

Chemistry 210 – General Chemistry II

Spring 2016, MWF 8:00-8:50am (SL104)

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Office hours:

MWF 9-11, Tu 11-1, Th 10-12 {*Office hours subject to change, check web page*}

Required Material:

“Chemistry” 3rd Edition; Gilbert, Kirss, Foster & Davies

CHEM 210 General Chemistry II (3) General chemistry principles: kinetics, chemical equilibrium, acid-base chemistry, solubility equilibrium, thermodynamics, oxidation-reduction, electrochemistry, coordination chemistry, and nuclear chemistry. Should register for CHEM 210L to be taken concurrently. CHEM 210 and 210L are both required to satisfy LASC 3 requirements. MnTC Goal 3.

LASC/MnTC Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate & test hypotheses by performing laboratory, simulation, or field experiments in at least two natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical & graphical analysis, and an appreciation of its sources of error & uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

Class Blog:

ChemistryInGeneral.blogspot.com

- All class announcements will be posted to the class blog
- Any questions that I receive via email will be answered to the blog and only to the blog.
- The blog permits anonymous comments. If you have questions about a day in class or a problem that is posted, you may respond/comment without your identity being revealed.

Grading:

Grades will be based upon approximately weekly homework/quizzes (100pts total), 3 of 4 hour exams (150pts each, Feb 3, Feb 29, Apr 1, Apr 29), and a final exam (200pts, May 9, 9am).

Quizzes/Homework	100pts
Exams	3 x 150 =450pts
<u>Final Exam</u>	<u>200pts</u>
<i>Total Points</i>	<i>750pts</i>

Tentative grade assignments are: A = 90-100%, B = 80-90%, C = 70-80%, D = 60-70%. These cutoffs *may* be lowered at the instructor's discretion, but they will not be raised.

If you have a legitimate conflict with an exam, let me know as soon as possible. There will be no make-up exams without advanced notice. Your 3 highest exam score will count, the lowest (for whatever reason) will be dropped. Exams will be closed book and a calculator will typically be allowed. The Final Exam will be cumulative. Anyone who does not take the final exam will receive a grade of “F” for the course regardless of previous performance.

No graphing/programmable calculators, no cell phone/iPod/iPad/networked calculators, and no sharing of calculators during the exams. If your calculator cost more than \$30 or is much more advanced than a TI-30, it is probably not allowed. Be sure to use your exam calculator for all of your homework problems; during an exam is *not* the best time to be trying to learn how to use your calculator.

LEARNING OUTCOMES (General)

1. Understand the fundamental relationships between matter and energy.
2. Describe the chemical systems and concepts introduced in General Chemistry I with greater depth.
3. Recognize that physical and chemical change are not unidirectional and be able to predict how change occurs.

Academic Honesty: Cheating will not be tolerated and will be reported to the Dean of your College and the Vice President for Academic Affairs. It may also be reported to the Judicial Affairs Officer and the Student Conduct Committee for further disciplinary action. For a full description of the MSUM Academic Honesty Policy, please see the Student Handbook. {<http://www.mnstate.edu/s handbook/POLICY/index.htm>}

Disability Access Statement: Students with disabilities who believe they may need an accommodation in this class are encouraged to contact Greg Toutges, Director of Disability Services at 477-4318 (Voice) or 1-800-627-3529 (MRS/TTY), Flora Frick 154 as soon as possible to ensure that accommodations are implemented in a timely fashion.

C. OUTLINE OF MAJOR CONTENT AREAS

1. States of matter and their relationship to/interaction with energy.
2. Chemical kinetics.
3. Chemical equilibrium.
4. Acid-base chemistry.
5. Thermodynamics.
6. Reduction-Oxidation chemistry.
7. Nuclear chemistry.

Tentative Schedule:

Dates	Chapter	
Jan 11-13	6 – Gases	
Jan 13-15	12 – Solids	
<i>Jan. 18</i>	<i>No Class – MLK Day</i>	
Jan. 20-22	11 – Solutions	
Jan. 25-Feb 1	14 – Thermodynamics	
<i>Feb 3</i>	<i>Exam 1</i>	
Feb 5-12	15 – Kinetics	
Feb 17-26	16 – Equilibrium	
<i>Feb 29</i>	<i>Exam 2</i>	
Mar 2-30	17 – Acids & Bases	
<i>Mar. 14-18</i>	<i>No Class – Spring Break</i>	
<i>Apr 1</i>	<i>Exam 3</i>	
Apr 4-Apr 11	17, 18 – Aqueous Equilibrium	
<i>Apr 12</i>	<i>No Class – Student Academic Conference</i>	
Apr 13-22	19 – Oxidation and Reduction	
Apr 25-27	21 – Nuclear Chemistry	
<i>Apr 29</i>	<i>Exam 4</i>	
May 2	Review	
<i>May 9</i>	<i>Final Exam, 9:00am</i>	

Other important dates: Jan 18 (No class, MLK), Mar 14-18 (No class, Spring Break), Mar 25 (No class), Mar 28 (No class), Apr 12 (No class, Student Academic Conference), May 4 (Study Day)