CHM 2045	General Chemistry Gower Sections	Fall 2014

INSTRUCTOR: Jeff Gower (jgower@ufl.edu)
Lectures: MTR 10th and 11th Periods (CLB 130)
Discussion Sections: Wednesdays or Fridays (depending on section)
Office hours: MTR 7th and 8th Periods (CLB 314, telephone: 392-2155)

TEXT: **Chemistry: The Molecular Nature of Matter and Change (6th Edition)**
by Martin Silberberg (McGraw-Hill)

PLANNED LECTURE SCHEDULE: It is expected that you attend each lecture and that you attend the lecture period for which you are registered. Please do not overcrowd the lecture hall by going to a lecture period for which you are not registered. For official UF attendance policy, see
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Dates	Topics (# of lectures)	Chapters
Aug. 25–28	Introduction and Review: Atoms, Molecules, and Ions (2)	Chap. 1–2
Sep. 2–9	Mass Relations and Stoichiometry (3-4)	Chap. 3
Sep. 11–16	Aqueous Reactions (3-4)	Chap. 4
Sep. 18–22	Enthalpy & Calorimetry (2)	Chap. 6
Tuesday, Sep. 23 (8:20-10:20 pm)	**Progress Exam 1**	**Chaps. 1–6**
Sep. 25–29	Atomic Structure (2)	Chap. 7
Sep. 30 – Oct. 7	Electron Configuration and Periodic Trends (4)	Chap. 8
Oct. 9–14	Chemical Bonding Models (3)	Chap. 9
Oct. 16−20	Molecular Geometry (2)	Chap. 10
Oct. 21–27	Covalent Bonding Theories (3)	Chap. 11
Thursday, Oct. 30 (8:20-10:20 pm)	**Progress Exam 2**	**Chaps. 1–4, 6–11**
Oct. 28 – Nov. 4	Gases (3)	Chap. 5
Nov. 6–13	Intermolecular Forces and Liquids and Solids (3-4)	Chap. 12
Nov. 17–24	Solutions (4)	Chap. 13
Tuesday, Dec. 2 (8:20-10:20 pm)	**Progress Exam 3**	**Chaps. 1–13**
Dec. 1–9	Chemical Kinetics (4)	Chap.16
Saturday, Dec. 13 (8:00–10:00pm)	**Final Exam**	**Cumulative**

ONLINE ASSESSMENTS will be posted and due on most MONDAYS (see under ONLINE ASSESSMENTS below for details and exceptions).

HOLIDAYS (no classes): Sep. 1 (Labor Day); Oct. 17 (Homecoming); Nov. 11 (Veterans Day); Nov. 26−28 (Thanksgiving)

E-LEARNING (http://lss.at.ufl.edu): We will be using the **SAKAI** option in E-Learning for this course. Here you will find the syllabus, the Discussion Section schedule, 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. 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/.

HOMEWORK ASSIGNMENTS:
(1) Twelve (12) weekly tutorials will be posted online on e-Learning/Sakai (under the "Assessments" tool). These tutorials will walk students (via multiple-choice responses) through certain problems from the week's lecture material, identifying and correcting common mis-steps that students typically make w/r/to the concepts and/or solution strategies necessary to successfully answer the problems. Successful completion of a weekly tutorial will earn the student 5 points. The highest scores of 10 of the 12 tutorials will count toward your grade.
(2) Twelve (12) weekly lists of assigned problems from the end of chapters in the textbook will be posted, related to the week's lecture material. Worked-out solutions to end-of-chapter problems are found in Sakai. Be sure to use the strategies listed in the "How To Succeed In College Chemistry" document in Sakai when doing these or any other practice problems. Students will not earn points directly from doing these problems, but students will be given the opportunity at the beginning of each Discussion Section (see below) to demonstrate their proficiency with the problems by completing one or more of the problems on paper as a quiz, the successful completion of which will earn the student 5 points. The highest scores of 10 of the 12 quizzes will count toward your grade.

