

## Chemistry 101 Fall, 2009 Course Guidelines

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Office Hours: MWF 0930 - 1030 or by arrangement.

Class Hours: MWF 0815 - 0905, Flanner Lecture Hall = Flanner 129.

Textbook: *Chemistry and Chemical Reactivity*, by Kotz, Treichel, and Townsend, Seventh Edition. This text will also be used in Chemistry 102.

The course will cover essential material of Chapters 1 – 13 of KTT. The topics will include:

1. Matter, measurements, physical and chemical properties.
2. Atomic theory and the elements; molecules, ions, and compounds.
3. Chemical reactions: types of reactions.
4. Chemical reactions: stoichiometry and more reaction types.
5. Energy and chemical reactions.
6. The electronic structure of atoms
7. More electronic structure: periodic law.
8. Chemical bonding and molecular structure.
9. More molecular structure
10. Gas Laws
11. The forces between molecules.
12. Molecules and phase diagrams.

### Exams:

There will be three one-hour exams and one two-hour 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 one-hour exams, each weighted 1/3, plus completion of the final exam. Attendance and completion of the final exam are mandatory.
2. The average of the top two one-hour exams plus the cumulative final. Here the two one-hour exams will each be weighted 1/4; the final exam will be weighted 1/2.
3. The final exam by itself plus completion of three previous exams.

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 extensive, 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 the problems as possible with the help of each other and the instructor.

### **Discussion Sessions:**

Weekly discussions will accompany the lectures. These meetings are aimed at reviewing, clarifying, and reinforcing ideas presented in the textbook and lectures. Each discussion session will feature a quiz. Completion and hand-in of each quiz will warrant one point of credit applied to the up-coming exam.

### **Help/Review Sessions:**

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

### **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 MWF class day will offer a lecture at 0815. There are three discussion groups that will meet on Mondays. DG is in charge of one 11:30 section that meets in Flanner 105.

Don May is the preceptor for two sections that meet in Flanner 007: one at 11:30 and another at 12:35.

M 082409 **First Day of Class.** We will begin with Chapter 1 on Basic Concepts of Chemistry

M 090709 **Labor Day Holiday** ☺ 🎵

F 092509 **Exam I.**

M 100509 **Fall Break** ☺ 🎵

F 102309 **Exam II.**

W 111809 **Exam III.**

F 120409 i-dotting and t-crossing.

M 121409 **Two-Hour Cumulative Final Exam at 0900.** The exam will address five "focus topics" to be decided during the last week of classes. Please note that attendance and completion of the final exam are mandatory.