

Chemistry 11b

General Chemistry Lecture
Brandeis University

Syllabus, Summer 2009

Chemistry 11b Faculty:

Instructor:

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

Course Description:

This course is an extension of material presented in CHEM 11a. When taken in conjunction with CHEM 11a and associated laboratory courses CHEM 18a and b, it meets the general, analytic, and inorganic chemistry requirements of medical and dental schools. The course will address quantitative instruction of chemical equilibria applied to ionic equilibria of acid-base, metal ion and oxidation-reduction reactions followed by explanations of chemical kinetics and thermodynamics. Students will then learn about applications to electrochemistry, inorganic coordination compounds, and radioactivity and nuclear chemistry. The combination of the two summer sessions covers the same material presented in CHEM 11a and CHEM 11b to all science majors during the academic year.

Prerequisite: A satisfactory grade (C- or better) in CHEM 11a or the equivalent.

Class Times:

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

Quizzes and exams will be given during lectures. The final exam is scheduled for Friday, August 7th 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 (July 20), Exam 2 (August 3), Final (August 7)
- Quizzes (July 10, 17, 24, 31)

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
July	6	7	8	9	10	Ch 14: Chemical Equilibrium
	Lec	Lec		Lec	Quiz 1 Lec	Ch 15: Acids and Bases
	13	14	15	16	17	Ch 16: Aqueous Ionic Equilibrium
	Lec	Lec		Lec	Quiz 2 Lec	Ch 13: Chemical Kinetics
	20	21	22	23	24	Ch 17: Free Energy and Thermodynamics
	Exam 1 Lec	Lec		Lec	Quiz 3 Lec	
	27	28	29	30	31	Ch 18: Electrochemistry
	Lec	Lec		Lec	Quiz 4 Lec	Ch 24: Transition Metals and Coordination Compounds
Aug	3	4	5	6	7	Ch 19: Radioactivity and Nuclear Chemistry
	Exam 2 Lec	Lec			Final 9-12pm	