



Principles of Chemistry I- Honor

CHEM 1211K-25H

Fall 2007

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General Information

Class Time M & W 2:30pm – 5:00pm
Classroom Lecture: TLC 2105, Lab: TLC 3104
Office Hours MW5-6, TR 9:30-11:30, T 1:30-5, F 2:30-4. I will be happy to see you at other times by appointment.

Required Course Materials

- **Textbook:** *Chemistry - The Molecular Nature of Matter and Change*, 4th edition, Silberberg, McGraw-Hill, 2006.
plus Student Solutions Manual and Student Study Guide that come with the textbook.
- **Scientific calculator** (see policy on p.2)
- **Safety goggles** (can be purchased during the first labs- \$5).

Course Description

This is the first course in a two-semester sequence covering the fundamental principles and applications of chemistry for science majors. Topics to be covered include composition of matter, atomic structure, stoichiometry, periodic relations and nomenclature. Laboratory activities will include qualitative and quantitative experiments.

This course satisfies the university core area D, Laboratory Science Course for science and non-science majors. Good algebra skills and a working knowledge of high school chemistry are assumed.

The class meets for 2 hours and 30 minutes each 2 days per week. Most class meetings consist of lecture, problem-solving, and laboratory activities.

Learning Outcomes

Students will demonstrate an understanding of the basic concepts of chemistry given above, and an awareness of the role of chemistry in everyday life. Students will increase proficiency in laboratory techniques, learn to collect and analyze scientific data, and to formulate appropriate conclusions from data analysis. Students will demonstrate superior oral and written communication skills to present scientific ideas.

Course Policies and Guidelines

- Please come to class on time, and do not leave early.
- You are expected to be civil in the classroom.
- You should be prepared to spend at least **6~8 hours per week** studying chemistry outside the classroom.
- **Policy on Scientific Calculators:** Remember to bring a calculator to every class. During exams and quizzes, only non-programmable calculators are allowed on the table. All other devices (including cell phones) must be turned off and stored in your bags. If you wish to use a programmable calculator, you must delete all the memories before exam or quiz.
- **Policy on Electronic Devices:** Do not use a laptop computer, music devices, or any other electronic devices in the classroom. Turn off cellular phones and pagers completely (not a silent/vibration mode).

Study Skills for Success

The best way to be successful in this course is to **attend classes, take notes in class, read the textbook, and work through homework problems, on a REGULAR BASIS.** Before each exam, it is highly recommended to do the following: **make a summary note of key terms and concepts to remember, work on problems you could not answer previously, and use help sessions and office hours to ask questions.** Keep track of the end-of-chapter problems that give you the most difficulty, and try similar problems for additional practice and review. **Ask questions frequently** in class, workshop and the office hours.

Grades

| | |
|---|----------------|
| Laboratory Activities | 200 pts |
| Quizzes | 100 pts |
| Homework for submission | 100 pts |
| Article presentation | 100 pts |
| <u>Exams (4 in-class and a final, 100 pts each)</u> | <u>500 pts</u> |
| Total | 1,000 pts |

* Extra credit opportunities may come up and will be announced in class.

Grading Scale:

Above 90 points : A 80 – 89 points : B 70 – 79 points : C
60 – 69 points : D 59 and below : F

Laboratory Activities

For lab activities we will move to **TLC 3104.** You will work with a lab partner. Labs need to be completed efficiently and in the allotted time. Please see Laboratory Instruction handout for more information.

Laboratory grades are worth **20%** of your entire grade and will be based on attendance, completion of the activity, clean-up, and report. You will earn a zero out of hundred if you are absent. No makeup labs are allowed. Lab report due is typically the beginning of the next class period unless otherwise instructed. Points will be deducted for late submission. You will earn a grade of F for the entire course if you miss more than one fourth of in-class activities.

Whenever the lab handout is provided in advance of class, you will be expected to come to class having read this and completed the **prelab assignments**. Some directions may be given on the same day. For all labs, **each student must submit their own individual (unique) lab report** even though the experiment is done with a partner. Data is not to be shared without the instructor's permission. A few of the experiments may require you to complete a **typed formal lab report**.

Quizzes

Unannounced in-class quizzes (10 to 15 minutes each) will be given occasionally. Questions may be asked from homework questions previously assigned, or any materials covered previously. The lowest quiz will be dropped. No make-up quizzes will be given. Quiz grades are worth 10% of your entire grade.

