Chemistry 199: Preparatory Chemistry  
Fall 2011

Instructor: Dr. Eric Sheagley

Office: Science Building II, Room 316

Email: sheagley@pdx.edu (this should be the primary means of contact). Also, D2L has a Discussion List feature that allows communication with your classmates. I will be making a point to regularly check the Discussion Board.

Office Hours: Monday 11:00-12:00, Wednesday 2:00-3:00 and Tuesday, Thursday 4:00 – 5:00 (due to time constraints, office hours will have to end promptly at the listed times).


General Info: You are responsible for all information given during class times. This includes homework assignments and any special announcements or schedule changes. Deadlines and course information will frequently be posted on the class D2L page.

Exams: There will be two one-hour in class midterms (100 pts each), 5 online pre-chapter quizzes given on D2L (10 pts each), and a two-hour final (150 pts) (see schedule). The final exam will be cumulative. The material to be covered during each exam is shown on the schedule.

Homework: Homework is designed to help you develop basic skills and to understand and apply concepts presented in class and in the textbook readings. Doing all assigned problems is essential to success in this course. If you have questions about the homework you can raise them during office hours, and seek help in the Resource Room.

The assignments consist of ALEKS objectives and problems from the textbook. There will be no extension of deadlines or make-ups allowed for any homework assignment due to built-in nature of the assignments. Do not put these off until the last minute.

Assigned problems from the book will not be collected for grade. However, knowing how to solve these problems is necessary for mastery of the materials. The answers to these problems are provided in the back of the text and in the solutions manual. Success in this course is strongly correlated with time spent working problems.

ALEKS is a artificial-intelligence based teaching tool that we will be using this semester to help you learn chemistry. The ALEKS component of your grade is worth 100 points, 20% of your final grade. These points are earned through the completion of various tasks. The primary assessment is worth 10 points, DO IT NOW! The remainder of the ALEKS portion of your course grade will be based on two numbers between 0 and 100 in equal measure (half comes from one, half from the other): 1) your highest Assessment score (so please take the assessments seriously! Do not enter your answers carelessly or abuse the button marked “I haven’t learned This Yet) and 2) your performance on the Objectives (the column labeled “Total Grade,” which is simply the average of all the objective grades (In other words, you didn’t procrastinate, so I’ll give you points for that). Once an objective grade has been recorded, it will never change, even if you later forget some of the material and are forced by ALEKS to go back and
relearn it (but the mastery grade goes up and down as the assessments measure your true mastery and retention over the entire semester).

Grading: There will be a total of 450 points possible for this class (100 points for ALEKS, 200 points for the midterms and 150 points for the final). Your grade will be assigned based on the percentage of total points scored in the class approximating the following scale (Note: this scale may change based on class performance):

<table>
<thead>
<tr>
<th>Grade</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>≥ 90%</td>
<td>≥ 80%</td>
<td>≥ 65%</td>
<td>≥ 55%</td>
<td>&lt; 55%</td>
</tr>
</tbody>
</table>

Outside Assistance: Where can I get chemistry help

CHEMISTRY DEPARTMENT TUTOR ROOM SCHEDULE IN SB1 ROOM 221
- MON-THURS 10am-6pm;
- FRI 11-2

CHEMISTRY TUTORING AT THE PSU LEARNING CENTER:
- Schedule is available here: http://www.pdx.edu/tutoring/tutoring-schedule

Policies: 1. Missing an Exam: If you miss an exam, please contact me within 24 hours. I will allow you to reschedule your exam only if your absence was excused, EXCEPT in the following cases, where you will need to take the exam ahead of time:
   - a) Previously scheduled work or family commitments
   - b) School-sponsored field trips or athletic events

Illness, work conflicts and family emergencies are considered excused absences. Other instances will be evaluated on a case by case basis. All exams must be made up before the exams are passed back in class. Failure to notify me of the reason for your absence, as well as unacceptable excuses, will result in a score of zero for that exam.

2. Professional Demeanor: It is expected that you will act with professional demeanor and attitude at all times. This includes, but is not limited to, being respectful at all times to the instructor and to your colleagues. It also expected that you refrain excessive talking, cell phone use, or disruptive internet use in class.

