

Syllabus

Chemistry 11A, General Chemistry, Summer 2017

Instructor: Dr. Kal Banger

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Office: SSC 3-13

Office hours: M & Th 11-12

Lectures: Monday, Tuesday, Thursday, and Friday
8:30-10:50 AM

Course description:

Chemistry 11A covers a wide array of topics, embracing aspects of descriptive, as well as quantitative chemistry. No prior study of chemistry is assumed as the course begins by looking at the atomic foundation of matter, the elements, and the organization of the Periodic Table, working its way up to an examination of how atoms are bonded together to form larger units of matter. Students who complete this course will have an understanding of the three major phases of matter—solids, liquids, and gases—and how they behave, as well as a knowledge of the major types of chemical reactions and how to represent them. A strong focus is placed on pedagogical learning approach encompassing interactive *problem-solving*—using the material as a way to develop creative approaches to solving unfamiliar problems—cooperative learning a skill that carries students far beyond the confines of the classroom.

Textbook:

Tro, Nivaldo J. Chemistry, A Molecular Approach. Pearson Prentice Hall, 3rd ed. (2013), ISBN-13: 978-0134112831 or 4th ed. ISBN-13 978-0321804716 (2016)

To make the most of each lecture, it is essential that you keep up with the readings and work through the sample problems in the text as you go along.

LATTE:

LATTE is the Brandeis on-line course website. This resource may be used for class notes and can be accessed via <http://latte.brandeis.edu>. Log in using your UNET ID and password.

Attendance:

Attendance at all lectures **is expected** in order to keep up with the material and obtain a better understanding of the associated lab Chem18A.

Problem Sets:

Problems are assigned to go along with the reading for each chapter of the book. Problem sets will not be graded, but will be selected to help you learn the material effectively.

Quizzes: 5 quizzes (Best 4 used in final grade)

Exams: 2 Exams, plus 1 Final exam (3 Tests in total)

Calculators:

You must have a calculator for exams and quizzes. Cell phone calculators will **not** be permitted under *any* circumstances.

Make-ups:

There are no make-ups for quizzes or exams. With a *documented medical note*, your final grade will be based on the average of the quizzes and exams taken. If you arrive late you will have only the remaining portion of the allotted time to finish the quiz or exam.

Students entitled to accommodations:

If you are entitled to extra time, or other accommodations, please provide official documentation **at the beginning of the session**. **No accommodations can be made retroactively.**

Grading:

Grades will be weighted as follows:

In-class participation and problem-solving	10%
4 Quizzes	20%
2 Exams	35%
Final exam	35%

The average grade in Chem. 11A is generally around *B-*. Letter-grade equivalences to numerical scores are usually determined based on the class average and the distribution of scores.

Performing well in the course is not a competition with your fellow students. The following table provides guaranteed letter-grade equivalences for any student whose performance falls within a specified range.

Percentage of Total (after weighted average is taken)	Grade range
85-100 %	A ⁻ —A ⁺
70-84 %	B ⁻ —B ⁺
60-69 %	C ⁻ —C ⁺
50-59 %	D ⁻ —D ⁺
< 50 %	F

Any “curve” can only help, it cannot hurt, your grade. For example, if the average final score is 62%, that score will be set as the *B-* and all other grades will be adjusted around that average. On the other hand, if the class average is 82%, that does *not* mean that 82% is now equivalent to a *B-*. Rather, it means that the average grade earned in the class would be *B+*.

Academic honesty:

Academic integrity is central to the mission of educational excellence at Brandeis University. Violations of University policies on academic integrity, described in Section Three of *Rights and Responsibilities*, will not be tolerated and may result in a

failing grade in the course or on the quiz or exam in question. A repeat offense may result in suspension or dismissal from the University.

Provisional Schedule:

Subject to adjustment and will be dependent somewhat on student response.

	Monday	Tuesday	Wednesday	Thursday	Friday	
June	5 Chapter 1 <i>Matter and Measurement</i>	6 Chapter 2 <i>Atoms and Elements</i>	7	8 Chapter 3 <i>Molecules, Compounds</i>	9 Quiz 1 Chapter 3 <i>Molecules, compounds</i>	Quiz 5: HW
	12 Chapter 4 <i>Stoichiometry, aqueous rxns</i>	13 Chapter 4 <i>Stoichiometry, aqueous rxns</i>	14	15 Chapter 5 <i>Gases</i>	16 Quiz 2 Chapter 5 <i>Gases</i>	
	19 Exam 1 Chapter 6 <i>Thermo-chemistry</i>	20 Chapter 6 <i>Thermo-chemistry</i>	21	22 Chapter 11 <i>Liquids, IM Forces</i>	23 Quiz 3 Chapter 11 <i>IM Forces</i>	
	26 Chapter 12 <i>Solutions</i>	27 Chapter 12 <i>Solutions</i>	28	29 Chapter 7 <i>Quantum Mechanical Model</i>	30 Quiz 4 Chapter 7 <i>QM Model</i>	
	3 Exam 2 Chapter 8 <i>Periodic Properties</i>	4 No Class	5 Chapter 8 <i>Periodic Properties</i>	6 Final exam 9:00-12:00	7	

Key Links:

<http://www.brandeis.edu/summer/calendars/Exam%20Schedule/Exam%20Schedule%202017.html>

<http://www.brandeis.edu/summer/calendars/Academic%20Calendar%202017/Academic%20Calendar%2020172.html>