

Temple University  
Chemistry: A Study of Matter (C051)  
Fall 2005

**Tuesday and Thursday Scheduled class time PE 110 6:30-8:30 PM**

1. Course Instructor Information: Dr. Alexandra Hilosky ([alehil@rcn.com](mailto:alehil@rcn.com)) Please call after 7 PM (610 644-5371) Office hours and location: PE 110 after class (8:30 PM T, H or TBA). Please call or email for an appointment.
  2. Course Description: This is the first of a two semester chemistry course for non-science major. The course includes demonstrations and hands-on activities so that you will get the feel for science investigations using the scientific method. Class activities will help you understand the concepts discussed in the course. A major course emphasis is on real-world applications of chemistry concepts and theory as they relate to: art, photography, fibers, painting materials, nutrition, historic preservation, forensic, medicine, pharmaceuticals, chemical warfare, cosmetics, music and the environment.
  3. Required Reading Material: Chemistry for Changing Times, by Hill and Kolb. Prentice Hall. 7<sup>th</sup> or newest edition. Instructor will provide websites for MSDS information and electronic chemical encyclopedia. Other chemical dictionaries and journals are placed on reserve in the Tyler Library.
  4. Prerequisites: Basic knowledge of mathematics and internet searching skills.
  5. Course Objectives: At the completion of this course, you should:
    - a. Recall and use the scientific method/process
    - b. Define modern atomic theory
    - c. Discuss the use of isotopes in modern medicine and archaeology
    - d. Compare and contrast different types of chemical bonds and their relationship to common chemicals used in society.
    - e. Relate acids and bases to environmental problems
    - f. Define organic chemistry and relate its usefulness to the world in which we live.
    - g. Describe the historic perspective and connections of alchemy to modern day chemistry
    - h. Relate alchemy symbolism to aspects of art history and gender issues
    - i. Experience the excitement of the scientific process
    - j. Relate the connections of chemistry to other fields of study
    - k. Prepare basic laboratory reports
    - l. Investigate chemistry literature
    - m. Use MSDS sheets for health and safety information
1. Course activities;
    - a. Teaching techniques include lecture, demonstrations, problem-solving, Socratic questioning, discussion/debates, and Inquiry/discovery laboratory activities, classroom assessment techniques and instructor/peer/self-evaluations will be used.
    - b. Outside class work. Library research and community project. Blackboard for course information

- c. Special instructional materials including slide presentation, films, case studies and computer simulations will be used.

1. Attendance Policy and Student Responsibilities:

- **You are expected to attend each session.** Please email me if you are unavoidably absent.
- You must be prepared for each session by reading the assigned material prior to each class.
- In class, you are expected to actively participate in discussion, debates, observations, data collection, feedback responses and sharing information.
- Please bring a #2 pencil and a calculator to each exam.
- Unacceptable or inappropriate behavior in class will not be tolerated. Among these are eating in class, cell phones and beeper use, etc.
- You must assume responsibility for your own learning progress by seeking assistance when you have questions or achieve less than a 75% on any exam.

8. Course Evaluation:

- **3 Exams** (one hour) including lab work/concepts. Please bring a #2 pencil (**65%**)
- 1 chemistry related (pre-approved) article presentation-due midterm (**5%**)
- Weekly group lab reports (**15%**) and class assignments-due each week (**5%**, including a **Element report/presentation (1% of the 5%) = total of (20%)**)
- Final course project due last day of class (**10%**). **Paper project = 5 pages, 12 point font, double spaced, referenced (at least 5 current, scholarly sources) and cited within the paper using APA formatting. Illustrations encouraged. OR Chemistry depiction Project, presented to the class with an statement, such as an artist's statement.**
- **No retests will be given. In case of an emergency, with proper notification and documentation, a test may be taken/made up, a within a week of the scheduled exam at the discretion of the instructor with a 5 point penalty. Students who miss the final exam and do not make alternative arrangements before Dec. 1 will be graded F.**

**9. Assignment Quality Expectations:**

All assignments must be word processed using 12 point font and double spacing. A cover sheet is also required with your name. All work must be cited and referenced with sources not older than 5 years unless you are using historical references.

All late assignments are subjected to 20% point reduction, in order to be fair to student who submitted on time.

Cheating/plagiarism will not be tolerated (Please review the University's policy). All papers will be submitted for plagiarism checks. Make sure you quote, cite and reference using APA format.

10. Disability disclosure statement:

Any student who has a need for accommodation based on the impact of a disability should contact me privately to discuss the specific situation as soon as possible. Please contact disability Resources and Services at 215-204-1280 in 100 Ritter Annex to coordinate reasonable accommodations for students with documented disabilities.

Tentative Schedule: C051 Chemistry: A Study of Matter

WEEK	ACTIVITY	CHAPTER DISCUSSION	EXAMS/MAJOR ASSIGNMENTS
1 8/30	1. The Scientific Process and Experimental Design	History of Chemistry Chapter 1 Alchemy slide presentation	Alchemy report and websites
2 9/8	2. PTE/Density	Chapter 2-3 atoms, atomic structure and the PTE	Lab 1 report due
3		Review	Lab 2 report due <b>Exam 1-Chapters 1-3 September 22</b>
4 9/27	3. $\frac{1}{2}$ life simulation/radioactivity	Chapter 4 Nuclear chemistry	<b>Element Report due My Dear Heisenberg Film response September 27</b>
5 10/4	4 Mega Absorbers		Lab3 report due Balancing worksheets
6 10/11	5. Molecular modeling and geometric shapes	Chapter 5 Chemical bonds	Lab 4 report due Nomenclature worksheets
7 10/24	6. Molarity		Lab 5 report due
8 10/31	7. Acid/base titration and buffers	Chapter 6 chemical accounting	<b>Article presentation due Nov. 3</b>
9 11/7			Lab 6 report due Final project proposal due <b>Exam 2 chapters 4-6</b>
10 11/14	8. Oxidation and reduction	Chapter 7 Acid/base	Lab 7 report due
11 11/22	9. Chromatograph	Chapter 8 Oxidation/reduction <b>Thanksgiving</b>	Lab 8 report due
12 11/29		Chapter 9 Organic chemistry	Lab 9 report due
13 12/6	10. Chemistry in a bag Endothermic/exothermic		
14 12/13		Interactive Review	Lab 10 report due Chemistry project/paper <b>Final exam Chapters 7-9</b>

