

CCS AP CHEMISTRY 2010-2011

Course Description

AP Chemistry is a rigorous course which covers first-year college general chemistry. The goal of the course is to prepare students for the AP Chemistry exam in May. Classes will meet for four 50-minute periods each week and one 90-minute block period every other week. Regular class periods will consist of lecture and problem-solving sessions; block period classes will be spent in laboratory work.

Course content includes stoichiometry, the periodic table, each of the states of matter, atomic bonding, acids, bases and equilibria, solutions, electrochemistry, the elements, and an introduction to nuclear chemistry, organic chemistry and biochemistry. These topics will be covered both conceptually and mathematically. Strong math and problem-solving skills are necessary for success in this course.

Laboratory work is meant to supplement and complement the concepts learned in class and provide context for calculations. Weekend lab days may be necessary during the year to complete the lab requirement. Laboratory work is done in pairs, but all lab reports must be individually done and written in a lab notebook with carbon copies. Students are responsible for their own data collection, observations, calculations, and conclusions.

Instructor Information

Mr. Daniel Kim
Email: danielkim@ccs-rams.org
Office Hours: By appointment

Required Textbooks

Zumdahl, Steven S., Zumdahl, Susan A. *Chemistry: Seventh Edition*. Houghton Mifflin Company © 2007 (Student or Instructor Edition acceptable) ISBN-10: 061852844X or ISBN-13: 978-0618528448

Hague Jr., George R., Smith, Jane D. *The Ultimate Chemical Equations Handbook: Student Edition*. Flinn Scientific, Inc. © 2001 (purchase from school)

Lab notebook, at least 100 pages, must have yellow carbon copies, spiral bound ISBN-10: 1930882742 or ISBN-13: 978-1930882744

AP Chemistry Lab Manual and Class Notes (purchase from school) – additional materials may be provided by the instructor in order to supplement the current lab manual.

Materials

- 3-ring binder (may be shared with another class) with dividers
- Spiral notebook (chemistry only)
- 8 ½" x 11" loose-leaf binder paper (college-ruled)
- Writing utensils: pencils (mechanical), pens (blue/black and green ink), eraser and/or white-out
- ANSI Z87.1 Chem-Splash goggles (purchase from school)
- Lab coat
- Chemical-safe gloves (neoprene or nitrile)
- Scientific calculator (TI-30XI highly recommended, TI-82 through TI-84 programmable calculators will be allowed although all calculator memory must be wiped prior to each exam)

Grading

Quarter grades:
35% Labs (written lab reports and lab conduct)

35% Exams (quizzes, chapter tests and midterm)

30% Other (homework, in-class assignments, notes, class attendance/participation)

Semester grades:

First Quarter: 45%

Second Quarter: 45%

Final Exam: 10%

<u>Percentage</u>	<u>Grade</u>	<u>Percentage</u>	<u>Grade</u>
97-100%	A+	77-79%	C+
93-96%	A	73-76%	C
90-92%	A-	70-72%	C-
87-89%	B+	67-69%	D+
83-86%	B	63-66%	D
80-82%	B-	60-62%	D-
		50-59%	F

Class Administration

1) *Rules:*

- i. Do not do anything that prevents other students from learning.
- ii. Do respect others, the facilities, and yourself.

2) *Disciplinary Policy:*

- First Violation: Student warned verbally
- Second Violation: Additional work at lunch
- Third Violation: Additional work at and call home
- Fourth Violation: Disciplinary referral to administration

3) *Attendance:* Attendance is required. Students must be in their seat and appropriately prepared for class when the bell rings and remain on task for the entire class period. If a student is absent (even excused), tardy, leaves early, fails to stay on task, or is unprepared, no attendance points will be given for that day. In the case of an absence, it is the student's responsibility to get notes and/or make up assignments. Make up tests will be given three days after an excused absence.

4) *Homework:* There will be homework assigned every week, consisting of reading, book problems, and/or hand-outs. Work must be shown neatly and turned in at the beginning of class in order to get full credit for the assignment; any work turned in after class begins will be considered late. Homework must be done on 8 ½" x 11" loose-leaf binder paper.

5) *Late/Missing Assignments:* Students are responsible for keeping track of due dates on their own. Any late work will then be docked 10% (one letter grade down) for every day that it is overdue. Three or more missing assignments will result in a call home.

6) *Binder/Notebook:* Students will take notes in the AP Chemistry lab manual and class notes book. A binder should be used to organize all handouts (there will be lots of them!) and returned work. Notes and binder organization will be checked and graded periodically.

7) *Participation:* All students are expected to be involved in discussions and activities, ask questions, and otherwise contribute to the class. This includes bringing the required materials (e.g. textbook, writing utensils, calculator) and being ready to learn at the start of each class. During problem-solving sessions in class, students should work quietly unless directed to collaborate.

8) *Labs:* There will be at least one lab experiment almost every week. Written lab reports will be due on the day of the following lab unless otherwise stated. All labs will be done in pairs unless

otherwise stated; however, all lab reports must be done individually. **All students are expected to adhere to SAFETY rules for lab.** The first minor violation will result in a verbal warning. The second minor violation will require the student to give up three lunch periods to study lab safety. The third minor violation will result in the loss of all lab privileges for the following lab, and immediate 10% retraction of the grade for the current lab. Any major violation will result in immediate ejection from the lab and loss of all lab privileges for the following lab, and immediate 30% retraction of the grade for the current lab.

- 9) *Exams:* For every major unit, there will be a test covering only those chapters. There will also be one midterm and one final given each semester; these are cumulative (midterms cover the entire quarter and finals cover the entire semester). All tests will be announced at least three days before. Unannounced quizzes on reading will also be given to gauge comprehension and to give you an idea of what kinds of questions will be on the tests.

Chemistry Study Groups

Studying chemistry in groups helps you to learn better! While you should definitely not copy from your classmates, it is often beneficial to have people you can consult about problem-solving strategies. Make sure you get the phone numbers or screen names of a couple of people in your class. Help each other out. Get together before tests. Just remember that there are no group exams.

Course Outline

Summer:	Unit 1: Calculations and Uncertainty Unit 2: Atoms, Ions, and Nomenclature
August:	Unit 3: Stoichiometry
September:	Topic 3: Stoichiometry Topic 4: Qualitative and Quantitative Chemistry
October:	Topic 4: Qualitative and Quantitative Chemistry Topic 5: Gases
November:	Topic 6: Thermochemistry Topic 7: Atomic Structure & Periodicity Topic 8: Bonding
December:	Topic 8: Bonding Topic 9: Phases of Matter
January:	Topic 10: Properties of Solutions Topic 11: Chemical Thermodynamics
February:	Topic 11: Chemical Thermodynamics Topic 12: Chemical Kinetics
March:	Topic 13: Chemical Equilibria
April:	Topic 14: Acids & Bases Topic 15/16: Electrochemistry/Nuclear Chemistry Review
May:	Review Other topics in chemistry

Missing Assignment Form

Completing assignments on time is YOUR RESPONSIBILITY as a student.

Name: _____

Date: _____ Class: _____

Missing Assignment Type/Name (e.g. Lab #5 – Flame Tests):

I do not have my assignment today because:

- I did the assignment, but forgot to bring it to class
- I chose not to do the assignment
- I forgot to do the assignment
- I did not have the appropriate materials (text, notes, lab book, etc.)
- I did not understand the assignment.
- Other – please explain below:

I plan to:

- Complete the assignment by the next class meeting for a 90% maximum.
- Complete the assignment by _____, with the understanding that a failure to turn in the assignment before it is returned to the class will result in a 70% maximum.
- Not complete the assignment at all, resulting in a 25% maximum.
- See Mrs. Carlson during lunchtime or after school to get help completing it. I understand that there is no point penalty associated with this option.
- Other – please explain below:

Signature: _____

August 02, 2010

Dear CCS AP Chemistry Parent,

I'm looking forward to teaching your child chemistry this year! I hope that this will be an enjoyable learning experience for both your child and you – ask your child about what he is learning once in a while! While the labs and dramatic demos will be exciting, college-level chemistry is a challenging subject for many students. Please do not be alarmed if your child struggles initially. I will be happy to go over any concepts or math with your child outside of class time.

Students will be required to turn in homework in class.

You can keep track of your child's overall grades by checking Powerschool.

I will be scheduling review and lab sessions throughout the school year to further prepare your child for the AP exam. Each will be several hours long and take place after school or on Saturdays. These sessions will happen more frequently as the date of the exam, May 2, 2011, draws nearer. While they are not required, it is highly recommended that your child attend these sessions.

Please do not hesitate to contact me if you have any questions or concerns. I can be reached most easily by email, at danielkim@ccs-rams.org. Best wishes to you for a pleasant, successful and rewarding year.

Sincerely,

Daniel Kim
AP Chemistry Instructor

(please return to Mr. Kim as soon as possible)

I have read the syllabus for CCS AP Chemistry 2010-2011.

The best way to contact me is by:

Email: _____

Phone: (_____) _____ - _____

Student's Name (please print)

Parent's Name (please print)

Parent's Signature