
Dr. Michael Lufaso

General Chemistry I

CHM 2045C

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Syllabus

Fall 2008

Lecture

MW 4:30 - 5:45 pm

Building 50, Room 1202

Office Hours

MW 8-10 am, 11 am-noon

Building 50, Room 2716

Course Information and Requirements

Purposes and Objectives:

I. Skills: Students should be able to:

- A. think critically, reason soundly, and argue effectively,** as demonstrated by the ability to:
- use systematic processes, including the collection and analysis of evidence, to form and support conclusions
 - read and analyze complex texts, including the analysis of rhetorical devices and modes of inference

II. Knowledge: Students should know:

A. The natural and designed world,

- demonstrating a general knowledge of current scientific understanding of the history and nature of the universe, the earth, and of life forms
- demonstrating a general knowledge of the methods and traditions of analysis in the natural sciences

D. Mathematical and Quantitative Reasoning

- demonstrating proficiency in solving problems using mathematical concepts and quantitative reasoning

Required Materials:

In pursuit of the objective outlined above, the course has been structured to utilize the following:

Textbook: "Chemistry, The Central Science", Brown, LeMay, Bursten and Murphy (11th Edition) (ISBN-10) 0536778531 (with M.C.) OR 053622918-X (no M.C., must purchase M.C. separately)

Lab Manual: "Thomson Custom Publishing *General Chemistry I* Laboratory Module". 2005

Homework: MasteringChemistry (M.C.) online tutorial and homework companion student access kit or code, either with the new textbook or purchased separately at www.masteringchemistry.com.

Enter Student ID that is the same as your UNF N# to receive credit for homework.

Calculator (Scientific): For quizzes and examinations, the use of calculators capable of communications, programming, or graphing is prohibited. Calculators should be capable of scientific notation, log, and exponential functions. Examples include TI-30, TI25X, TI34, TI36X; Sharp EL-501W, EL-509, EL-531; Casio FX-250, FX260, FX280; HP 20S, HP32SII.

Safety: Glasses with side shields or goggles must be worn in lab at all times. A 1% reduction (per occurrence) to the overall laboratory score may be enforced for not wearing goggles in the lab.

Prerequisite: CHM 1025C or high school chemistry with a minimum grade of B and H.S algebra.

Web Sites for Additional Information:

<http://www.unf.edu/~michael.lufaso/chem2045/>

<http://blackboard.unf.edu/>

<http://www.masteringchemistry.com>

Accommodations

Students with disabilities who seek reasonable accommodations regarding their coursework must first be registered with the UNF Disability Resource Center (DRC). The DRC will work with the student to obtain required documentation of disability and to partner with the student to determine accommodations as required under the Americans with Disabilities Act (ADA). When all required documentation is received, the student will deliver a letter from the DRC that advises faculty about approved accommodations. If students registered with the DRC do not receive approved accommodations, they should immediately contact the DRC.

Tentative Schedule: Tentative lecture topic coverage

<i>Week of</i>	<i>Lecture Topic</i>	<i>Reading</i>	
1 Aug 25-29	The Science of Matter, Units of Measurement, Sig. Figures	Ch. 1,2	
2 Sept 1-5	Rounding, dimensional analysis; atomic structure, weights	Ch. 2	
3 Sept 8-12	Periodic Table, Molecules and Ions, Naming Compounds	Ch. 3	
4 Sept 15-19	Chemical Equations and Reactions, Formula Weights	Ch. 3,4	Exam #1
5 Sept 22-26	Reaction Stoich., Mole, Empirical Formula, Lim. Reactants	Ch. 4	
6 Sept 29-Oct 3	(Non)Electrolytes, Ox/Red., Solution Conc., Titration	Ch. 4	
7 Oct 6-10	Ionic Equations, Redox Equation Balancing, Energy	Ch. 5	
8 Oct 13-17	Hess's Law, Enth. Form., Thermochem. Eq., Calorimetry	Ch. 5	
9 Oct 20-24	The Bohr Atom, Orbitals, Many-Electron Atoms, e ⁻ config.	Ch. 6	Exam #2
10 Oct 27-31	Periodic Trends, The Periodic Table, Groups 1A and 2A,	Ch. 7	
11 Nov 3-7	Metals and Non-Metals, Ionic and Covalent Bonding	Ch. 7,8	
12 Nov 10-14	Lewis Structures, Polarity, Octet Rule,	Ch. 8	
13 Nov 17-21	VSEPR Model, Molecular Geometry, Hybrid Orbitals	Ch. 9	Exam #3
14 Nov 24-28	Multiple Bonds, Molecular Orbital Theory, Gases	Ch. 9,10	
15 Dec 1-5	Gas Laws, Ideal Gas Equation, Partial Press., K-M Theory	Ch. 10	
E Dec 10	Final Exam: Wednesday, December 10, 2008. (3:00 pm - 4:50 pm)		Final Exam

*Sept. 1 and Nov. 11, 27, 28 are University holidays (offices are closed and no classes are held).
Last day to withdraw is Friday, November 7, 2008.