3. Mistakes are sometimes made while grading exams; the good news is that they are usually addition errors, which I will happily fix. Exam scores have a margin of error. If you believe there has been a serious mistake on grading your exam, you may ask me, IN WRITING, to regrade exam. Indicate on the face of the exam, quiz or laboratory report the questions you wish re-graded and your reasons for believing that they were mis-graded. The entire work will be re-graded. Be sure you have made no alterations in your work. We occasionally photocopy your
graded work as a check. Please note that the penalties for academic misconduct are severe. A request for a regrade must be made within 2 days of returning the exams.

4. Dishonesty: I expect that the work you do in this course is your own. Academic dishonesty, which includes a variety of actions, will not be tolerated in this course. Cheating during any examination will be reported and the student(s) will receive an “F” for the exam.

5. Accommodation: If you have a physical or learning disability and you need extra accommodation, please be certain you are registered with Disability Services and make appropriate arrangements with me.

An Introduction to ALEKS for CH199 at PSU

In your CHEM 199 course this fall you will use an innovative approach to facilitating the study of chemistry called ALEKS (Assessment and LEarning in Knowledge Spaces). ALEKS is a web-based, artificially intelligent assessment and learning system. ALEKS uses adaptive questioning to quickly and accurately determine exactly what you know and don’t know in the course, and then provides instruction on the topics you are most ready to learn. When you use ALEKS, you complete only the learning tasks that you need and not those somebody else needs. Students who show a high level of mastery in ALEKS will gain the foundation needed to be successful in the overall course.

Each of you will have a password-protected student account in ALEKS. Since all records of your work are kept on the ALEKS servers, you can access your account from any computer connected to the Internet. In this course, you will be required to use ALEKS to help you master course content. Your work in ALEKS will constitute a significant part of your final grade in the course, so be sure to start ALEKS early in the term. ALEKS is very unfriendly to procrastinators; don’t wait until the last minute to finish an ALEKS assignment as an automated progress assessment may interrupt your timing.

You must complete your Initial Assessment by 11:00 pm on 10/03/2013

ALEKS IS VERY UNFRIENDLY TO PROCRASTINATORS. ALEKS was designed by psychologists who specialize 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 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.

ALEKS Registration
Before starting ALEKS, you must first register in our ALEKS course (there is a $30 fee to register for ALEKS).
1. Go to www.aleks.com
2. Click on the link marked “New User? Sign Up Now!” in the upper left corner of the page.
3. Under “Using ALEKS with a Class,” enter the 10-character course code given below into the boxes provided, and click on “Continue.”

Course Code: AH9FR-YU3PM
Verify the course information and click on “Continue.”

4. Enter the ALEKS access code you purchased in the bookstore, or purchase online by clicking on the “purchase an access code online” link and follow the instructions.
5. Answer the questions on the “Personal Information” page to complete your registration.

6. During the registration process, you will be given a login name and password. You will have the opportunity to change your password if you wish. **Write down your login name and password, and keep them in a safe place.** You will need them to access your ALEKS account in the future.

7. If you do not have a current ALEKS plug-in, one will be installed automatically at this time. The plug-in is a small software component needed by ALEKS and provided free of charge to all ALEKS users. Normally, installation is fully automatic and requires only a minute or so. **If you experience any difficulty with installation, please contact ALEKS Customer Support at http://support.aleks.com.** When the installation is complete, please be sure to close all of your browser windows to restart your browser.

8. Go to www.aleks.com and enter your ALEKS login name and password in the Registered Users area and click on “LOGIN.” You will now be in your ALEKS student account.

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:

- Go to [http://www.aleks.com/plugin](http://www.aleks.com/plugin) and simply log in to or register with ALEKS as you normally would.
- 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.
- 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. **Important:** When you restart the browser and return to ALEKS, you must go to [http://www.aleks.com/plugin](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.

**Tutorial**
After Registration you will take a brief Tutorial, or introduction to the ALEKS interface. It shows you how to enter the various kinds of answers that you may be asked to provide in ALEKS.

