KAP CHEMISTRY REFERENCE SHEET

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KAP = Kenyon Academic Partnership:

Kenyon Lecture Course:	Chemistry 121, 123 (½ unit credit/lecture)
Kenyon Lab Course:	Chemistry 122, 124 (¼ unit credit/lab)
KAP & Transcript Information:	KAPhelp.org

Class format:

KAP chemistry is a course that covers many of the fundamental concepts and basic principles that are common to the different fields in chemistry. We will explore chemical reactivity and bonding through the development of the modern theory of quantum mechanics as it relates to the electron and through more in-depth examinations of chemistry applications such as the field of electrochemistry.

The class meets nine times for each eight-day rotation. Two of these days each cycle are lab periods which last 90 minutes. Class time is spent discussing new material, problem solving, and discussing lab results. Lab periods are used for completing labs relevant to the content and completing analysis of data.

Textbook and Lab Manuals:

Chemistry, 10th Edition, Chang
Kenyon College / Chemistry 113,114 Introductory Chemistry Laboratory
Laboratory Investigations / AP Chemistry*, Hostage, Fossett

The textbook and lab manuals are available through the US virtual bookstore. Clearly label your books with your name in ink and be sure to store them in a safe place. It is expected that you will have the required books in your possession no later than Monday, August 30th.

Additional Materials:

- Scientific calculator
- Notebook & binder for notes & organization of papers
- Lab goggles (Available at the US Bookstore)

Grading:

Tests & quizzes	50%
Labs	30%
Final Exam	20%

Lab days:

EX & B days

Basic Information & Responsibilities:

- KAP Chemistry is a college course. You will get college credit, which may or may not be transferable, from Kenyon College.
- Attendance is required and will be taken each day. It is your responsibility to tell me when you are not going to be here (anticipated absences)
- When absent, it is your responsibility to get the notes, to turn in any collected assignments, and make arrangements to make up lab work or tests.
- Students are provided with a syllabus every two weeks. This syllabus is also posted on the US website and is accessible to each student in the class anywhere they have access to the internet. All assignments (reading and written) are required and expected to be completed on time. Class time will be used to clarify and apply concepts from the reading.
- Extra help is available through individual appointments and scheduled problem solving sessions. Problem solving sessions will be offered before school and during lunch. Days and times will be announced at the beginning of each interim.
- The lab is an essential part of the class. It is 30% of your US grade and it is a separate Kenyon grade. 25% of each lab grade is doing the lab. Makeup for missed lab work is difficult to arrange. If you are not here to do the lab work and a makeup time cannot be arranged the highest grade you can get for that particular lab is a C+.
- Four tests are scheduled for each semester. All the tests together are 50% of you grade. Each test will have multiple choice questions and problems. Each test is not necessarily weighed the same. Please let me know well in advance if you are going to be absent from a test.

Tests and exams:

The table below provides the tentative test schedule for both semesters. In an effort to encourage timely preparation for tests, questions will not be answered by any of the chemistry teachers on test days once the school day has begun.

A semester exam is given in January. Students will be tested on material from the whole semester. The final exam is given in late April before the start of Senior Projects. The exam covers topics from throughout the school year.

Semester 1:	**Semester 2:**
Test 1: September 16	Test 1: February 2
Test 2: October 20	Test 2: March 4
Test 3: November 23	Test 3: April 13
Test 4: December 15	Final Exam: April 28

Tentative Schedule Semester One:

Chapters 1-3	Intro & review of basics
Chapter 4	Overview of reaction types
Chapter 5	Gases
Chapter 6	Thermochemistry
Chapters 7-8	Quantum Theory & Periodic Relationships
Chapter 24	Organic
Chapters 9-10	Bonding & Molecular Orbital Theory
Chapter 11	Liquids & Solids
Chapter 12	Solutions

Tentative Schedule Semester Two:

Chapter 13	Kinetics
Chapter 14	Chemical Equilibrium
Chapter 15	Acids and Bases
Chapter 16	Acid-Base Equilibria
Chapter 18	Entropy, Free Energy, and Equilibrium
Chapter 19	Electrochemistry
Chapter 22	Coordination Compounds

Tentative Lab Schedule:

Lab number	Description
1	Double and single displacement reactions
2	Alum Synthesis
3	Alum analysis
4	Analysis of antacid
5	Redox Analysis
6	IR Spectroscopy
7	NMR Spectroscopy
8	Dye Lab
9	Kinetics: Differential and Integrated Rate Laws
10	Determination of Acid Ionization Constant of a Weak Acid
11	Determination of a Equilibrium Constant of an Indicator
12	Finding the Mass Percent of Acetic Acid in Vinegar
13	Determining the Solubility Product of Calcium Hydroxide
14	Electrochemistry