

XAVIER UNIVERSITY
CHEM 160-11 (General Chemistry I)**FALL 2001**
3 CREDITS

INSTRUCTOR: **Dr. Craig M. Davis** (Logan 206A) DavisC@xu.edu (513) 745-2066
OFFICE HRS.: Mon. and Wed. 3:00-4:00 p.m.; Tues. and Thur. 9:30-11:00 a.m. Also, you call to schedule a more convenient time.

FORMAT: Three lectures each week, 8:30-9:20 a.m. MWF in Logan 100.

PREREQUISITES: High-school courses in algebra, chemistry, and physics are desirable.

TEXTS: *Chemistry*, 7th ed., by R. Chang; and *Student Solutions Manual*, 7th ed., by B. Cruickshank and R. Chang; both WCB/McGraw-Hill; Boston, MA; 2002

DESCRIPTION: This is the first semester of a science-major chemistry sequence. Fundamental principles are discussed, including: atomic theory and nuclear chemistry; stoichiometry; aqueous solutions; gases; thermochemistry; electronic structure of atoms and its relationship to the periodic table; and molecular bonding and structure.

ATTENDANCE: Regular attendance is highly recommended but not required, and roll will not be taken. Students auditing the class are, however, required to attend regularly. Also, student participation in asking and answering questions is strongly encouraged.

ASSIGNMENTS: You should carefully read the appropriate sections from the text *before* coming to class. When you come to class, take detailed notes and review them as soon after the lecture as you can. As you are reviewing your lecture notes, write down any concepts that cause you difficulty. Return to the textbook to see if it can resolve those issues. If not, *come see me*.

HOMEWORK: Appropriate questions from the end of each chapter will be suggested for the students to consider. Although the answers will not be collected, students should find the exercise of answering these questions vital to the understanding of the material presented in the lecture. I cannot stress strongly enough the importance of the review questions and problems. You will discover many exam questions will resemble homework questions.

TESTS: Five tests will be given. Dates are Sept. 19, Oct.3, Oct. 24, Nov. 14, and Dec. 10. (These dates are tentative, and are subject to change, pending the pace of the course.) Tests will be given during the regular class time in Logan 100. Each test counts 15% toward the final grade (total contribution of 75%). Students are responsible for taking tests at the scheduled times. Make-up tests will only be given with proof of illness or proof of some other conflicting event (note from an appropriate university counselor). Notice of an illness or conflict **MUST** be made in person or by phone **BEFORE** the testing period. **NOTE:** Only non-programmable calculators will be allowed.

FINAL EXAM: Monday, December 17, 8:30-10:20 a.m., in Logan 100.

Final counts 25% toward the overall grade. This is a cumulative examination.

ACADEMIC HONESTY: Cheating on any examination will result in a grade of "F" for the course. Students may appeal according to normal procedures stated in the University Catalog.

GRADING SCALE: A 92-100; B 81-91; C 70-80; D 60-69; F 59 and below.

Upon review at the end of the semester, this scale may be adjusted downward.

(NOTE: According to the Xavier University Catalog, a grade of "A" is earned for "Exceptional" performance. This is also the agreed upon grading policy of the faculty in the Chemistry Department.)

TENTATIVE SCHEDULE FALL 2001

<u>CLASS</u>	<u>TOPIC</u>	
1-2	Chapter 1	Chemistry: The Study of Change
3-6	Chapter 2	Atoms, Molecules, and Ions
7-8	Chapter 23	Nuclear Chemistry (Sections 1, 4-6)
9	TEST #1	Wednesday, September 19
10-14	Chapter 3	Mass Relationships in Chemical Reactions
15	TEST #2	Wednesday, October 3
16-20	Chapter 4	Reactions in Aqueous Solutions
AND	Chapter 19	Balancing Redox Reactions (Section 1 only)
21-22	Chapter 5	Gases (Sections 2, 4, 6, and 8 only)
23	TEST #3	Wednesday, October 24
24-27	Chapter 6	Thermochemistry (skip Section 7)
28-31	Chapter 7	Quantum Theory and Electronic Structure (skip Sec. 2)
32	TEST #4	Wednesday, November 14
33-35	Chapter 8	Periodic Relationships among the Elements (skip Sec.
6)		
36-39	Chapter 9	Chemical Bonding I: Basic Concepts (skip Section 3)
40	Chapter 10	Chemical Bonding II: Molecular Geometry (Begin)
41	TEST #5	Monday, December 10

42-43
3, 6-8)

Chapter 10

Chemical Bonding II: Molecular Geometry (skip Sec.

44

FINAL EXAM

Monday, December 17, 8:30-10:20 a.m.