DISCUSSION CLASSES: The Discussion Classes meet every Wednesday or Friday, depending on your section number. (There are no Discussion Section classes during the first week of the semester). During the first 10-15 minutes of the Discussion sections you will take the short quiz (see item (2) under "Homework Assignments"). After the quiz, you will participate in a discussion of one or more multi-step (more challenging) problem(s) with the Teaching Assistant. The multi-step problem(s) will delve into the same material as other problems you will have encountered, but will do so at a somewhat deeper level. You must go to your scheduled Discussion section in order to take the quiz (you may NOT take the quiz in a section in which you are not officially enrolled, even if that section is taught by the same TA). You must use a non-graphing non-programmable scientific calculator on quizzes (with log, ln, root, and exponent (scientific notation) functions).

ONLINE ASSESSMENTS: Timed Online Assessments will be posted on most Mondays (except for the first day of class). Since Labor Day falls on a Monday (Sept. 1), the Online Assessment for that week will fall on a Tuesday (Sept. 2). To access the assessments, click on "Assessments" in e-Learning/Sakai. You'll have 60 minutes from the time you open the Assessment to answer the questions therein and you'll have 24 hours (midnight to midnight) during which you may start the assessment. No makeup assessments will be given for any reason. To accommodate unavoidable conflicts or computer issues that may arise, we only count 10 of the 12 planned Online Assessments toward your grade. It is suggested that you do the assessments early enough in the day to avoid last-minute time or computer issues late at night. If you must be absent for an assessment due to a documented and approved academic or UF athletic conflict, bring the documentation to your instructor beforehand (at least one week prior to the scheduled quiz). Planned or emergency trips home or elsewhere are not approved conflicts.

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, papers, cell phones or other electronic devices can be in view during exams.
No makeup progress exams will be given for any reason. Since unavoidable emergent situations (illnesses, accidents, emergencies, etc.) do arise occasionally, we've incorporated a dropped-exam policy so that if you have to miss one of the progress exams due to an emergent situation, that one exam score will not be counted toward your course grade. 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 one week prior to the scheduled exam) and an early conflict exam will be scheduled. Planned or emergency trips home or elsewhere are not approved conflicts. For more information on CHM2045 exam policy, see
http://iteach.chem.ufl.edu/Exam_Absence_Policy_GChem_s13.pdf
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. 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 accommodated.

CONTACTING THE INSTRUCTOR / OFFICE HOURS: Course administrative queries can be emailed to the instructor or made during office hours (or by special appointment if necessary). Chemistry queries should be made in person during office hours or before/after lectures. If this is not possible, please 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 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 e-Learning. 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.

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

Progress Exams (best 2 of 3 @ 250 pts)	500 pts
Homework Tutorials (best 10 of 12 @ 5 pts)	50 pts
Discussion Section quizzes (best 10 of 12 @ 5 pts)	50 pts
Online Assessments (best 10 of 12 @ 10 pts)	100 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 = D+ 630-659 = D 600-629 = D-
< 600 = E (a grade of C or higher is required to take CHM2046)

For further information on UF's Grades and Grading Policies, go to
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

INSTRUCTOR EVALUATIONS: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu during the last two or three weeks of the semester. 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/.

HONOR CODE: (http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/)
The UF Student Honor Code 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.

DISABILITIES / STUDENT MENTAL HEALTH COUNSELING: Students requesting classroom and exam accommodations should contact the Dean of Students Disability Resources Center (DRC) at 392-8565 or 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 or as soon as possible after obtaining the paperwork from the DRC. It is the student's responsibility to schedule and arrange accomodations with the DRC. Students may seek mental health counseling at any time. See http://www.counseling.ufl.edu/cwc/.

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.
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.
PROGRAM OBJECTIVES: Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical

sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.
These objectives will be accomplished through participation in the course lectures and discussion sections, and individual work done on homework assignments and step-by-step online tutorials.
GENERAL EDUCATION STUDENT LEARNING OUTCOMES: The following learning outcomes will be assessed through Discussion section quizzes, online tutorials, online assessments, and progress (mid-term) and final examinations.

Area	Institutional Definition	Institutional SLO
CONTENT	Content is knowledge of the concepts, principles, terminology and methodologies used within the discipline.	Students demonstrate competence in the terminology, concepts, methodologies and theories used within the discipline.
COMMUNICATION	Communication is the development and expression of ideas in written and oral forms.	Students communicate knowledge, ideas, and reasoning clearly and effectively in written or oral forms appropriate to the discipline.
CRITICAL THINKING	Critical thinking is characterized by the comprehensive analysis of issues, ideas, and evidence before accepting or formulating an opinion or conclusion.	Students analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems.