

Chemistry 102 Summer, 2012 Course Guidelines

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Office Hours: MWF 1130 - 1230 or by arrangement.

Class Hours: MWF 0830 - 1120, Cuneo Hall 002

Textbook: *Chemistry: the Central Science*, by Brown, LeMay, Bursten, Murphy, and Woodward, Twelfth Edition. This book will be referred to as BLB—this is easier to remember and say than BLBMW. BLB is the same text used at Loyola University this past academic year.

The early bird section of summer Chemistry 102 will focus on essential material of Chapters 13 – 21 with a detour around Chapter 18. If time allows, we will discuss aspects of Chapter 23.

The primary topics are...

1. Properties of solutions, mostly ideal ones (Chapter 13).
2. Chemical kinetics, reaction rates, and thermal effects (Chapter 14).
3. Chemical equilibrium states in gas and liquid phases (Chapter 15).
4. Acids and bases: equilibrium states in aqueous solutions (Chapter 16).
5. More aspects of liquid solutions and equilibrium states (Chapters 17).
6. Chemical Thermodynamics: The second law and applications (Chapter 19).
7. Electrochemistry: electrolyte solutions, voltaic, and electrolytic cells (Chapter 20).
8. Nuclear chemistry: reactions, kinetics, and energy considerations (Chapter 21).
9. Chemistry of transition metals and coordination compounds (Chapter 23, if time allows).

Exams:

There will be three eighty-minute exams and one cumulative final exam. Each exam will consist of questions and problems representative of the text and lecture material. All calculations, units, and essays will be entered 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. Please review the College's policy on academic honesty via the Loyola University website.

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.

If special provisions are needed for the exams and other aspects of Chemistry 102, please consult with the instructor during the first week.

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 eighty-minute 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 eighty-minute exams plus the cumulative final. The top two eighty-minute exams will each be weighted 1/4; the final exam will be weighted 1/2.
3. The three-hour final exam by itself. Completion of all three eighty-minute exams is mandatory.

An aim of the grading policy is to allow time and incentive for improvement. As with many subjects, chemistry is not easy to learn. The process, however, is 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.

Assignments:

Multiple assignments will be posted electronically based on the text and lecture materials. Students are urged to work as many assigned problems as possible with the help of each other and the instructor. Completion and hand-in of each assignment will warrant one point of credit applied to the up-coming exam. Key problems of the assignments will be discussed in class.

Chem Coaching:

The lecture hall is free for an hour or so after the MWF morning sessions. This offers time and space for Q&A, diagnostics, and practice problems. Chem coaching will also be offered at TBA times in the lobby of Flanner Hall so as to prepare for exams.

Handouts:

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

Schedule:

The typical class day will feature lectures, discussion, and litmus tests with breaks somewhere in-between. Exam days will begin with the exam at 0830 followed by class sessions and breaks.

M	070212	First Day of Class. We will begin with Chapter 13 on Solution Properties.
W	070412	Independence Day Holiday ☺ 🎵
F	071312	Exam I at 0830: Material of Chapters 13 - 15 will be emphasized.
W	072512	Exam II at 0830: Material of Chapters 15, 16, and 17 will be emphasized.
F	080312	Exam III at 0830: Material of Chapters 17, 19, and 20 will be emphasized.
W	080812	Last lectures, discussion, i-dotting and t-crossing.
F	081012	Cumulative Final Exam at 0830. Attendance and completion of the final exam are mandatory.