
(Credit Hours: 3.00)

Co-requisite: CHEM 212 - General Chemistry Laboratory I

Principal Instructor – Professor Narayan S. Hosmane, FR 305, 753-3556 hosmane@niu.edu (short e-mail questions)
Co-Instructor – Michael Vega, LaT 313, <mvega5@niu.edu>
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


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. Missed exam (including Final) will be considered as one of the lowest exam grades. However, one of the lowest exam grades will be replaced by ALEKS grade that is mandatory!

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!

Online Self-Assessment through ALEKS is mandatory (100 Points)

Total points = 400 points (best two hourly exams including Final = 200; surprise quizzes = 100; ALEKS = 100)

Grading scale: A > 90% (360 pts.), B > 80% (320 pts.), C > 70% (280 pts.), D > 60% (240 pts.), F < 60% (<239 pts)

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

<table>
<thead>
<tr>
<th>WEEK</th>
<th>CHAPTER/TOPIC</th>
<th>Exam</th>
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<tbody>
<tr>
<td>1.</td>
<td>June 15 Ch. 1: Keys to the Study of Chemistry + Ch. 2: The Components of Matter</td>
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<td>2.</td>
<td>June 22 Ch. 2 (continued) + Ch. 3: Stoichiometry of Formulas and Equations</td>
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<td>3.</td>
<td>June 29 Ch. 3 (continued) + Ch. 4: The Major Classes of Chemical Reactions</td>
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<td>4.</td>
<td>July 06 Ch. 4 (continued) + Ch. 5: Gases and the Kinetic Molecular Theory</td>
<td>Exam I (July 9)</td>
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<td>6.</td>
<td>July 13 Ch. 5 (continued) + Ch. 6: Thermochemistry: Energy Flow and Chemical Change</td>
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<td>7.</td>
<td>July 20 Ch. 7: Quantum Theory and Atomic Structure + Ch. 8: Electron Configuration and Chemical Periodicity</td>
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<td>8.</td>
<td>July 27 Ch. 9: Models of Chemical Bonding + Ch. 10: The Shapes of Molecules</td>
<td>Exam II (July 30)</td>
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<td>9.</td>
<td>Aug 03 Ch. 10 (continued) + Ch. 11: Theories of Covalent Bonding</td>
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<tr>
<td>August 6, 2014</td>
<td>FINAL EXAM in La Tourette Hall (FW) 201 - 1:00 PM – 02:15 PM</td>
<td>Exam III (FINAL)</td>
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Getting Started with ALEKS

You must register and 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:

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: **TFFHN-YUQG4**
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. ALEKS will now walk you through a tutorial of how to input answers.
7. Once you have completed the input tutorial, ALEKS will prompt you to complete the Initial Assessment. *This initial assessment is VERY important.* It will identify any pre-requisite topics you need to learn before you can be successful in this course, it can also identify what you already know, so you don’t waste time on topics you already know. This is not a test for points – it is ALEKS trying to build an efficient and customized learning path for you to achieve success. Don’t use any outside resources during this assessment – if ALEKS thinks you know more than you do – your homework will be really hard and take you much longer to do! Also, when you know how to do a problem – do it! If you prove mastery of that topic, you’ll have less to do in learning mode.

**NOTE:** ALEKS has two modes, assessment mode and learning mode. Assessment mode measures what you know today (and will figure out if you have forgotten any previously learned topics). Learning mode is where you learn, practice and master the topics – and grow your ALEKS pie (your knowledge). You will frequently be assessed throughout the ALEKS course to ensure ALEKS is providing you the best instruction possible.

**ALEKS 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:

4. Email the Support Team: [http://support.aleks.com](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.