GENERAL CHEMISTRY
CHEM 1010-1
AUTUMN, 2013

Instructor: Dr. Scott D. Pegan
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Text: Chemistry, 6th Edition, Silberberg, Connect Plus
Lectures: 9-9:50 am, MWF, Olin 205
Additional Meetings as needed, 9-9:50 a, T, Olin 205
Office Hours: 10:30-11:30, M SGM 251

Welcome to General Chemistry! In this course, you will be introduced to fundamentals of chemistry that are necessary for you to do well in other courses in chemistry, biochemistry, biology, and engineering. Topics to be explored in this course include the structure of atoms and the periodic table, molecular structure, balancing chemical reactions, stoichiometry, and heats of chemical reactions.

This is a hybrid course, which means that there are both online and face-to-face course components that have been carefully designed to help you master the content in an efficient way. This year, the online portion of the course will be administered through McGraw-Hill's Connect Plus Chemistry web software. I have put together adaptive learning, "LearnSmart," assignments on this web portal to prepare you for the face-to-face classroom activities and discussions. These are designed to enhance your learning and success in the course by providing an alternate form of instruction to lecture. Additionally, they are tailored to your individual previous experience making them a time efficient technique to fortify the foundation of chemistry knowledge this course provides. In addition to the LearnSmart assignments, there will be weekly on-line individual homework assignments to probe your proficiency in the topics covered. **Participation in both components is required to do well in this course.** The goal is for everyone to master the content so that you will all be successful in the course.

Exams: There are 3 X 1 h midterm exams during the quarter, plus a 2 h cumulative final exam. Each exam is worth 100 points. Exam questions will be similar to the problems assigned as homework and problems worked in class.

If you miss a 1 h midterm exam, then your final exam will be counted twice and replace the missed midterm exam. With one exception, **THERE WILL BE NO MAKEUP EXAMS**. The only exceptions to the no-makeup policy will be for members of a university team or group, e.g. athletic team or music group scheduled to be away from campus at the time of the exam, and members of the U.S. Armed Forces with conflicting obligations. You must inform me of this prior to the exam and make arrangements at that time for a makeup exam.

If you take all 3 midterm exams and your grade on the final exam is better than one of your midterm exam grades, then your final exam will be counted twice and replace your lowest midterm exam grade.

Online Activities: This is an enhanced course that includes the use of the in class TurningPoint clicker system as well as individual LearnSmart and individual assignment on-line activities using McGraw-Hill's Connect Plus Chemistry web portal.

The adaptive LearnSmart assignments accessed through McGraw-Hill's Chemistry web portal, or blackboard need to be completed to their stated due date on the website.

On-line individual assignments are also assigned on a weekly basis. These individual assignments are due by 10 pm every Sunday except in week 10 when they will be due on Thursday, November 4th.

Grading:	Midterm Exams	300 points	
	Final Exam	100 points	
	Adaptive Learning	100 points	(10 pts per week, except weeks 1 & 10)
	Individual Online	50 points	(5 pts per set)
	Clicker	50 points	(This is a Clicker Enabled Course)

The assignment of a letter grade to a given numerical grade will depend on the overall class performance. However, if everybody does well, grades will not be curved down. **Also, note that points will be deducted from your final grade for disruptive behavior**.

Projected Grade Ranges (unless revised lower by the instructor during the course)**:**

A ≥ 94%	B- ≥ 80%	D+ ≥ 67%
A- ≥ 90%	C+ ≥ 77%	D ≥ 64%
B+ ≥ 87%	C ≥ 74%	D- ≥ 60%
B ≥ 84%	C- ≥ 70%	F < 60%

Disability Services Program

1. If you have a disability/medical issue protected under the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act and need to request accommodations, please make an appointment with the Disability Services Program (DSP); 303.871.2372/ 2278/ 7432; located on the 4th floor of Ruffatto Hall; 1999 E. Evans Ave. Information is also available on line at http://www.du.edu/disability/dsp. See the Handbook for Students with Disabilities.

2. Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Disability Services Program located on the 4th floor of Ruffatto Hall; 1999 E. Evans Ave., to coordinate reasonable accommodations for students with documented disabilities/medical issues. 303.871. / 2278 / 7432/ 2455. Information is also available on line at http://www.du.edu/disability/dsp; see the Handbook for Students with Disabilities.

3. If you qualify for academic accommodations because of a disability or medical issue please submit a Faculty Letter to me from Disability Services Program (DSP) in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities/medical issues. DSP is located on the 4th floor of Ruffatto Hall, 1999 E. Evans Ave.; 303.871. 2372/ 2278 / 7432. Information is also available on line at http://www.du.edu/disability/dsp; see the Handbook for Students with Disabilities.

DATE TOPIC* (Week is Monday-Sunday)	READING
WEEK 1	
Sep 9 Intro. into class	Ch1
11 Nature of light	Ch2,3, 7.1-7.2
13 Wave-Particle/Quantum-Mechanical	Ch7.2-7.4
WEEK 2	
Sep 16 Periodic table	Ch7.4, 8.1-8.2
18 Periodic table (cont.)	Ch8.2
20 Chemical reactivity and properties	Ch8.3-8.4
WEEK 3	
Sep 23 Chemical Bonds	Ch8.4, 9.1-9.2
24 Exam 1 Study Session	
25 **EXAM 1 Ch 1-3, 7, 8.1-8.4****	
27 Covalent bond	Ch9.3-9.4
WEEK 4	
Sep 30, Lewis structures	Ch9.5-9.6
2 VSEPR	Ch10.1-10.2
4 Shape & polarity	Ch10.3
WEEK 5	
Oct 7 Valence bond theory	Ch10.3, 11.1
9 Molecular orbital theory	Ch11.2-11.3
11 Water as a solvent	Ch11.3, 4.1
WEEK 6	
Oct 14 Precipitation reactions	Ch4.2-4.4
15 Exam 2 Study Session	
16 **EXAM 2 Ch 9, 10, 11.1-11.3****	
18 Oxidation-reduction reactions	Ch4.5-4.6
WEEK 7	
Oct 21 Acids and bases in water	Ch4.6-4.7, 18.1-18.2
23 Bronsted-Lowry	Ch18.3
25 Weak bases/weak acids	Ch18.4-18.5
WEEK 8	
Oct 28 Redox Reactions	Ch18.5, 21.1
30 Voltaic cells	Ch21.2-21.3
Nov 1 Forms of energy	Ch21.3, 6.1-6.2

WEEK 9

Nov 4 Calorimetry	Ch6.2-6.4
5 Exam 3 Study Session	
6 **EXAM 3 Ch 4, 18, 21****	
8 Hess's Law	Ch6.5-6.6

WEEK 10

Nov 11 Entropy	Ch20.1-20.2
12 Calculating entropy change	Ch20.2-20.3
13 TBA	
15 No Class	

Red denotes Tuesday Class meetings

FINAL EXAM (comprehensive), November 20th, 8-9:50 in Olin 205

*Daily Topics may change depending the progress of the class.

**Exam will likely focus on these topics; however, the exact chapters covered will depend on the progress of the class.