# Los Angeles Mission College
# Chemistry 65
# Fall Semester 2011

Lecture Instructor: Dr. R. W. Gellert
Section: #3069

Lec. MW 7:30-8:55 INST 2003
Lab. MW 5:55-7:20 INST 2012

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**Chemistry 65 is an introductory Chemistry Course. Pre-Requisites: Math 125 with a "C" or better, or appropriate math placement results.**

**Required - Textbook(s):**
Introductory Chemistry, 6th Ed., by Steven S. Zumdahl, Houghton Mifflin, 1999 (Available in LAMC Bookstore).

**Laboratory Manual:** "Everyday Chemistry", Fenyes, Maria. (Available in LAMC Bookstore).

**Laboratory Notebook:** Bound Laboratory Notebook (National #53-110 quadruled paper, ***hard cover Composition Book***) This is available in the LAMC Bookstore. You must have the Laboratory Notebook by the second class meeting. You are required to record all laboratory work in your Lab Notebook. (See Laboratory Manual Appendix II.)

**Optional Textbook:**
Study Guide for Zumdahl, 5th Ed., Houghton Mifflin, 1999

**Other Supplies**:

**Safety Goggles:** Case-hardened safety glasses or goggles (MUST BE WORN AT ALL TIMES IN LABORATORY WHEN EXPERIMENTAL WORK IS IN PROGRESS; your instructor will give details on this).

**Scientific Calculator**: Equipped with scientific notation and logarithm functions. You should have your calculator with you for all class sessions.

**Optional Supplies**: (1) **Lab Coat** –protective clothing. (2) **Periodic Table of the Elements:** This is available at LAMC Bookstore. However, a basic Periodic Table will be provided by the Instructor.

**Attendance:** Not only is attendance essential but 100% attendance is ***required***!. CHEMISTRY IS A DEMANDING SUBJECT! YOU CANNOT AFFORD TO BE ABSENT IF YOU WISH TO DO WELL IN THIS COURSE.

**Homework(end-of-Chapter Problems)**:
Homework (end-of-chapter problems) need not be turned in. However, the working of these exercises is an essential part of the learning process in a course of this sort and its importance cannot be over emphasized. It is suggested that you work on chemistry EVERY DAY! Do just 2 or 3 problems or read a few sections of the current chapter. You will often need to work problems of the same type several times before you fully understand it. Carefully read the examples and solved problems in the text. Attempt to solve the problem yourself after reading the text by covering up the authors' solution. Do as many end-of-chapter problems as you can or your time permits. Most of these problems are based on the chemical principles you have covered in the chapter or previous chapters. LEARN and understand

these PRINCIPLES! Remember you cannot solve test problems quickly and efficiently without LOTS OF PRACTICE. If you have difficulty with any of the end of chapter problems you can turn in the work you have done on the problem and your instructor will direct you toward the solution so you may solve the problem yourself.

**SLO: At the end of the semester students will be able to**,

1. Conceptualize, model and explain chemical processes qualitatively at the molecular level.
2. Express mathematically and solve quantitative chemical problems.
3. Extract appropriate information, analyze and synthesize experimental results to reach correct conclusions.
4. Perform laboratory techniques safely and accurately and maintain a laboratory notebook according to standard scientific guidelines.
5. Represent and interpret data graphically.

## Course Grade

Your grade in Chemistry 65 will be based on the following:

| | |
|---|---|
| MIDTERM EXAMS- three ..... | 40 % |
| (Exams will be announced in advance, No make-up exams given!) | |
| Weekly quizzes (9-12, 10-15 pts, drop 2 lowest) ..... | 10 % |
| LABORATORY WORK..... | 30 % |
| Your laboratory work includes Three laboratory open notebook exams, experimental reports, and unknowns. | |
| There will be No make-up laboratory work. | |
| FINAL EXAM ..... | 20 % |
| TOTAL ..... | 100 % |

Grading Scale: A: ~86-100 %, B: 75-85%, C: 65-74.9%, D: 55-64.9%

WELCOME TO THE COURSE. LET US WORK TOGETHER TOWARD
AN ENJOYABLE AND SUCCESSFUL LEARNING EXPERIENCE.
I HOPE IT WILL BE WORTH THE EFFORT AND THAT
THE KNOWLEDGE ACQUIRED WILL ENRICH YOUR LIVES.

***TENTATIVE LECTURE SCHEDULE***

| Week | Date | Chapter | Lecture Topic | Quizzes |
|---|---|---|---|---|
| **1** | M, Aug 29 | **1, 2** | Introduction, Scientific Method, Scientific Notation, Units, | |
| | W, Aug 31 | **2** | Measurments; SI Units, Errors in Measurements; Significant Figures | **Q1** |
| **2** | M, Sep 5 | **---** | **Labor Day (College closed)** | |
| | W, Sep 7 | **2** | Problem Solving and Dimensional Analysis, Temp. | **Q2** |
| **3** | M, Sep 12 | **3** | Matter: Physical and Chemical Changes/ Properties | |
| | W, Sep 14 | **3, 4** | Calculations, Elements, Atoms, and Ions | **Q3** |
| **4** | M, Sep 19 | **4, 5** | Atomic Structure, Ionic Compounds | |
| | **W, Sep 21** | **----** | **Exam 1 (Chapters 1–4, part 5)** | |
| | **September** | **23** | **Last day to drop without "W"** | |
| **5** | M, Sep 26 | **5,11** | Nomenclature, Modern Atomic Theory | |
| | W, Sep 28 | **11** | Electronic Structure of the Atom | **Q4** |
| **6** | M, Oct 3 | **6** | Chemical Reactions: Evidence, Equations | |
| | W, Oct 5 | **7** | Reactions in Aqueous solutions | **Q5** |
| **7** | M, Oct 10 | **7** | Reactions in Aqueous solutions cont'd | |
| | W, Oct 12 | **8** | Mole Concept and Chemical Composition | **Q6** |
| **8** | M, Oct 17 | **8, 9** | Empirical Formulas, Mole-Mole Relationships | |
| | **W, Oct 19** | **----** | **Exam 2 (Part 5, 11, 6-8)** | |
| **9** | M, Oct 24 | **9** | Mass-Mass Calc., Limiting Reactant, | |
| | W, Oct 26 | **9, 10** | %Yield, Thermochemistry | **Q7** |
| **10** | M, Oct 31 | **11, 12** | Thermochem. Cont. Chemical Bonding | |
| | W, Nov 2 | **12** | Molecular Structure | **Q8** |
| **11** | M, Nov 7 | **13** | The Gaseous State, Partial Pressures | |
| | W, Nov 9 | **13** | KMT, Gas Stoichiometry | **Q9** |
| **12** | M, Nov 14 | **14** | Liquids and Solids | |
| | **W, Nov 16 -- Nov. 18 ->** | **----** | **Test 3 (part 5, Chapters 9, 10,12-13 ) *** Last day to drop with "W" ***** | |
| **13** | M, Nov 21 | **14** | Liquid and Solids cont'd | |
| | W, Nov 23 | **14, 15** | Solutions | **Q10** |
| | **November** | **24-27** | **Thanksgiving Holiday – Campus Closed** | |
| **14** | M, Nov 28 | **15** | Solution Composition | |
| | W, Nov 30 | **15** | Stoichiometry of Solution Reactions | **Q11** |
| **15** | M, Dec 5 | **16** | Acids and Bases | |
| | W, Dec 7 | **16** | Acids and Bases | **Q12** |
| **16** | **M, Dec 12** | ------ | **Final Exam Cumulative w/emphasis on last Chapters. 8-10 PM INST 2003** | |