

Chemistry 11a

*General Chemistry Lecture
Brandeis University*

Syllabus, Summer 2009

Chemistry 11a Faculty:

Instructor:

Dr. Jason K. Pontrello (email: pontrell@brandeis.edu)
Office: Shapiro Science Center 00-08B (phone: 736-2545)

Course Description:

This course will provide students with an understanding of the principles and concepts underlying the molecular processes and macroscopic chemical changes of matter. Following an introduction to atoms and stoichiometry, students will be introduced to macroscopic properties of solids, liquids, and gases and the behavior of molecules in solution. A background of quantum theory and atomic structure will lead to an understanding of molecular bonding and structure, and states of matter and phase changes. The course will conclude with applications to organic and inorganic chemistry. This course will provide students with the full range of chemical topics desired when only a single semester of chemistry is adequate for their needs.

Class Times:

Lectures: Mon, Tues, Thurs, Fri, 9 – 11am.

Quizzes and exams will be given during lectures. The final exam is scheduled for Friday, July 3rd from 9-12pm.

Office Hours:

- Dr. Pontrello will hold office hours following each lecture (M, T, Th, F 11-12pm) or at other times by email appointment.

Required Materials:

- *Chemistry, A Molecular Approach* 1st Ed. by Tro, Pearson Prentice Hall, 2008. ISBN-10: 0131000659.

Course Handouts:

Any handouts will be distributed during class.

Credit and Grading:

Grades will be calculated as follows:

4 Quizzes	20%
2 Examinations	40%
Final Exam (cumulative)	40%

Course grades are determined based on the class average and student distributions.

Examinations:

- Exam 1 (June 15), Exam 2 (June 29), Final (July 3)
- Quizzes (June 5, 12, 19, 26)

No Makeups:

There are no makeups for quizzes or exams. If you arrive late, you must complete the quiz or exam within the time allotted. With a documented medical excuse, you will receive the average of the other 3 quizzes and/or 1 exam and the final.

Regrades:

Any regrades must be submitted in writing to Dr. Pontrello within 2 days after the graded document is returned. **Note: the entire document will be regraded.**

Homework:

Be sure you are reading the chapter as we cover it (and before). Questions at the end of the chapter will be suggested, but will not be collected/graded.

Student Disabilities:

If you are a student with a documented disability on record at Brandeis University, and if you wish to request a reasonable accommodation for this class, please see Dr. Pontrello immediately. Please keep in mind that reasonable accommodations are not provided retroactively.

Academic Integrity:

Each student in this course is expected to abide by the Brandeis University Student Development and Conduct Rights & Responsibilities. Any work submitted by a student in this course for academic credit will be the student's own work.

Course Schedule:

	Monday	Tuesday	Wednesday	Thursday	Friday	Tentative Topics
June	1 Lec	2 Lec	3	4 Lec	5 Quiz 1 Lec	Ch 1: Matter, Measurement, Problem Solving Ch 2: Atoms and Elements Ch 3: Molecules, Compounds, Equations Ch 4: Chemical Quantities, Aqueous Reactions
	8 Lec	9 Lec	10	11 Lec	12 Quiz 2 Lec	Ch 5: Gases Ch 6: Thermochemistry
	15 Exam 1 Lec	16 Lec	17	18 Lec	19 Quiz 3 Lec	Ch 11: Liquids, Solids, Intermolecular Forces Ch 12: Solutions
	22 Lec	23 Lec	24	25 Lec	26 Quiz 4 Lec	Ch 7: Quantum-Mechanical Model of the Atom Ch 8: Periodic Properties of the Elements Ch 9: Chemical Bonding I: Lewis Theory
July	29 Exam 2 Lec	30 Lec	1	2	3 Final 9-12pm	Ch 10: Chemical Bonding II: Molecular Shapes, Valence Bond Theory, and Molecular Orbital Theory