

SUMMER 2013 - GENERAL CHEMISTRY - CHEM 210 – 0001 (2213)*(Credit Hours: 3.00)***Co-requisite:** CHEM 212 - General Chemistry Laboratory I**Classroom Instructor** – Professor Narayan S. Hosmane, FR 305, 753-3556 hosmane@niu.edu (short e-mail questions)**Office Hours** – Tu and Th, 2:30 - 3:30 PM, or by appointment**Lectures** – 01:00 – 02:15 PM; Monday-Thursday; **Room La Tourette (Faraday West) 201****Materials:** *"Principles of General Chemistry"*, by Martin S. Silberberg, 3rd Edition (McGraw Hill: 2013).**Exams, Assignments, Quizzes and Grading**

Exams - Tentative dates for TWO 100 point hourly exams and the fixed date for 100 point FINAL EXAM are indicated in the lecture schedule (see below). Make-up exams will **NOT** be given **under any circumstances**. Therefore, only best **TWO of THREE EXAMS** will be counted toward your FINAL GRADING. Missed exam (including Final) will be considered as dropped.

Surprise Quizzes (Pop Quizzes): Surprise quizzes (believe me you will be surprised!) for a TOTAL 100 points (worth a grade of ONE exam) will be given during the lecture hour. However, only **BEST TEN** quiz grades will be counted toward your FINAL GRADE. There will be **ABSOLUTELY no** make-up quizzes. **Exam and Quizzes will not be curved!**

**The 100-point comprehensive Final Exam (not mandatory!) is on
Thursday, August 8, 2013 from 01-02:15 PM**

OPTIONAL: Online Self-Assessment through ALEKS is only for Extra Credit (50 Points Maximum)

Total points = 300 points (best TWO of THREE hourly exams = 200; Surprise Quizzes = 100)

Grading scale: **A > 90% (270 pts.), B > 80% (240 pts.), C > 70% (210 pts.), D > 60% (180 pts.), F < 60%**

Any student who may need an accommodation due to a disability, please make an appointment to see me during my office hours, or when convenient. A letter from Disability Support Services authorizing your accommodations is usually needed before accommodations can be granted.

TENTATIVE LECTURE SCHEDULE

<u>WEEK</u>	<u>CHAPTER/TOPIC</u>	<u>Exam</u>
1. June 17	Ch. 1: Keys to the Study of Chemistry + Ch. 2: The Components of Matter	
2. June 24	Ch. 2 (continued) + Ch. 3: Stoichiometry of Formulas and Equations	
3. July 01	Ch. 3 (continued) + Ch. 4: The Major Classes of Chemical Reactions	
4. July 08	Ch. 4 (continued) + Ch. 5: Gases and the Kinetic Molecular Theory	Exam I (July 11)
6. July 15	Ch. 5 (continued) + Ch. 6: Thermochemistry: Energy Flow and Chemical Change	
7. July 22	Ch. 7: Quantum Theory and Atomic Structure	
	+ Ch. 8: Electron Configuration and Chemical Periodicity	
8. July 29	Ch. 9: Models of Chemical Bonding + Ch. 10: The Shapes of Molecules	Exam II (August 1)
9. Aug 05	Ch. 10 (continued) + Ch. 11: Theories of Covalent Bonding	
August 8, 2013	FINAL EXAM in La Tourette Hall (FW) 201 - 1:00 PM – 02:15 PM	Exam III (FINAL)

Getting Started with ALEKS

You must complete your Initial Assessment by **11:00 pm on the first day of Classes (but it's great to start now to get ahead!)**

ALEKS IS VERY UNFRIENDLY TO PROCRASTINATORS. ALEKS was designed by psychologists who specialized in learning, who know that procrastinating until the night before an assignment is due and then cramming until the wee hours is not a good way to learn. You can't do ALEKS that way. You must put in some time every day, or else you will fall so far behind on basic topics that you won't have time to complete the Objectives. **It is impossible to earn a good score in ALEKS by cramming all night right before the due date!**

To register as an ALEKS user:

