

GENERAL CHEMISTRY SYLLABUS
CHE-107, Section 1

Fall, 2009

Text: General Chemistry, The Essential Concepts, Fifth Edition, Raymond Chang
Laboratory Manual: Laboratory course pack available from the Book Mark
Safety Goggles: Required, available from Book Mark
Class Meeting Days: MTRF, 8:00 AM, Nobel Hall 201
Instructor: Dr. Al Splittgerber
Office: NHS 133
Office Hours: R, 1:00-5:00 PM, or by appointment
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INTRODUCTION

We consider both lecture and laboratory to be necessary and complementary parts of any chemistry course, including general chemistry. You must pass both the laboratory and the lecture parts of the course to receive a passing final grade. This means that even were you to have an "A" in the lecture part of the course, too many missed labs or low lab report grades would still result in a final grade of "F".

Sometimes the week's laboratory experiment will be introduced during the morning lecture and sometimes quiz questions will be taken from your laboratory work. You should view laboratory and lecture as part of the same enterprise of hypothesis building and testing. Chemistry is not a subject that can be completely mastered by studying only textbooks. It is also a laboratory enterprise where knowledge is gained by doing experiments, testing ideas, and making mistakes. It is hoped and expected that the work in the laboratory will provide you with the framework to better understand the compressed and sometimes simplified information you read in the text. Quizzes will reflect this expectation by requiring you to have knowledge of the text material and an understanding of the ideas being tested in laboratory.

LABORATORY ATTENDANCE

It is very important that you attend laboratory regularly, that you arrive for the pre-lab presentations on time, that you read the experiment ahead of time, and that you work up your data promptly. Similarly, attendance at lectures is essential if you are to put forth your best effort on quizzes. Attendance is recorded in laboratory but not in lectures.

TEXTBOOK, CDROM, AND CALCULATOR

The textbook chosen for this year was adopted because of its brief but clear expository style. This is probably the least voluminous textbook on the market. The color illustrations and supplementary material are included on a CDROM that is bundled with the text. If you do not own a CDROM reader, there are many computers across campus which have publicly available readers.

You will need a calculator but it need not be expensive. It needs to do logarithms in either base 10 or base e as well as exponentials. Though you may want a calculator which can solve polynomial roots, invert matrices and do vector algebra, we will not use these capabilities in this course.

GRADING POLICY

As indicated on the accompanying schedule, there will be five (5) one hour quizzes, always on a Friday. Each of these quizzes counts 10% of the final grade. Laboratory counts 20% and the two-hour comprehensive final exam counts 20%. Homework sets will be collected and graded throughout the semester. Cumulatively, these count 10% of the final grade. No make-ups will be given for any missed quiz. If you miss a quiz for reasons beyond your control, it will not be computed in your final average. Otherwise, a grade of zero will be recorded for the missed quiz.

The grading curve in CHE-107 will be approximately the same as the general college grading scheme with the addition of + and – grades. This will be approximately: 94-100, A; 90-93, A-; 86-89, B+; 82-85, B; 78-81, B-; 74-77, C+; 70-73, C; 66-69, C-; 62-65, D+; 58-61, D; 54-57, D-; below 54, NC. The exams will consist of multiple choice, short answer questions, and problems. The mix will vary from quiz to quiz. The scores listed above are guaranteed, i.e., if you can average 70 on each quiz, you are guaranteed a C for this portion of the course grade. It is possible, though not probable, that everyone in the class will earn an “A” on every quiz.

THE HONOR CODE

You have agreed to abide by the Gustavus Adolphus College honor code. The code will be written in full and signed on every examination and graded paper except homework. It states: “On my honor, I pledge that I have not given, received, nor tolerated others’ use of unauthorized aid in completing this work.”

Any student found in violation of the academic honesty policy and honor code will receive a grade of 0 for that exam or lab report. The Dean of the Faculty and Dean of Students offices will also be notified of the nature of the offense. The second code violation results in an F or NC for the course. If you question these policies, please see me.

