

## C104 (Chemistry II) Syllabus - SPRING 2011

**Lecturer:** Dr. Jeff Ashley  
Room 304, Search Hall  
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**Office Hours:** Mondays from 11:30 am to 12:30 pm  
Tuesdays from 2:30 pm to 3:30 pm  
Thursday from 12:00 pm to 1:00 pm

ALL office hours held in **Hayward 201**

**Course Information:** <http://faculty.philau.edu/ashleyj>

**Homework Website:** <http://www.masteringchemistry.com/site>

**Required Text:**

Nivaldo J. Tro's Principles of Chemistry: A Molecular Approach (2010)

NOTE: You may use: Nivaldo J. Tro's Chemistry: A Molecular Approach (2008)

**Objectives of Lecture:**

- 1. To provide you with an overview of the fundamental laws and theories of chemistry including chemical reactions, solution chemistry, acid and base chemistry, reaction kinetics, and thermochemistry.*
- 2. To give you a sense of the importance and understanding of chemistry in our everyday lives.*
- 3. To continue to develop your problem solving skills.*

**Tentative Lecture Schedule**

<b>Week</b>	<b>Date</b>	<b>Chapter in Text</b>	<b>Lecture Topic</b>	<b>CHEM 104 L Lab Experiment</b>
1	Jan 12 Jan 14	Chapter 10	Chemical Bonding II: Molecular Shapes & Valence Bond Theory	No Lab
2	Jan 17 - No Class Jan 19 Jan 20	Chapter 10	Chemical Bonding II: Molecular Shapes & Valence Bond Theory	No Lab
3	Jan 24 Jan 26 Jan 28	Chapter 11	Liquids, Solids, and Intermolecular Forces	Molecular Geometry
4	Jan 31 Feb 2 Feb 4	Chapter 11	Liquids, Solids, and Intermolecular Forces	Vapor Pressure of Liquids
5	Feb 7 Feb 9 Feb 11	Chapter 12	Solutions	The Effect of Concentration

6	<b>Feb 14 (TEST 1 – Chapters 10 &amp; 11)</b> Feb 16 Feb 18	Chapter 12	Solutions	Using Freezing Point Depression to Find Molecular Weight
7	Feb 21 Feb 23 Feb 25	Chapter 13	Chemical Kinetics	Computer Exercise on Kinetics
8	Feb 28 Mar 2 Mar 4	Chapter 13	Chemical Kinetics	Rate Law Determination of the Crystal Violet Reaction
9	Mar 7 Mar 9 <b>Mar 11 (TEST 2 – Chapters 12 &amp; 13)</b>	Chapter 14	Chemical Equilibrium	Back and Fourth: Reversible Processes and Equilibrium
	<b>Mar 14</b> <b>Mar 16</b> <b>Mar 18</b>	Spring Break		No Labs
10	Mar 21 Mar 23 Mar 25	Chapter 14	Chemical Equilibrium	Chemical Equilibrium: Finding a Constant K <sub>c</sub>
11	Mar 28 Mar 30 Apr 1	Chapter 15	Acids and Bases	Conveying Scientific Results: The Poster Presentation
12	Apr 4 Apr 6 Apr 8	Chapter 15	Acids and Bases	Acid Dissociation Constant
13	Apr 11 Apr 13 Apr 15	Chapter 16	Aqueous Ionic Equilibrium	Investigation of Buffer Systems
14	Apr 18 Apr 20 <b>Apr 22 (TEST 3 – Chapters 14 to 16)</b>	Chapter 16	Aqueous Ionic Equilibrium	Poster Presentations
15	Apr 25 Apr 27 Apr 29	Chapter 17	Free Energy and Thermodynamics	Check Out + Final Exam

**Mini-Quizzes:** There will be frequent short quizzes (1 to 5 questions) during the semester (in-class). The quizzes will be focused on recently introduced topics and are intended to prepare students for upcoming tests. **Bring a calculator and your periodic chart to each quiz.**

**Tests:** There will be three tests. The tests will emphasize problem-solving skills. **Bring a calculator and your periodic chart to each test.**

**Final Exam:** The final exam will be cumulative and scheduled during exam week. **Bring a calculator and your periodic chart to the final exam. Students scoring over an average of 90% on the three tests may be exempt from the final exam.**

**Homework:** There will be homework problems assigned from each chapter (primarily from MasteringChemistry.com). These homework problems will be graded (either for completeness or correctness, or both). There will occasionally be additional worksheets designed to focus on a specific topic.

**Grading:** Three In Class Test (non-cumulative; 15 points each)  
Periodic Quizzes (non-cumulative; 15 points total)  
Final Exam (cumulative; 25 points)  
Homework Assignments (15 points)

**Your final letter grade will be based on the following percent distributions:**

<i>Letter Grade</i>	<i>Corresponding % Range</i>	<i>Letter Grade</i>	<i>Corresponding % Range</i>
A	94-100%	C+	77-79%
A-	90-93%	C	74-76%
B+	87-89%	C-	70-73%
B	84-86%	D+	60-69%
B-	80-83%	D	50-59%
		F	<50%

**Course Policies:**

If you miss a test or quiz due to an excused absence, your remaining grades will be averaged for your final grade (**NO MAKE-UP EXAMS ARE GIVEN**). If your absence is not excused, you will receive a grade of zero for that test or quiz.

Assignments that are turned in late will not be accepted unless prior arrangements have been made with the instructor. No extra credit assignments will be made. **Therefore, to do well in this course, you must keep up with the lecture material, reading, and any assignments. The only way to learn chemistry is to do it...and keep doing it!**

**Attendance is mandatory in lecture and in lab. Missing classes will affect your grade in two ways:**

**1) Missed classes EQUATE to missed material. Time and time again, I've seen that this relates to a poorer understanding of key concepts (and ultimately will decrease your chance of success on quizzes and tests), and**

**2) Penalties for missed classes will begin on your fourth unexcused (non-medical) absence. For every unexcused absence (beyond the three 'grace' classes), your grade will decrease by 2 points (that's 2% each missed class). Miss five classes, and you've already decreased your grade by one letter!**

### **Student Code of Conduct:**

The Faculty of Philadelphia University take academic integrity seriously. Instances of academic dishonesty will not be tolerated, and students violating the University's academic integrity policy will be subject to appropriate sanctions. Plagiarism on any written assignments will not be tolerated. You may turn in only your own work for writing and homework assignments (unless I inform you otherwise), and any references that you use must be fully documented (using MLA format). As well, cheating on tests, final exams or quizzes will not be tolerated. Once again, please familiarize yourself with the **Student Code of Conduct** as it appears in the **Student Handbook for Philadelphia University**.

### **Gutman Library** ([www.philau.edu/library](http://www.philau.edu/library))

The home page of the Gutman Library provides students with a variety of information resources, including databases and research guides. Librarians are available online and in person at the information desk to help students with research.

### **The Learning and Advising Center** ( [www.philau.edu/learning](http://www.philau.edu/learning))

The Learning and Advising Center provides one-on-one tutoring assistance for writing, study strategies, and test taking. To make a tutoring appointment, students should stop by the Learning and Advising Center in Haggar Hall or call (215) 951-2799. Academic resources, including information on citation and documentation, note taking, and study strategies are available on the Center's website.

### **Technology assistance** (<http://www.philau.edu/OIT/>)

For assistance with technology issues, students should contact the Technology Help Desk at (215) 951-4648 or send an email to [helpdesk@philau.edu](mailto:helpdesk@philau.edu). General purpose computing facilities are available in Search Hall and Gutman Library.