CHM2095 – General Chemistry for Engineers – Fall 2014

Lectures: MWF 2nd Period in CLB 130 Discussion sections: Tuesdays

INSTRUCTOR: Dr. Maria Korolev
Email: korolev@chem.ufl.edu Office hours: Monday – Friday periods 6th - 7th in Flint 251

TEACHING ASSISTANTS: Trisha deTorres, Jeremy Koelmel, and Alyssa Mitchell

COURSE SCHEDULE (lecture schedule is tentative, but exam dates will not change)

Dates	Topics (# of lectures)	Chapters
Aug 25 – 27	Introduction and Review (2)	Chap. 1–2
Aug 29 – Sept 8	Mass Relations and Stoichiometry (3-4)	Chap. 3
Sept 10 – 15	Aqueous Reactions (3)	Chap. 4
Sept 17 – Sept 22	Enthalpy & Calorimetry (3)	Chap. 6
Tuesday, Sept 23rd (8:20-10:20 pm)	**Progress Exam 1**	**Chaps. 1–4, 6**
Sept 24 – 26	Atomic Structure (2)	Chap. 7
Sept 28 – Oct 6	Electron Configuration and Periodic Trends (4)	Chap. 8
Oct 8 – 13	Chemical Bonding Models (3)	Chap. 9
Oct 15 – Oct 22	Molecular Geometry (3)	Chap. 10
Oct 24 – 29	Covalent Bonding Theories (3)	Chap. 10
Thursday, Oct 30th (8:20-10:20 pm)	**Progress Exam 2**	**Chaps. 1–4, 6–10**
Oct 31 – Nov 5	Gases (3)	Chap. 5
Nov 7 – 14	Intermolecular Forces, Liquids and Solids (3-4)	Chap. 11
Nov 17 – 24	Solutions (4)	Chap. 12
Tuesday, Dec 2nd (8:20-10:20 pm)	**Progress Exam 3**	**Chaps. 1–12**
Dec 3 – 10	Chemical Kinetics (4)	Chap. 13
Saturday, Dec 13th (8:00pm–10:00pm)	**Final Exam**	**Cumulative**

Holidays (no classes): September 1st, October 17th, November 11th , November 26th – 28th

COURSE INFO: CHM 2095 constitutes the first semester of the two term sequence of General Chemistry, CHM 2095-2096. Prerequisite information and credit suitability can be found in the Undergraduate Catalog. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

REQUIRED MATERIALS: The following materials will be provided as part of a free-trial
Chemistry: A Molecular Approach 3rd Edition by Nivaldo Tro
MasteringChemistry and LearningCatalytics Pearson platform

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

Progress Exams (best 2 of 3 @ 500 pts)	500 pts
Final Cumulative Exam	300 pts
MasteringChemistry/LearningCatalytics	100 pts
Mini-projects	100 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/CHM2096)

E-LEARNING (http://lss.at.ufl.edu**)**: Here you will find the syllabus, a link to the MasteringChemistry 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. For computer assistance, visit http://helpdesk.ufl.edu/.

CLICKERS AND HOMEWORK: Ten percent of the course grade (100 points) will be based on performance on in-class clicker questions and online homework. You can earn points in class by correctly answering clicker questions through LearningCatalytics (1 point per each correct answer). You can also earn points by answering online homework problems through MasteringChemistry by the displayed due dates (1 point per each problem). You can earn up to 100 total points through both of these combined scores. It is recommended that you do all of the homework problems, even if you are answering questions correctly in class. Additionally, you should do the more challenging problems posed at the end of each class. These will be the best preparation for your exams that will determine your grade.

DISCUSSION ACTIVITIES: Part of your grade will be determined by engineering projects done during your discussion sections. There will be three projects spread over the semester that will relate to material covered in lecture. Each project will be done over three weeks to be done both during

discussions and outside the discussions. You will be graded on the scientific merit of your work in groups. More of the details of the activities will be discussed during the 1st meeting on September 2nd.

These activities are part of an initiative to improve this section of general chemistry, and are tied to a research grant. Due to this, you will need to complete a consent form as well as pre- and post-semester surveys. Your compliance with this will be worth points that contribute to your overall activities score. Your attendance is required in your registrar assigned section. Although you are graded in groups, points will be taken away for lack of participation.

CONTACTING THE INSTRUCTOR / OFFICE HOURS: Emails are for administrative purposes only, and not for distance-instruction. 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 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 Canvas. Additionally, 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.

EXAMS: Exams will be taken in the evenings outside of class and the Exam Room Assignments will be posted. 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 (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 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/file.php/1/Exam_Absence_Policy_GChem_s13.pdf

Checking your Scantron: Scantrons may be checked during the two established instructor office hour sessions following the posting of the exam score in your Sakai gradebook. Scantron errors will not be negotiated, and a 9 point penalty will be applied for failure to bubble in a form code, UFID, or not taking the exam in the assigned room.

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: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, http://www.dso.ufl.edu/drc/)by providing appropriate

documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

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

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 assessments.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES: The following learning outcomes will be assessed through online assessments and 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.

DISCLAIMER: This syllabus represents my current plans and objectives. If those need to change as the semester progresses, then the changes will be communicated to the class clearly.