**Assessment**
Following the Tutorial, you will be assessed to determine the correct starting point for your work in the course. **Do the initial assessment carefully and honestly.** If you do this assessment carelessly or answer randomly, you’ll waste time later because ALEKS will force you to work through material you already know and don’t really need to review. Also, there is no advantage to consulting outside resources to improve your assessment score. Doing so, will not only make the assessment longer, but when you enter the Learning Mode, ALEKS will try to teach you things that you are not really ready to learn. The periodic progress assessments will discover this, and you’ll spend even more time in Learning Mode to reach your correct learning state. The Initial Assessment should take about an hour.

**Assessments in ALEKS**
There is no partial credit on assessments; take the time to be sure that you have entered your answer correctly. Enter only the final answer and have a pencil and scratch paper ready to use. **NEVER click the “I don't know” button during any ALEKS assessment unless you really don't have any idea of how to solve the problem.** Otherwise, ALEKS will think that you not only don’t know how to solve that specific problem, but
also other related problems. As you make progress in ALEKS, you will be automatically reassessed at regular intervals to check retention and provide review as needed. If the reassessment comes at a time when you cannot concentrate, log off and return later. You can also interrupt your assessment mid-way if you become tired, and return to complete it later. You may lose material from your pie on automatic reassessments; this is completely normal. The loss of material is based on the answers you gave on the assessment. ALEKS uses the assessments to update your pie and provide needed review.

Pie Chart
The results of your assessment are shown in a color-keyed pie chart. The pie chart represents the course curriculum; each slice of the pie chart represents a part of the curriculum and is filled in with solid color to reflect your current course mastery. Your goal is to fill in the slices of the pie chart by demonstrating your mastery of the course curriculum. If you move your mouse pointer around the slices, they will pop out and display lists of topics that you are currently ready to learn. Click on any one of these topics to begin working in the Learning Mode.

Learning Mode
Most of your time in ALEKS will be spent in Learning Mode, working practice problems. ALEKS can provide a nearly unlimited variety of practice problems since they are algorithmically generated and do not rely on a question/answer bank that you can cycle through. In most cases, you will solve only a few problems per topic in order to establish your grasp of the concept. Every time you do a problem, ALEKS will give you immediate feedback on your answer. Note that if you make mistakes, ALEKS requires a little extra practice, but it doesn't start you over; you always get credit for the problems that you have answered correctly.

Timing Out
ALEKS will automatically terminate your session after 30 minutes. There is no warning message before the session is terminated. Simply log back on and ALEKS will bring you back to exactly where you left off.

ALEKS Buttons
The following is a brief summary of the main buttons you will use in ALEKS.

- **Explain** - This button leads to an explanation and solution of the given practice problem. If you choose to view the solution, you will not get the same problem back again for practice, but rather a similar problem.
- **Dictionary** - This button leads to an online dictionary of terms. Terms appearing in the Learning Mode are also hyperlinked to corresponding entries in the Dictionary.
- **Help** - This button leads to Tutorial pages that you can access if you don’t know how to enter your answer.
- **Next** - This button submits your answer to the problem.

Browser Buttons
**Please do not use your browser’s back or forward buttons while working in your ALEKS student account;** you should only use the navigation buttons and links within ALEKS itself. You may be tempted to review an ALEKS explanation to a problem, and then click the back button to return to the original question to enter the answer given in the explanation. If you do this, ALEKS will treat the answer as correct but will NOT credit the answer toward your mastery of the topic. In other words, using this shortcut will not only prevent you from adding mastered topics to your pie, but it will also waste your time.