Homework from Textbook

Homework problems will be assigned from the textbook on a regular basis. These are not graded, but it is a crucial component of your study outside of class. It is very important that you attempt to solve all the assigned problems to perform well in exams. Solving problems help you realize what you have or have not understood. If you cannot solve a problem without any reference, mark the problem and consult with the Solutions Manual. Make sure to go back to the problems before exam.

Homework for Submission

Occasionally some homework problems will be assigned for submission. Your answers/solutions will be graded and are worth 10% of your total grades.

Article Presentation Project

This year's theme: **the role of chemistry in improving people's lives**

Your task is to find at least three scientific journal articles on a specific topic you select, and give a powerpoint presentation. You will submit printouts or photocopies of three articles by **Wednesday, October 10**. One or two lab activity periods in November will be used for presentations.

Examinations

There will be **four in-class exams** and a **comprehensive final exam** during the semester. No exams will be dropped. The exam dates are published below and will not be postponed. No makeup exam will be given. Please arrive on time, as no extra time will be given if you arrive late. Use only a pencil and an eraser. You are allowed to use a scientific calculator for numerical calculations only (see policy below). You will be provided a periodic table, conversion factors and constants, equations if necessary, and scratch paper. Everything that has been taught since the beginning of the class can be asked at any point of time, *including laboratory activities*.

Exam grades will be based on your ability to DEMONSTRATE full understanding of the material. For non-multiple-choice questions you must SHOW ALL WORK for full credit.

The standardized examination from the American Chemical Society will serve as the final exam. It consists of multiple-choice questions. If there is a conflict with the final exam time, you must provide me the written authorization from the Dean of Arts & Sciences to move your final exam time. This note should be delivered to me at least two weeks prior to the scheduled final exam time.

Academic Integrity and Honesty

We value academic integrity and honesty very highly. Not only does academic honesty preserve the integrity of both the student and the institution, but it is also essential in gaining a true education.

We do not permit any forms of dishonesty or deception that unfairly, improperly or illegally enhance a grade on an individual assignment or a course grade. Each incidence of academic dishonesty is subject to serious penalties, including (but not limited to) failing the assignment and failing the course.

Please refer to Student Handbook p.20 and Undergraduate Catalog p.103 for the university's honor code and definitions of cheating, fabrication and plagiarism.

Special Needs

If any of you have special needs, please meet with me soon in my office. I will find ways to best assist your learning.

Official Communication Tools: Campus e-mail and WebCT Vista

Official communication method will be via **campus e-mail**. It is your responsibility to check your my.westga.edu e-mail account on a regular basis. Grades and answer keys will be posted on **WebCT Vista**.

Tentative Schedule

| <i>Date Class#</i> | <i>Monday</i> | <i>Class#</i> | <i>Wednesday</i> |
|------------------------|---|--------------------|-----------------------------------|
| | | 8/15 1 | Syllabus, Introduction, Ch 1 |
| 8/20 2 | Ch 1 | 8/22 3 | Ch 2 |
| 8/27 4 | Ch 2 | 8/29 5 | Ch 2-3 |
| | September 3 – NO CLASS | 9/5 6 | Ch 3, review |
| 9/10 7 | EXAM 1 | 9/12 8 | Ch 3 |
| 9/17 9 | Ch 4 | 9/19 10 | Ch 4 |
| 9/24 11 | Ch 4 | 9/26 12 | Ch 5 |
| 10/1 13 | Ch 5, review | 10/3 14 | EXAM 2 |
| 10/8 15 | Ch 5 | 10/10 16 | Ch 6 Three articles due |
| 10/15 17 | Ch 6 | 10/17 18 | Ch 6 |
| 10/22 19 | Ch 7 | 10/24 20 | Ch 7, review |
| 10/29 21 | EXAM 3 | 10/31 22 | Ch 7-8 |
| 11/5 23 | Ch 8 | 11/7 24 | Ch 8 |
| 11/12 25 | Ch 9 | 11/14 26 | Ch 9-10 |
| 11/19 27 | Ch 10 | | November 21 – NO CLASS |
| 11/26 28 | Ch 11 | 11/28 29 | Review, Jeopardy |
| 12/3 30 | EXAM 4 | | |
| 12/7 (M) | COMPREHENSIVE FINAL EXAM – 2-4pm | | |