1. Go to the ALEKS web site at <http://www.aleks.com>.
2. Click on the link marked "**SIGN UP NOW**" (upper left corner of the screen).
3. On the next screen you will be asked to provide the following **course code**: **NPRHL-JMVT4**
4. The next screen will ask for your **full name**, your **email address**, and your **NIU student Z-ID number**. *Please provide all the information requested, even the information that is listed as optional.* Remember, your NIU student Z-ID number is NOT your social security number. *You must enter your NIU Z-ID number to receive credit for your work.*
5. On the next screen you will receive your **ALEKS login name** and a **temporary password**, and you will have the chance to change your temporary password. *We recommend that you change your temporary password.*
6. After you change your password, ALEKS will check your computer to see if you have the latest version of the ALEKS Java plug-in installed (see below). The plug-in will be installed automatically if it is not already installed. **NOTE: The internet browsers Internet Explorer and Safari are fully supported by ALEKS, so they should run ALEKS with no problems. The plug-in for Google's Chrome browser has a few bugs, but appears to run most features with no trouble. The first thing to try if you have trouble is another browser and another machine if possible.**
7. After the plug-in has been installed, you will learn how to input mathematical and chemical answers into ALEKS. This should take approximately 10 minutes.
8. Once you have completed the input tutorial, ALEKS will prompt you to complete the Initial Assessment. You may choose to complete the Initial Assessment later.

Installing the ALEKS Java Plug-in

Installation of the ALEKS plug-in is automatic. When you access ALEKS, it will automatically check to see if the current plug-in is installed on your computer. If it isn't, the plug-in will be downloaded, and you will be asked for your permission to install the plug-in on your system. This is a safe operation for your computer. Your browser uses the ALEKS plug-in when you are logged on to ALEKS. It is inactive at other times, and does not do anything except provide functionality for ALEKS.

If you need to access ALEKS in the library, a computer lab, or another place where you don't have authorization to install software, use the ALEKS "streaming" plug-in. To use the "streaming" plug-in, follow these steps:

1. Go to <http://www.aleks.com/plugin> and simply log in to or register with ALEKS as you normally would.
2. Upon first login, ALEKS will automatically retrieve the ALEKS plug-in from the server and store it in the browser's "cache" memory. You don't need to grant any special user rights or privileges on a computer for this installation to occur.
3. The plug-in will be available in the browser's cache until an updated version is available on the ALEKS server or until the browser's cache is cleared.
4. Important: When you restart the browser and return to ALEKS, you must go to <http://www.aleks.com/plugin>. If you do not add "/plugin" to the end of the URL, ALEKS will attempt to install the standard ALEKS plug-in on the computer instead of using the streaming version of the plug-in.

2 **EXAM-I: JULY 11; EXAM-II: AUGUST 01; EXAM-III (FINAL EXAM): AUGUST 8**

Technical Support

No one in the department of chemistry at NIU can provide you with competent technical support for ALEKS. Do not write to your teacher with operational questions about ALEKS...*he will not be able to help you.* Instead, try the following resources on the ALEKS website:

1. **Frequently Asked Questions:** <http://www.aleks.com/faqs>
2. **User's Guide:** http://www.aleks.com/user_guides/learners-gchem
3. **Troubleshooting:** <http://www.aleks.com/support/troubleshooting>
4. **Email the Support Team:** <http://support.aleks.com>

CHEMISTRY 210 - GENERAL EDUCATION AND COURSE CONTENT OBJECTIVES**General Education Course Objectives**

- Improve ability to think critically and logically
- Improve ability to reason quantitatively and to perform basic chemical computations
- Improve ability to interpret mathematical models
- Learn how to use the scientific method and theories to understand chemical phenomena
- Develop an appreciation for the importance of the role of chemistry in everyday life
- Develop an understanding of the historical development of the field of chemistry

Content Objectives of this Course

- Understand the components of atoms and ions
- Learn how to write chemical formulas, and how to name compounds
- Learn how to balance chemical equations and how to perform simple stoichiometry calculations
- Understand the behavior of gases, liquids, and solids
- Become familiar with the electronic structure of atoms and understand how chemical reactivity depends on electronic structure
- Correctly predict the shapes of complex molecules and ions, and become familiar with the theories of chemical bonding.

HOMEWORK ASSIGNMENTS:

- **There is no specific homework assigned for this class. However, it is your responsibility to do as much end-of-chapter problems as possible in order to perform well in the pop quizzes, exams and ALEKS. You can check your answers in the solution manual, but the professor of this class will not evaluate and grade your homework problems.**