Loyola University Chicago

Syllabus General Chemistry A CHM 101 Sec. 001; Discussion 002,003 SPRING 2012
Lecture: M, W, F: 01:40 PM - 02:30 PM Flanner Hall 133
Discussion: 002: M, 11:30 AM – 12:20 PM 236 Dumbach Hall
003: W, 11:30 AM – 12:20 PM 520 Mundelein Center
Instructor: Donald May Contact: dmay4@luc.edu
Office: Flanner Hall 403 Hours: Wed.,Fri.: 02:30 PM – 03:15 PM; Other announced times and by appointment.

Textbook: Chemistry: The Central Science, Brown, LeMay, Burnstein, Murphy, Woodward, 12th ed., 2012, Prentice Hall. There is also a student's solutions manual available (recommended).

Method of instruction: Lecture and discussion. Lectures may be supplemented with classroom discussion, use of molecular models, use of multimedia, and/or use of computer based materials as well as individual and/or group problem solving. Suggested textbook homework problems will be given which the student will need to complete on-line at, http:/www.MasteringChemistry.com which can be accessed on or off campus. CHM101SPRING2012 is the course ID for Mastering Chemistry. Problems may also be solved/covered in lecture and discussion and subsequently students should bring their calculator to lecture and discussion. Exam questions will come from theories covered in lecture and from suggested homework problems. No early and no make-up in-class exams. Exams will be given during scheduled lecture time (50 minutes). Discussion handouts will be given at the beginning and turned in on the day of discussion.

Grading: Semester grades will be determined by the following criteria:
Weekly on-line homework contributing 15% toward the final grade with individual due dates for chapters, to be given; Weekly discussion handouts contributing 5% toward the final grade;
Three (3) in-class unit exams contributing 45% (15% each exam) toward the final grade.
Unit exams will be 25 multiple-choice questions at 4 points each;
A comprehensive final exam (50 questions at 2 pts each) contributing 35% toward the final grade.
Final grades will be determined from one of the following exam contribution options, whichever is higher:
OPTION 1: All three (3) unit exams at 15% each = 45%; final exam 35%
OPTION 2: Best two (2) unit exams at 15% each = 30%; final exam 50%

Homework: 15%
Discusssion Handouts: 5%
Exams: 80%
Total: 100%

No early and no make-up in-class exams. For a single, missed in-class exam, Option 2, automatically will be utilized to determine the final course grade. Any subsequent missed in-class exams will be scored as zero. The student must have a valid and verifiable reason for missing the final exam, such as an extreme emergency or serious illness requiring hospitalization, and so forth. If a verifiable and valid reason cannot be provided, a zero score for the final exam will be recorded. See attached schedule. Exam Dates (tentative): Exam I: Feb. 10; Exam II: Mar. 16; Exam III: Apr 11; Final Exam: May 07, 1-3 PM

Final course grade: Generally the lowest A- is 88%, lowest B- is 78%, lowest C- is 66%, lowest D is 56%. Grades assigned will be: A, A-, B+, B, B-, C+, C, C-, D+, D, F

Student Conduct: Only students enrolled for the class may attend. At all times students are expected to conduct themselves in a professional manner, which includes but is not limited to: treating everyone in class with respect, avoidance of extraneous comments and small group discussions during lecture. Additionally radios, headphones, cell-phones, PDA's, mp3 players or similar devices must be in silent mode during lectures, discussions and are not permitted during exams. Students are expected to take care of personal matters before a lecture/discussion/exam begins. The eating and drinking of food, water, soda, use of tobacco products, chewing gum, are not allowed during lectures, discussions and exams. Students must utilize their own calculator for exams: cell phone calculators are not allowed. Calculators will not be provided. Not all possible contingencies for student conduct can be listed, subsequently other modes of student conduct not listed, will be addressed immediately. Disruptive students will be required to leave. Students are responsible for taking care of all personal matters before an exam begins. During exams, please keep noises to a minimum: radios, headphones, cell-phones, PDA's, mp3 players or similar devices must be in silent mode during lectures, discussions and are not permitted during exams. Disruptive and noncompliant students will be required to leave. If a cell phone rings (beeps, buzz, etc.) during any exam, the exam will be collected and the student will not be allowed to continue. It is recommended that the student read through each chapter before lecture. Bring your calculator each day.

