

Massasoit Community College
Spring 2010
General Chemistry I, CHEM 151

Instructor: Kendra Twomey, PhD

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Office hours: MW 8 -9 am

F 10 -11 pm

T 9-10 am

Class Times: M 1-3 pm; F 1-2 pm

Lab on W 1-3 pm

Course description: This course is designed for students who plan to continue in a science or related area. The major topics covered include atomic structure, stoichiometry, modern chemical bonding and the gaseous state of matter. The laboratory is both preparative and analytical using classical and spectroscopic techniques. Lecture: 3 hours
Laboratory: 2 hours

Prerequisite: Introductory Algebra (MATH101) or higher or waiver by placement testing results or Permission of Instructor.

Textbook: Burdge, *Chemistry, 1st ed.*

Twomey, K. *General Chemistry Lab Manual., 2nd ed.*

A scientific calculator will also be needed.

Course Objectives:

- Classify matter, properties of matter, and perform dimensional analysis problems
- Discuss atomic theory and the components of the atom
- Perform stoichiometry, limiting reagent, and percent composition calculations

- Determine concentration of solutions
- Discuss how we came about today's modern view of the atom compared to the older views
- Determine the electron configurations of the elements
- Distinguish between ionic, polar covalent, and covalent bonds
- Discuss VSEPR and valence bond theories
- Perform calculations using the gas laws
- Reactions in aqueous solutions

Teaching Procedures:

- At the start of each lecture class, the previous class's homework will be discussed. New material will then be presented with problem examples. At the end of each class, homework will be assigned and due at the beginning of the next class. Quizzes will be given at the start of the class.
- For the lab, a brief discussion of the experiment and safety issues will be discussed at the beginning of each lab period. Students will work in groups of 2 or 3.
- Before exams, a problem session will be done in place of a lab. Problems will be handed out for practice and worked on during the lab period

Grading Policy

Quizzes (20 %): There will be a total of 4 quizzes. The top 3 quizzes will be averaged, **if no quiz is missed.**

Homework (5 %): The assignment will be given at the end of class, and due at the beginning of the next class. Homework will be checked at the beginning of class before we go over it. **No late homework will be accepted.** If work is required of a problem, the work must be shown to receive credit for the homework.

Labs (25 %): Labs will be performed on Tuesdays. The lab sheets will be due at the end of class. Lab participation will also be included in the lab grade based upon my observations during lab.

Exams (50 %): There will be a total of 4 exams (30 %) plus a cumulative Final exam (20 %). The exams will cover new material starting from the previous exam. The lowest 50 min. regular semester exam grade will be dropped if all 4 exams are taken.

Grading Policy

The grades will be based upon quizzes, exams, labs, and homework. If you have an A (94 – 100) at the end of semester, you will be excused from the final exam.

A	94-100
A-	90-93
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	less than 60

Attendance Policy: Students are expected to attend all classes. You are responsible for the material you missed. Contact a fellow student for the material as soon as possible. Lateness to lab will not be tolerated as safety issues and lab procedures will be discussed during the first minutes of labs.

Accommodations: Students with disabilities who believe that they may need accommodations in the classroom are encouraged to contact a disability counselor as soon as possible. Students with learning disabilities should contact Andrea Henry, at extension 1805. Students with physical disabilities should contact Mary Berg, at extension 1425. Students at the Canton Campus should contact Stan Oliver at extension 2468.

Additional Resources

The Academic Resource Center (ARC), in the Student Union lower level, offers a full range of tutoring and academic support services. Free help either Walk-ins or by appointment.