IN CASE OF DIFFICULTY

It is not at all unusual for some of you to experience difficulty from time to time with the material of this course. There are several things you can do when you run into trouble. You can visit the tutors. Tutors are available Sunday through Thursday evenings in Nobel 305 to assist students in general chemistry with homework or to explain concepts. You can make an appointment to see me for help. I am generally in my office during the stated office hours. I will make every effort to interrupt anything I AM DOING TO GIVE YOU IMMEDIATE HELP. Otherwise I will make an appointment to help you at a more convenient time. Immediately before or after class is a good time to make an appointment for other times in the day. The Office of Student Advising, headed by Julie Johnson, is open daily to help students with study problems, time management problems, personal problems, and many other problems that interfere with your ability to do your best work. Please do not be shy in using any service available on the Gustavus campus to help you deal with problems. There is a big safety net in place to help you but you need to take the initiative. Anyone with the ability to gain admission to Gustavus has the ability to do well in general chemistry. We certainly want to make it possible for you to do your very best, and we will do all in our power to help you succeed.

COURSE SCHEDULE AND QUIZ DATES

Quiz dates: Sept. 25, Oct. 9, Oct. 30, Nov. 20, and Dec. 11, all of which are Fridays.

Final Exam (tentative): Wednesday, Dec. 17, 10:30 AM-12:30 PM

Each quiz will cover the following material:

Quiz 1: Chapters 1, 2, 3

Quiz 2: Chapters 4, 5 (sections 1-5), 6

Quiz 3: Chapters 7, 8, 9 (Sections 1-4)

Quiz 4: Chapters 9 (Sections 5-10), 10 (sections 1-5), 12 (Sections 1-2), 13 (Sections 1-3)

Quiz 5: Chapters 14 (sections 1-3), 15, 16 (Sections 1-4)

Chapter 16 (Sections 5-8), and Chapter 17 (Sections 1-3) are included in the final exam, which is comprehensive. Approximate dates on which various chapters are covered in class are:

Quiz 1: Chapter 1, Sept. 8, 9; Chapter 2, Sept 14, 15; Chapter 3, Sept 16, 17

Quiz 2: Chapter 4, Sept 16, 18, 22, 23; Chapter 5, Sept. 28, 29; Chapter 6, Oct. 1, 2, 5

Quiz 3: Chapter 7, Oct. 8, 12, 13, 15; Chapter 8, Oct. 16, 19, 20; Chapter 9, Oct. 22, 23,

Quiz 4: Chapter 9, Oct. 29, Nov. 2, 3 Chapter 10, Nov. 5, 6, 9; Chapter 12, Nov 10, 12; Chapter 13, Nov. 13, 16;

Quiz 5: Chapter 14, Nov 17, 19; Chapter 15, Nov 23, 24, 30, Dec. 1; Chapter 16, Dec. 3, 4, 7

Final Exam includes Chapter 16 (sect. 5-8), Dec. 8, 10 and Chapter 17 (sect. 1-3) Dec. 14, 18

As indicated previously, each quiz counts 10% of the final grade, and the final is 20%.

LABORATORY SCHEDULE

The laboratory begins on Monday, September 14. Usually each laboratory will be completed in one three hour session. Groups that work efficiently can usually turn in their completed laboratory report by the end of the session. However, completed laboratory reports are due at the beginning of the next laboratory session, and grading penalties will be imposed on reports received later than this. There will be no laboratory sessions or lecture sessions during Nobel Conference, Oct. 6, 7. Note the Reading Break, Oct. 24-27, and the Thanksgiving break, Nov. 26-29, during which there will also be no laboratories. The actual laboratory schedule is part of a separate laboratory syllabus, which may be found in your laboratory manual available at the Book Mark. The laboratory constitutes 20% of the final grade, as mentioned previously.

HOMEWORK ASSIGNMENTS

Homework this term is computer-generated and computer-graded. Details will be available the first week of class. The problem assignments will be done on a weekly basis and will constitute 10% of the final grade, as mentioned previously.