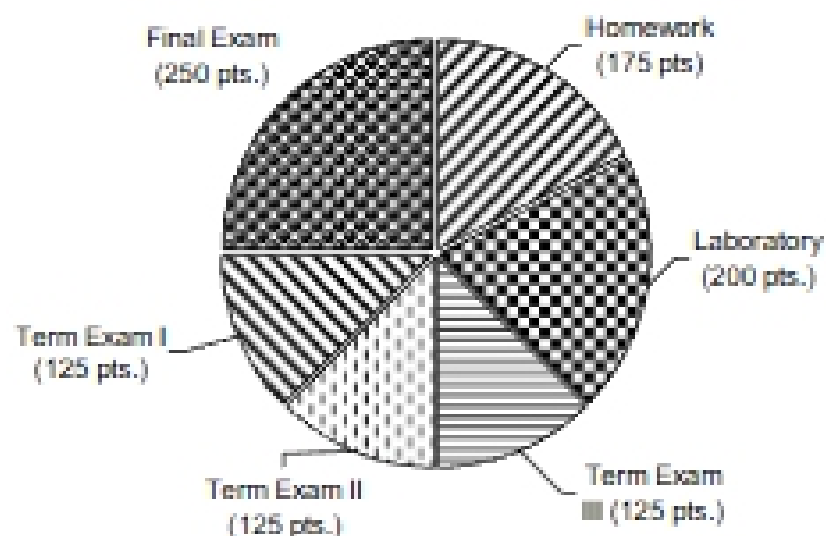
Exams:

Term exams (3) are scheduled on September 22, October 20, and November 17. The final exam is scheduled on Wednesday, December 10, 2008. (3:00 pm-4:50 pm). UNF ID cards may be requested at an exam. Bring an approved calculator to all exams – no exceptions. No make-up exams will be given. Reasons beyond your control must be documented by official documentation (e.g. police report, emergency room receipt).

Grading and Evaluation:

Your performance and final grade in the course will be evaluated on the basis of distribution total points earned.

Homework	175 pts.
Laboratory	200 pts.
Term Exam I	125 pts.
Term Exam II	125 pts.
Term Exam III	125 pts.
Final Exam	250 pts.
Total	1000 pts.



The course will be graded so that A: 92 - 100%; A-: 89 - 91%; B+: 87 - 88%; B: 80 - 86; B-: 78-79; C+: 76 - 77%; C: 67 - 75%; D: 55 - 66%. +/- final grades will be assigned. Retain all graded papers so that you can present them if you become aware of a grade recording error. Ethical behavior is expected in all work inside and out of class. Penalties for academic misconduct are severe, up to and including zero (grade of "F") for the course and additional sanctions allowed by University regulations.

Homework:

Specific graded homework problems will be assigned on the website <http://www.masteringchemistry.com> with the course ID "LUFASOCHEM2045CFA08". Graded homework will contribute towards your overall course grade. The 11th edition of the textbook is required because of differences between questions in previous editions of the textbook.

Academic Misconduct:

Lecture classes begin at 4:30 pm Monday and Wednesday, and will end at 5:45 pm. It is assumed all students will be in class on time and remain until dismissed. If you are late, do not enter at the front of the classroom. Use the doors at the back of the lecture hall. Avoid disruptive behavior such as using cell phones, PDA, or laptops. Those with cell phones that ring during class may receive a penalty, per occurrence, to their overall course score. As a courtesy to other students, disruptive students may be asked to leave the class. Repeat offenders may be referred to the Vice President for Student Affairs for expulsion from the course.

Any material submitted in General Chemistry must represent your own work and follow the Academic Integrity Code. Students supplying materials for others to "look at" (e.g. exams) may be charged with academic misconduct. Copying another student's work, use of 'cheat sheets' or use of stored formulas or text in calculators examinations, no matter how small the violation, may be regarded as a violation of academic standards. Apparent violations of this standard will be referred to the Registrar's Office and Office of Academic Affairs.

Helpful Suggestions or: How to Succeed

The *Academic Center for Excellence* (620-2766) has free workshops and tutoring on note-taking and study habits, which may be useful for students that are unsure about how to take good lecture notes. It is recommended that reading of the pertinent chapter sections is completed *prior* to each class meeting time. Chemistry, in particular, is a *cumulative* subject in which new material builds upon a series of linked concepts. **Practice is critical.** Keep up in chapter reading and homework problems and don't fall behind. Procrastination, following by "all-nighters" often lead to lack of success. Deliberate and *consistent effort* will likely yield the best results.

The lecture class and textbook are intended to complement each other and you are responsible for everything that is covered during the lecture class period. Lectures may utilize PowerPoint slides, but please note that merely watching and copying what is on the slides is not sufficient as class notes – you should also take notes on verbal explanations which accompany the slides. Take quality notes and review them periodically in the context of the textbook. Plan to spend at least 3 hours outside of class for every 1 hour lecture, some may need more or less time.

Make sure you understand the material and can do the problems independently, then consider study groups to learn difficult subject material. Learn from each other, but remember that you will not be taking exams or working on graded homework as a group. In order to be highly successful in General Chemistry I, you should also do the majority of the practice homework problems at the end of each chapter. Attempt the problems first, before looking at the solutions. More practice and study of the problems, concepts, and material will help you on exams - since you will be able to answer questions more rapidly and have time to check your answers and calculations. Consider going to the library to obtain other general chemistry books for additional practice problems. I will also gladly provide additional problems for practice.

When appropriate, ask lab instructors about content that overlaps with the lecture. Students who feel they are not achieving their highest level of success in this course are also encouraged to seek help during office hours. I desire to have each of you learn chemistry according to your ability and also enjoy the course. *Your success in this course will largely depend on your own effort and motivation!*