Academic Integrity: Consult the Undergraduate Studies Handbook for additional information. All exams are closed book and closed note. During exams violations include but are not limited to: cell phone ringing, opening a book-bag or back-pack during an exam, using unauthorized notes or books, looking at another student's exam, using another student's calculator, talking to another student, taking a copy of the exam from the room and so forth. Students caught cheating will receive an automatic "F" for the course and will not be allowed to drop the course. Further actions will also result. The student must bring their Loyola I.D. for each exam. Students are not allowed to leave the room during exams. If you leave, you must turn in your exam and you will be considered finished. Please keep noises and sounds to a minimum. When leaving, be respectful and leave quietly.

Lecture Outline (tentative, subject to change)

Week	Date	Chapter	Topic	*
1	01/16		**NO CLASS, HOLIDAY**	
	01/18	01	Matter, Units	
	01/20	01	Measurements, Conversions,	
2	01/23	01	Significant Figures, Dimensional Analysis	
	01/25	02	Atoms, Atomic Structure,	
	01/27	02	Periodic Table, Molecules, Compounds, Chemical Formulas	
3	01/30	02	Polyatomic Ions, Nomenclature	
	02/01	03	Chemical Equations, Reactions	
	02/03	03	The Mole, Molar Mass	
4	02/06	03	Calculating Formulas, Percent Composition	
	02/08	03	Stoichiometry, Limiting Reagents, Percent Yields	
	02/10		**EXAM I**	
5	02/13	04	Electrolytes, Aqueous Solutions, Solubility	
	02/15	04	Net Ionic Equations, Acid-base reactions	
	02/17	04	Redox reactions	
6	02/20	04	Concentrations, Molarity and Stoichiometry revisited	
	02/22	05	Thermodynamics	
	02/24	05	Enthalpy, Heat Transfer, Work	
7	02/27	05	Hess' Law, Enthalpies of Formation	
	02/29	06	Light, Waves, Photons, Electromagnetic Radiation	
	03/02	06	The Hydrogen Atom, Matter Waves	
8	03/05		**NO CLASS, SPRING BREAK**	
	03/07		**NO CLASS, SPRING BREAK**	
	03/09		**NO CLASS, SPRING BREAK**	
9	03/12	06	Quantum Mechanics, Atomic Orbitals	
	03/14	06	Atoms, Electrons, Electronic Configurations, Quantum Numbers	
	03/16		**EXAM II**	
10	03/19	07	Periodic Trends	
	03/21	07	Ionization energies	
	03/23	08	Octet Rule, Covalent Bonding, Lewis Structures, Multiple Bonds	
11	03/26	08	Bond Polarity, Formal Charge, Resonance Structures **("W"day)**	
	03/28	08	Lewis Structures, Bond Properties, Enthalpies of Reactions	
	03/30	08,09	Valence Bond Theory,	
12	04/02	09	VSEPR Theory, Molecular Properties	
	04/04	09	Bonding Theory, Domain Theory, Molecular Shapes	
	04/06	09	Hybridization, Sigma (σ) and Pi (π) bonds	
13	04/09	10	Boyle's Law, Ideal Gas Law	
	04/11	10	Ideal Gases	
	04/13		**NO CLASS, HOLIDAY**	
14	04/16		**NO CLASS, HOLIDAY**	
	04/18		**EXAM III**	
	04/20	10	Stoichiometry Re-revisited	
15	04/23	10	Kinetic Molecular Theory	
	04/25	11	Intermolecular Forces, Liquids	
	04/27	11,12	Phase Diagrams, Solids	
16/17	05/07		**FINAL EXAM 01:00 – 03:00PM**	