

Chemistry 141

Spring 2004

Instructor: Dr. Monica Ali, Pierce Hall, Room 210; Telephone 4-8340

Texts and Supplies: Chang, R., "Chemistry," 7th edition, McGraw Hill, New York

Study Guide to Accompany Chang
Solutions Manual to Accompany Chang

Parker, L., "Chemistry 141-142 Laboratory Manual,"
14th edition, 2003-2004, (Sold by chemistry department)

Carbon-copy laboratory notebook

Safety glasses for laboratory

You must have the last three items before your first laboratory meeting

Goals: The study of science, particularly chemistry in this case, can lead to an understanding and appreciation of science as a part of a liberal arts education. One goal of a liberal arts education is an awareness and appreciation of one's surroundings. In order to begin to understand the natural world around us, one needs to have a basic concept of the nature and workings of chemical materials, which comprise our bodies and all other materials around us.

The ability to think clearly and critically is a skill, which is a valuable asset in any part of life. In order to think clearly and critically, one must be able to solve problems. The ability to think, to consider different pieces of information and formulate a rational and reasonable plan of action, based upon that information, is a skill that may be learned, partially, through the study of chemistry.

Content: You will be expected to master the following areas of chemistry

- The scientific method
- Conversion between different measuring systems
- Significant figures
- The structure of the atom
- Nomenclature
- Molecular mass and moles
- Stoichiometry
- Reactions in aqueous solution
- Molarity

- Gases
- Thermochemistry
- Quantum theory and electromagnetic radiation
- Electron configurations
- The periodic table
- Bonding
- Molecular geometry and hybridization
- Intermolecular forces
- Phases of matter

Syllabus: We will cover chapters 1-10 and part of 24 this semester.

Attendance: Attendance is required in both class and laboratory and will be taken every session. Since emergencies may arise, up to three classes may be missed without penalty. However for the fourth absence one point will be subtracted from the final course average; for the fifth absence, two points; for the sixth absence, three points, etc. It is a good idea to save the first three absences for use in case of sickness. The student, if absent, is still responsible for all material covered in class.

The student is expected to be on time for class. If you come in to class more than 15 minutes late, you will be counted as absent. If you come late, it is your responsibility to see me immediately after class to be certain that you are marked late and not absent. No adjustments will be made at a later time.

When you are in class, you are expected to be attentive, participatory, and not disturbing to others. Leaving a class early counts as an absence, as does sleeping through a class or being generally inattentive.

Tests: Tests will be given for fifty-five minutes during the class period on the following Fridays:

Friday, February 6
 Friday, February 27
 Friday, March 26
 Friday, April 16

There are NO make-up tests. Should one test be missed (only for the most urgent of reasons, which is acceptable to the instructor), the grade on the final exam will be used in place of the missed test. THE INSTRUCTOR MUST BE NOTIFIED BEFORE THE TEST AND THE REASON FOR THE ABSENCE MUST BE ACCEPTABLE TO THE INSTRUCTOR IN ORDER THAT THE FINAL EXAM GRADE BE USED TO REPLACE THE MISSED TEST. If the reason is not acceptable to the instructor or the instructor is not notified before the test, the grade for the test will be zero. Should a second test be missed, the grade will automatically be zero. Should the student be late for a test, no extra time to take the test will be given.

Because some sections of the text are more difficult than others and may require more time in class, all tests will not cover equal amounts of text material. Some tests may include more or fewer pages.

Test questions may include multiple choice, short answer, word and mathematics problems, and short essays. Please bring a calculator to all tests.

Suggested Method of Study:

You will gain the most from each class if you familiarize yourself, with the material to be discussed that day, before you come to class. **Read ahead in the text** so that you are always slightly ahead of the class lecture.

After attending each class, look over your **class notes** from that day, reread the text material, and work any assigned problems which pertain to the material discussed that day. Try to completely **work the problems** yourself before looking up answers in the back of the text or the Solutions Manual. You are encouraged to form **small study groups with a few other classmates**. Get together with one or two other students in the class on a **regular basis** to help each other with any questions you may have. Utilize the **Study Guide** for additional practice with chemistry problems. At least one problem from pertinent material in the Study Guide will appear on each test or quiz.

Problem Sets: Problems from the end of each chapter will be assigned. The specific problems, for which you are responsible, will be listed on the class learnlink conference. You are strongly encouraged to work all the problems assigned. At least one problem from each problem set will be seen on the test for that material.

Learnlink Conference: The class has a learnlink computer conference. Please check the conference on a regular basis for announcements regarding the class. Problem sets for each chapter, times for help sessions, and any other appropriate notices, will be posted regularly on the conference.

Review Sessions: A help session with the instructor outside of class time will be held before each test. Usually the meetings are in the afternoon after laboratories. Additional help sessions may be provided as needed. The session is optional on the part of the student. No new material will be taught. Questions from the students will be answered. It is to the benefit of the student to attend. Often questions which are asked in the help sessions appear on tests.

Honor Code: The Honor Code is endorsed on the Oxford College campus. The Honor Code promotes the virtues of honesty and academic integrity. Briefly, any work for which you receive a grade is to be completed with the Honor Code in mind. Your signature on your work indicates that you have abided by the Honor Code. You may not give help to anyone, you may not accept help from anyone, nor may you use any unauthorized materials for graded material.

Electronics: The use of beepers and cell phones in class is not allowed. Laptop computers are allowed if they are quiet.

Religious Holidays: Please notify the instructor in writing one week in advance if you will be out of class for one of the religious holidays indicated on the campus list of religious holidays.

Laboratory: The laboratory instructor will explain the rules and procedures to be followed in the laboratory. You will receive a syllabus for the laboratory containing the rules and procedures for laboratory. There are no allowed absences for laboratory. **IN ORDER TO PASS THE COURSE, IT IS NECESSARY TO PASS THE LABORATORY PORTION OF THE COURSE.**

Grading: The final will count as two exam grades, giving a total of 6 (4 exams + final counting twice). This average will constitute the lecture portion of your course grade.

Your lab grade will count in one of two ways, whichever results in a higher grade in the course for you.

- 1) Your course grade will be computed by adjusting your grade on the lecture portion using your lab average as shown below. This method normally benefits students whose exam average is a high B or an A.

<u>Class Grade</u>	<u>Adjustment</u>	<u>Class Grade</u>	<u>Adjustment</u>
93 and up	+2	73 - 75	-4
90 - 92	+1	70 - 72	-5
85 - 89	no adjustment	67 - 69	-6
82 - 84	-1	64 - 66	-7
79 - 81	-2	61 - 63	-8
76 - 78	-3	58 - 60	-9
		57 and below	-10

OR

- 2) Your course grade will be computed by taking 80% of your class grade and 20% of your lab grade. This method usually benefits students whose exam average is a B or lower.

Grading scale. Grades are normally assigned as follows, with no rounding:

93 - 100 A	77 - 79 C+
90 - 92 A-	73 - 76 C
87 - 89 B+	70 - 72 C-
83 - 86 B	67 - 69 D+
80 - 82 B-	60 - 66 D
	below 60 F

Final Exam: The final exam, which is comprehensive, will count as two tests. The final exam may be taken only at the regularly scheduled time.

Thursday, April 29th, 2-5 PM

Office Hours : I am in my office most days from 9 AM to 5 PM except during the time for classes, laboratories, meetings, lunch, etc. However, to be sure of finding me, it is best to speak to me outside of class, call on the telephone, or email me to make an appointment.