

ABILENE CHRISTIAN UNIVERSITY
CHEMISTRY 133, GENERAL CHEMISTRY I – FALL 2011
SYLLABUS AND COURSE POLICIES

Section: 133-01 meeting T-Th 9:30-10:50 AM, Foster Science Room 117

Instructor: Dr. Cynthia B. Powell • Campus: Foster Science Bldg 277B, 674-2864
• Home: 370-1353 (before 9 pm) • email: powellc@acu.edu

Office hours:	Mon	Tue	Wed	Thu	Fri
	2:00-4:00 PM	none	2:00-4:00 PM	2:00-4:00 PM	9:00-11:00 AM

Prerequisites: Math 109 with minimum grade of “C”, or placement/credit in Math 124 or above, ACT math score of at least 24 highly recommended. Not credited without concurrent enrollment in Chemistry 131 (General Chemistry Lab I).

ACU Mission: To educate students for Christian service and leadership throughout the world

Department Mission: To prepare students for careers in chemistry, biochemistry, chemical education, and health professions by displaying high professional standards and by modeling Christian values, leadership, and service.

Course goals: The goals of this course are to help the student 1) to understand and describe matter's structure and behavior and 2) to develop analytical and critical thinking skills, including the ability to solve both numerical and conceptual problems.

Required Materials: •K.W. Whitten, R.E. Davis, M.L. Peck, and G.G. Stanley, *Chemistry*, 9th ed., bundled with OWL and eBook, Brooks/Cole, Belmont, California (2010). (Bundle ISBN 0-495-78498-2)
•W. Keeney-Kennicutt, *Student Solutions Manual to Accompany Chemistry*, 9th ed., Brooks/Cole, Belmont, California (2010). (ISBN 0-495-39174-3)
•A scientific calculator

Grading: 70% * 5 Major Exams – The four highest exam scores count as 15% and the lowest exam score counts as 10% in computing the course average. Exams may not be taken early or made up; you will receive a grade of "0" for a missed test unless you have a documented emergency that requires your absence. If you miss a scheduled exam it is your responsibility to contact the instructor within 24 hours of the missed assessment.

10% * Homework and Quizzes – There will be regular homework and there may be in-class quizzes. For homework we will use the Online Web-based Learning (OWL) system bundled with your text. If you bought your text without OWL, you will need to purchase a copy of OWL online at owl.cengage.com. You will use the same homework system for the second semester of General Chemistry therefore it is most cost effective to purchase a license that will give you access through May 2012. Homework will not be accepted late and quizzes cannot be “made-up” **but** the two lowest scores (homework & quizzes combined) will be dropped. Homework scores will be recorded by chapter, therefore you will have one homework score for each chapter covered in the course. All quizzes and the materials that will be covered on the assessment will be announced in class the class period before they are given.

20% * Final Exam – The final will be comprehensive and cannot be dropped.

•A 10-point scale will be used (A = 90-100, B = 80-89, C = 70-79, D = 60-69).

Academic Integrity: Violations of academic integrity and other forms of cheating, as defined in ACU's Academic Integrity Policy, involve the intention to deceive or mislead or misrepresent, and therefore are a form of lying and represent actions contrary to the behavioral norms that flow from the

nature of God. Violations will be addressed as described in the Policy. While the university enforces the Policy, the most powerful motive for integrity and truthfulness comes from one's desire to imitate God's nature in our lives. Every member of the faculty, staff and student body is responsible for protecting the integrity of learning, scholarship and research. The full Policy is available for review at the Provost's office web site (<http://www.acu.edu/campusoffices/provost>) and the following offices: provost, college deans, dean of campus life, director of student judicial affairs, director of residential life education and academic departments.

NOTE: Students must make a "C" or better in Chem 133 in order to take Chem 134, General Chemistry II.

Class Format: Class time will be divided among lecture, demonstrations and group work. Class discussion and questions are always welcomed, but no class participation grade or group grades will be given. Students are expected to take accurate notes, to fully participate in class activities, to read the assigned materials and to complete the suggested problems. You are encouraged to ask for clarification on any material covered in class. The laboratory class associated with this course is a separate course. Students are encouraged and welcomed to visit the instructor during office hours.

Attendance: A sign-in roll will be circulated each class meeting. The instructor may drop a **student with 6 or more absences** (excused or unexcused). If you will be gone for a school-sponsored trip, please bring the Dean's signed form a week before the trip as per ACU policy. If you follow the ACU policy of notification, we will make arrangements for making up missed work before your absence. If you are extremely ill or have another emergency and cannot attend class, please call or e-mail ASAP to let me know about your absence and find out about material you have missed. You are responsible for the material covered in class when you are absent.

Course Content: The instructor may adjust the schedule on the following page, as needed. Study guides with assigned problems will be posted for each chapter. Your student solutions manual contains the answers for the assigned problems. The online homework system is an excellent resource for additional practice problems.

The study of science is the study of God's creation. Every calculation and observation is a glimpse into the creative mind of the Master of the universe. It is with awe that we approach any study of the Almighty and His works and our response is worship.

Text Chapter

Unit Topics/Chapter Topics

Planned Exam Date

	I. Foundations and Stoichiometry	Tues, Sept 20
1	Foundations of Chemistry	
2	Chemical Formulas and Composition Stoichiometry	
12	Gases and the Kinetic Molecular Theory	
	II. Chemical Reactions	Thurs, Oct 13
3	Chemical Equations and Reaction Stoichiometry	
4	Structure of Atoms	
	III. Atomic Structure and The Periodic Table	Tues, Nov 1
5	Chemical Periodicity	
6	Types of Chemical Reactions	
	IV. Chemical Bonding and Molecular Structure	Tues, Nov 22
7	Chemical Bonding	
8	Molecular Structure and Covalent Bonding Theories	
	V. Aqueous Solutions	Thurs, Dec 8
10	Aqueous Solutions: Acids, Bases, and Salts	
11	Aqueous Solutions: Calculations	
	Final Exam is Comprehensive and will be given at the assigned CHEM133 BLOCK FINAL exam time as shown on the university final exam schedule	