redox Reactions and Electrochemistry	Chaps. 19.3–19.4, 20, 4.5–4.6, and 21
Thursday, Mar. 15 (8:20 –10:20 pm)	**Progress Exam 2**	Cumulative
Mar. 16 – Apr. 11	Main Group Elements; Metals and Metallurgy; Transition Metals	Chaps. 14, 22, 23
Thursday, Apr. 12 (8:20 – 10:20 pm)	**Progress Exam 3**	Cumulative
Apr. 13 – Apr. 25	Nuclear Chemistry; Cumulative Class Review	Chap. 23 and review
Saturday, Apr. 28 (5:30 – 7:30 pm)	**Final Exam**	Cumulative

ONLINE ASSESSMENT SCHEDULE (in Sakai Assessments)
(Assessments Open at 12:00am on Begin Dates and Close at 12:00am on Due Dates)

Assessment #	1	2	3	4	5	6
Begin Date	Jan. 23	Jan. 30	Feb. 20	Feb. 27	Mar. 26	Apr. 2
Due Date	Jan. 28	Feb. 4	Feb. 25	Mar. 3	Mar. 31	Apr. 7

HOLIDAYS (no classes): January 16 (MLK,Jr. Day); March 5–9 (Spring Break)

SAKAI (CLASS WEB SITE): http://lss.at.ufl.edu
Here you will find the syllabus, your gradebook for the class, selected lecture material, 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.

LECTURE ATTENDANCE AND ETIQUETTE: Students should attend each assigned lecture, but attendance is not monitored. Keep in mind that although you may decide to not attend lecture, you are nevertheless responsible for everything that is said in lecture. No excuses, no exceptions. Be in class on time. If you arrive late, enter in the REAR of the hall, NOT the front of the hall. If possible, please keep the last row of the hall reserved for students who need to leave lecture early. Do not leave from mid-rows or mid-hall, and only leave through rear doors and not front doors, unless for emergency. When the instructor is speaking, DO NOT SPEAK, PERIOD! It bothers your fellow students. Failure to keep quiet during lecture will result in your being told to leave the hall.

DISCUSSION CLASSES: The Discussion Classes meet every week (except for the first week of the semester) according to the schedule linked below. As with lectures, your attendance in Discussion classes is not monitored, but it is highly recommended that you take advantage of this opportunity to have a structured problem-solving sessions and conceptual discussion with graduate chemistry TAs. You may go to as many Discussion Classes that you would like to attend, so long as space is available.
http://www.chem.ufl.edu/generalchemistry/teachingassign.shtml

CHEMISTRY LEARNING CENTER (CLC): Tutoring from graduate student TAs is available in the CLC Mon-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 at
http://www.chem.ufl.edu/generalchemistry/CLCofficehours.shtml
And, there is the **TEACHING CENTER** located on the ground floor of Broward Hall, if you'd like to use that free resource. Their web site is http://www.teachingcenter.ufl.edu.

CONTACTING THE LECTURE INSTRUCTOR / OFFICE HOUR POLICY:
Emails are for administrative purposes only (requests about policies or information that is not given in the syllabus or was not mentioned in lecture), and not for distance-instruction (my experience has shown that it is very difficult to adequately teach chemistry via email). All email queries about information covered in the syllabus or announced in lecture will be disregarded and unanswered. Academic inquiries should be made during office hours or before/after lectures. Please consult the online chapter solutions for the problem (if available) before coming to office hours.

EXAMS: Three cumulative progress exams and a cumulative final exam will be given. **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.
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 ASSESSMENTS: There will be six (6) online assessments given via the Sakai web site for this course. The schedule for these assessments is given above – it is up to the student to know the schedule. Each assessment will begin at 12:00am on a Monday and end at 12:00am on the following Saturday (i.e., the preceding Friday at midnight). To access the assessments, click on "Assessments" in Sakai. You'll be given two submission attempts for each assessment. **No makeup assessments will be offered for ANY reason.** Computer issues that may arise will not be negotiated. To help assuage any unavoidable conflicts or computer issues that may arise, only the best 5 of 6 assessments count toward your grade – see under "GRADES" below. I suggest doing the assessments early enough in the week to avoid last-minute time or computer issues.

SUGGESTED END-OF-CHAPTER HOMEWORK: I have posted in Sakai (in "Resources") suggested Silberberg End-Of-Chapter problems for you to do from each Chapter. It is strongly recommended that you do these problems, using the detailed method outlined below in the "How To Succeed In College Chemistry" portion of the syllabus. Of course, most of you will still need to do more End-Of-Chapter problems to adequately prepare yourself for exams. Doing merely the suggested problems herein will not necessarily guarantee exam success; it is up to you to determine what and how many problems you need to do to prepare yourself for what you might see on an exam.

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 (if not all) of the End-Of-Chapter problems in your textbook (see Problem-Solving Strategy below) so that you can diagnose your own strengths and weaknesses with the material. (Do not make the common mistake of thinking that the weekly online assessment problems alone constitute enough practice). Then, you can study with focus and efficiency to tackle and overcome the weaknesses in your competence with the material. 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 worked-out solutions (in Sakai) after attempting each problem to see if you got the correct answer (anything less than the absolute correct answer 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)** 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; **4)** revisit the circled problems the next day or a few days later to see if you get the correct answer without looking at the solution; **5)** repeat step **3)**; and **6)** repeat step **4)** if necessary. Never assume that you have understood or succeeded at a problem until you have obtained the CORRECT answer (the answer in BOLD in the solutions) 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 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 types of situations arise in the future! And this is the most important thing of all: 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.

Note about using "old exams": The old exams that are posted are for you to use in a self-imposed exam-like setting (quiet room, with clock set to 2 hours, with no interruptions, with only a calculator and pencil and paper in hand). Do NOT look at the solutions at any time during the exams. Then grade your exam at the end, using the solutions then and only then. Merely using the exams as practice problems (using the solutions as you go along, similar to the way you'd do end-of-chapter problems) is defeating their purpose and WILL result in a FALSE sense of your exam-taking ability with the material. Each semester we General Chemistry instructors hear the same thing from students: "The exams we had to take were much harder than the "old exams" you posted." This is proven to be not true each semester. The average exam scores on the old exams are, within only a few percentage points, the EXACT same as the average exam scores on each semester's exams. The difference is that when you use an old exam, you are not in the same real-life exam setting as when you take your actual exams. This is a very significant difference. So, if you choose to use the old exams as practice problems,

that is fine, but understand that your performance on them is not necessarily reflective of how prepared you are for the real-exam setting you'll find yourself in during the semester.

Final Note: One of the most important things that you should learn while in college is that you must learn to teach yourself and not rely on others to teach you. You can gain help from others in the form of guidance and clarification, but you must learn to identify your own weaknesses and strengths with the material in your courses, and learn to efficiently work on those weaknesses with focus and honest self-assessment so that you will be able to prove yourself when the instructor assesses you on exams. It is your goal as a college student to learn to take responsibility for your own success or lack thereof, to utilize the experience and knowledge of instructors and fellow students without overly relying on such assistance, to avoid the temptation to blame others for your failures, and to develop the strength of character and self-reliance that will be required of you as a productive adult.

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
Online Assessments (best 5 of 6 @ 40 pts)	200 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

NOTE: No exam scores are "dropped" until AFTER the last day of classes. Do not think in terms of "I will drop this-or-that exam" until then, because you never know when an unavoidable situation will arise that will result in your missing another exam. 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 – think instead in terms of your PERFORMANCE level going into the Final Exam, which is reflected in ALL of your exam 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

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. 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.