

Chemistry 102 Summer, 2010 Course Guidelines

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Office Hours: MWF 1130 - 1230 or by arrangement.

Class Hours: MWF 0830 - 1120, Flanner Hall 133 (large lecture hall)

Textbook: *Chemistry and Chemical Reactivity*, by Kotz, Treichel, and Townsend, Seventh Edition. This is the same text used in Chemistry 101 and 102 this past and coming year.

This course will cover essential material of Chapters 14 – 20, 23, and 24 of KTW. The topics will include:

1. Properties of solutions, both ideal and non-ideal (Chapter 14).
2. Chemical kinetics, reaction rates, and reaction mechanisms (Chapter 15).
3. Chemical equilibrium in gas and liquid phases (Chapter 16).
4. Acids and bases, equilibrium in aqueous solutions (Chapter 17).
5. More aspects of solution and equilibrium states (Chapters 18).
6. Chemical Thermodynamics: The second law plus applications (Chapter 19).
7. Electrochemistry, voltaic, and electrolytic cells (Chapter 20).
9. Nuclear chemistry (Chapter 23).
10. Chemistry of coordination compounds (Chapter 22).

Exams:

There will be three ninety-minute exams and one cumulative final exam. Each exam will consist of questions and problems representative of the text, lecture, and discussion material. All calculations and proper units will be entered clearly in a standard "blue book" provided by the instructor. A calculator, periodic table, and a single page of notes (8.5 x 11 inches, both sides) may be used during each exam.

The single page of notes must be included with the blue book prior to hand-in. Blue books must be signed on the front, upper right-hand corner. Each signature will be taken as a statement of honest, independent work. Instances of academic dishonesty will warrant immediate failure of the course plus referral to the Arts and Sciences Dean's office. All blue books must be handed directly to the instructor upon completion.

All blue books will be graded and returned as soon as possible, usually the following class period. All grading questions, points of clarification, and grading errors must be brought to the instructor's attention during office hours no later than one week after return of the exam.

Assignment of Grades:

The following scale will be used: 87% - 100% A-, A; 72% - 86% B-, B, B+; 59% - 71% C-, C, C+; 50% - 58% D, D+; < 50% F. Grades will be assigned according to the highest percentage computed the following three ways:

1. The average of the three in-class exams, each weighted 1/3, plus completion of the final exam. Please note that attendance and completion of the final exam are mandatory.
2. The average of the top two ninety minute exams plus the cumulative final. Here the two ninety minute exams will each be weighted 1/4; the final exam will be weighted 1/2.
3. The final exam by itself. Attendance and completion of all three previous exams are mandatory.

An aim of the grading policy is to allow time and incentive for improvement. Chemistry is not easy to learn, but the process can be rewarding if daily effort is made to master the fundamentals as they appear. Students are urged to contact the instructor to discuss problems before they become serious.

Problem Sets:

Multiple problem sets will be assigned during the semester based on the text and lecture materials. Students are urged to work as many problems as possible with the help of each other and the instructor.

Help/Review Sessions:

In preparation for exams, help/review sessions will be scheduled. Dates, times, and locations will be announced in class.

Quizzes:

Multiple quizzes will be assigned during the semester based on the text and lecture materials. Completion and hand-in of each quiz will warrant one point of credit applied to the up-coming exam.

Ancillary Materials:

There will be multiple hand-outs during the semester. These will include quizzes, problem sets, and old exams. Errors should be brought to the instructor's attention as soon as

possible.

Schedule:

The typical class day will offer three lectures at 0830, 0930, and 1030 with breaks in-between. Exam days will begin with the exam at 0830 followed by a lecture at 1030.

M 070510 **Day-After Independence Day Holiday ☺🎵**

W 070710 First Day of Class. We will begin with Chapter 14 on Solution Properties.

F 071610 **Exam I at 0830:** Material of Chapters 14 - 16 will be emphasized. A lecture will follow the exam at 1030.

W 072810 **Exam II at 0830:** Material of Chapters 16, 17 and 18 will be emphasized. A lecture will follow the exam at 1030.

F 080610 **Exam III at 0830:** Material of Chapters 19 and 20 will be emphasized. A lecture will follow the exam at 1030.

W 081110 Last set of lectures, i-dotting and t-crossing.

F 081310 **Cumulative Final Exam at 0830.** The exam will address five "focus topics" to have been discussed in class on Monday of the sixth week. Please note that attendance and completion of the final exam are mandatory.