Required Text and Materials

http://www.mhhe.com/chang (click on the 6th edition)

Laboratory manual, safety goggles and laboratory notebook: required, available from the Bookmark

Scientific Calculator: required, must be able to do logarithms and exponentials

Course Description

Principles of Chemistry is an introductory course for the Gustavus chemistry major and serves as a building block for future chemistry courses. As such, this course covers a large amount of introductory material and it is essential that you keep up on your reading, problem sets, and laboratory exercises. While it is important for you to learn the basics of chemistry, an emphasis is also placed on problem solving and thinking like a scientist.

The lecture and laboratory components of this course are complementary and you must pass both sections of the course to receive a passing grade. Thus, even though the lab component counts 20% of your grade, if you fail this portion or don’t complete all labs, you will receive a grade of “F”. It is essential that you attend all laboratory sessions. Attendance at lectures is highly suggested, but not required.

Grading

Exams (50%), Final (20%), Laboratory (20%), Problem Sets (10%). Failure to attend Peer Mentoring (see below) can result in up to 5% reduction in your course grade. A > 93%; A- 90-93; B+ 87-90; B 83-87; B- 80-83; C+ 87-90; C 83-87; C- 80-83; D 60-70; F < 60.

Exams will cover the chapters listed below, material covered in laboratory, and peer mentoring activities. Exams will be a combination of multiple choice, short answer and problem solving. Makeup exams will only be allowed by prior arrangement and for legitimate reasons. Missed exams result in a score of zero. Exams will tentatively cover the following material:

Exam 1 Sep 24: Chapters 1-4 (4.1-4.2)  
Exam 2 Oct 15: Chapters 4-7 plus 16.1-16.4 & 18.1-18.5  
Exam 3 Nov 5: Chapters 8-10  
Exam 4 Nov 23: Chapters 12-14 (NOTE: this exam is the day before T-Giving break)  
Exam 5 Dec 10: Chapters 15-17

Laboratory Schedule

There is no laboratory scheduled the first week of class. See your lab manual for a complete laboratory schedule for the semester. Laboratory attendance is mandatory. Please see your lab manual which includes instructions to follow if you must miss your scheduled laboratory period.

Homework Assignments

Homework assignments in this class are completed and graded on the ARIS website: www.mharis.com. Follow the detailed instructions on the class Moodle site to register as a member of this class. Please use your Gustavus e-mail account when you register. ONLY use our class’s section enrollment code (8CA-E4-36C). Late homework is never accepted, but your two lowest homework scores are dropped. Please note that a written assignment related to the Nobel Conference is part of the homework score and cannot be dropped.
Peer Mentoring and Tutoring
To help you develop strong learning skills in the natural sciences and to better understand the ethos of scientific inquiry you will participate in a Peer Mentoring program. This program is funded with a grant to the College from the Howard Hughes Medical Institute (HHMI). Our goal is to help you be more successful in chemistry, biology, and other coursework.

Each week, you will meet with a small group of students that are enrolled in (BIO-101 or CHE-107) or both classes. The sessions are led by a talented junior or senior biology, chemistry or biochemistry major. The sessions involve hands-on, integrative activities where you will practice application of concepts, synthesis of material and gain an enhanced understanding. There are three main types of activities:

1. Lecture and Laboratory content reinforcement and practice, especially case studies, discussion, applied and integrative problems that are not assigned as homework.
2. Skill building: How to read technical material, effectively study, note-take, write clearly, analyze novel situations and use data to hone quantitative skills
3. How to be a good scientist: learn more about communication forums, useful library and databases, maintaining integrity, avoiding plagiarism, and developing collaborations.

You are required to sign up for a peer-mentoring group in the Peer Mentoring Center, Room 121, Nobel Hall of Science (NHS) on Wednesday, Sept 8th or Thursday, Sept 9th between 4:30 and 9:30 pm. If you are enrolled in only CHE 10, you will sign up for a group that will focus solely on that class. If you are enrolled in both BIO 101 and CHE 107, you will sign up for a group that does activities that relate to both courses. Please bring your class and event schedule so you can choose the best time for you and your lifestyle. Peer mentors will be available to answer your questions during that time.

You will meet with your group and peer mentor once a week in the Peer Mentoring Center, Nobel 121 or Nobel 222. Bring a notebook and a pen/pencil to your weekly peer mentoring session. Ten formal sessions are planned for the following weeks: Sept. 13, 20, 27, Oct. 11, 18, Nov. 1, 8, 15, 29, and Dec. 6. There will be no formal peer mentoring sessions during the weeks of the Nobel Conference (Oct. 3), Reading Break (Oct. 27) and Thanksgiving (Nov. 22); however, there will be open, voluntary forums during Nobel and Reading Break weeks. A list of the Peer Mentoring activities for the whole semester is on your course Moodle site. If you do not attend and actively participate in 8 of the 10 peer mentoring sessions, you will lose up to 5% of your final course grade. If you have any questions or concerns about the HHMI peer mentoring program, please contact Pamela Kittelson, HHMI Peer Mentoring Coordinator at pkittels@gustavus.edu.

Academic Honesty
Every student is required to sign the honor code on each exam. Gustavus Adolphus College is proud to operate under an honor system. The faculty and students have jointly created an Honor Board to enforce this policy. Please see the academic catalog for full details of the academic honesty policy. Depending on the severity of the violation, in this class you will generally receive a zero for the first academic honesty violation and fail the course for a second violation. Homework assignments are exempt from the academic honesty policy in this course. In fact, you are encouraged to work together on homework assignments.

Disability Services
Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (1990) work together to ensure ‘reasonable accommodation’ and non-discrimination for students with disabilities in higher education. A student who has a physical, psychiatric/emotional, medical, learning, or attentional disability that may have an effect on the student’s ability to complete assigned course work should contact the Disability Services Coordinator in the Advising Center (x6286), who will review the concerns and decide with the student what accommodations are necessary.