Support
Our department faculty cannot provide you with technical support for ALEKS. Please contact ALEKS Customer Support at [http://support.aleks.com](http://support.aleks.com) if you have questions or registration/system issues with ALEKS at any point during the term.
## Chemistry 199 Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/30</td>
<td>Intro, Chapter 1</td>
</tr>
<tr>
<td>10/02</td>
<td>Chapter 1, <strong>Assessment 1</strong> on ALEKS (10/03), Chapter 1, 2</td>
</tr>
<tr>
<td>10/04</td>
<td>Chapter 2, <strong>Objective Math and Algebra due on ALEKS</strong></td>
</tr>
<tr>
<td>10/07</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>10/09</td>
<td>Chapter 2, 3</td>
</tr>
<tr>
<td>10/11</td>
<td>Chapter 3, <strong>Chapter 1 and 2 Objectives due on ALEKS</strong></td>
</tr>
<tr>
<td>10/14</td>
<td>Chapter 3, 4</td>
</tr>
<tr>
<td>10/16</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>10/21</td>
<td><strong>Exam 1</strong> (chapters 1-3), <strong>Chapter 3 Objective due on ALEKS</strong></td>
</tr>
<tr>
<td>10/23</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>10/25</td>
<td>Chapter 4, 5</td>
</tr>
<tr>
<td>10/28</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>10/30</td>
<td>Chapter 5, <strong>Chapter 4 Objective due on ALEKS</strong></td>
</tr>
<tr>
<td>11/01</td>
<td>Chapter 6</td>
</tr>
<tr>
<td>11/04</td>
<td>Chapter 6, <strong>Chapter 5 Objective due on ALEKS</strong></td>
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<tr>
<td>11/06</td>
<td>Chapter 6, 7</td>
</tr>
<tr>
<td>11/08</td>
<td>Chapter 7, <strong>Chapter 6 Objective due on ALEKS</strong></td>
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<tr>
<td>11/11</td>
<td>Chapter 7</td>
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<tr>
<td>11/13</td>
<td>Chapter 8</td>
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<tr>
<td>11/15</td>
<td>Vacation, <strong>Chapter 7 Objective due on ALEKS</strong> (11/17 is the actual due date)</td>
</tr>
<tr>
<td>11/18</td>
<td>Chapter 8, 9</td>
</tr>
<tr>
<td>11/20</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>11/22</td>
<td><strong>Exam 2 Chapters 4-7</strong></td>
</tr>
<tr>
<td>11/25</td>
<td>Chapter 9, <strong>Chapter 8 Objective due on ALEKS</strong></td>
</tr>
<tr>
<td>11/27</td>
<td>Chapter 9</td>
</tr>
<tr>
<td>11/29</td>
<td>Vacation, <strong>Chapter 9 Objective due on ALEKS</strong> (12/08)</td>
</tr>
<tr>
<td>12/02</td>
<td>Chapter 9</td>
</tr>
<tr>
<td>12/04</td>
<td>Chapter 9</td>
</tr>
<tr>
<td>12/06</td>
<td><strong>Chapter 9 Objective due on ALEKS</strong> (12/08)</td>
</tr>
</tbody>
</table>

**Final Exam, Mon., December 9, 12:30-14:20**

**Note:** Dates marked in parentheses are the actual due dates.

**Disclaimer:** As the instructor of this course, I reserve the right to change the tentative schedule of topics, number and length of examinations, point distribution, course requirements, and percentages required for letter grades in order to better facilitate the learning process.
**Text Homework:**

*For each chapter you should complete the “Practice Exercise” and “Concept Exercise” problems*

Chapter 1: End of Chapter Problems: Key terms, Exercises 1-16 and Self Test.

PSS: End of Chapter Problems: Key terms, Exercises 1-54 and Self Test.

Chapter 2: End of Chapter Problems: Key terms, Exercises 1-66, 73-96 and Self Test.

Chapter 3: End of Chapter Problems: Key terms, Exercises 1-58, 79, 81, 83, 87, 91 and Self Test.

Chapter 4: End of Chapter Problems: Key terms, Exercises 1-96 and Self Test.

Chapter 5: End of Chapter Problems: Key terms, Exercises 1-92 and Self Test.

Chapter 6: End of Chapter Problems: Key terms, Exercises 1-78 and Self Test.

Chapter 7: End of Chapter Problems: Key terms, Exercises 1-20, 25, 27, 29, 37, 39, 43, 45, 71, 75, 79, 81, 83, 85 and Self Test.

Chapter 8: End of Chapter Problems: Key terms, Exercises 1-81 and Self Test.

Chapter 9: End of Chapter Problems: Key terms, Exercises 1-90 and Self Test.