

## Advanced Placement Chemistry

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**Course description:** This Advanced Placement Chemistry course is designed to be the equivalent of the General Chemistry course taken during the first year of college. For most students, the course enables them to undertake second year work in the chemistry sequences at their institution or to register in courses in other fields where General Chemistry is a prerequisite.

This course is structured around the six big ideas articulated in the AP Chemistry curriculum framework provided by the College Board. A special emphasis will be placed on the seven science practices, which capture the important aspects of the work that scientists engage in, with learning objectives that combine content with inquiry and reasoning skills. AP Chemistry is open to all students that have completed a year of Chemistry, Biology and Algebra II/Math III who wish to take part in a rigorous and academically challenging course.

### **The Six Big Ideas are as follows:**

1. The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.
2. Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions or molecules and the forces between them.
3. Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.
4. Rates of chemical reactions are determined by details of the molecular collisions.
5. The Laws of Thermodynamics describe the essential role of energy and explain and predict the direction of changes in matter.
6. Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations.

### **The Seven Science Practices are as follows:**

1. The student can use representations and models to communicate scientific phenomena and solve scientific problems.
2. The student can use mathematics appropriately.
3. The student can engage in scientific questioning to extend thinking or to guide investigations within the context of the AP course.
4. The student can plan and implement data collection strategies in relation to a particular scientific question.
5. The student can perform data analysis and evaluation of evidence.
6. The student can work with scientific explanations and theories.
7. The student is able to connect and relate knowledge across various scales, concepts, and representations in and across domains.

**Textbook:** McGraw-Hill Chemistry: AP Edition, Update (2013) New York, NY: The McGraw-Hill Companies, Inc.

**Required Materials:** 3 subject notebook (can be larger than a 3 subject if you write BIG!), 1 composition notebook, glue stick/tape, plenty of pens and pencils, folder, calculator (scientific)

**Technology:** Students will be expected to maintain a Castle Learning account and a Gaggles account for the duration of the course for electronic assignments and submissions (see **Additional Policies and Procedures** for more details).

### **Class Expectations:**

In order to maximize our learning and have fun, we must adhere to the following expectations:

1. Come to class prepared with materials and on time.
2. Be prepared to work together.
3. Use only professionally-appropriate language in the classroom.
4. Stay seated and on task during instruction.
5. Keep all food, drinks, electronics and hats away during class time.

I also expect that:

Students will adhere to all school rules. See Student Rights and Responsibilities Handbook.

Students will follow all laboratory safety guidelines. For your son/daughter to participate in labs, both student and parent must sign a laboratory safety contract.

**Class Consequences:** Because expectations are in place to promote a safe and friendly learning environment, students will receive a consequence if they do not adhere to the expectations. Consequences will be given in the following order

1. Verbal Warning
  2. Depending on the severity of the student's behavior offense:
    - phone call home
    - Parent/Teacher/Student conference
- removal from class (student will either be relocated to another teacher's class to work in isolation, or will be written a referral to the office.)

### **Grading Criteria:**

All work will be graded on the following scale:

A	93 - 100%
B	85 - 92%
C	77 - 84%
D	70 - 76%
F	Below 70%

### **Grading Scale (School Wide):**

Assessments/Projects/Lab Reports: 70%

Classwork/Participation: 15%

Homework: 15%

**Mid-Term Exam: 20% of Mid-Term Grade!**

**Final Exam: 25% of your Final Grade!**

**Projects/Lab Reports:** Research and communication are a large part of the AP Chemistry course curriculum. In order for students to get college credit for the laboratory portion of Chemistry I, students must maintain a college-grade lab notebook for each laboratory performed in class. Students will be expected to complete experiments and create lab reports on a regular basis (at LEAST 16 for the year, accounting for 25% of instructional time). These lab reports will be graded completely and will focus on data acquisition, analysis, and conclusions.

The inquiry portion of this course will require students to review other scientific research, design specific portions of experiments, analyze data and create their own procedures to test scientific problems. Students will also be expected to create visual and oral presentations to demonstrate their understanding of the scientific method and scientific concepts.

### **Classwork:**

Students should keep all class materials organized in a 3-subject notebook. One section of this notebook will be used for vocabulary/notes while the others will be for homework and classwork.\*\*

Students will be required to complete a 5 minute "warm-up" at the start of each class. The warm-up is meant to review material from previous lessons and should be answered in complete sentences. This will be collected and graded on a weekly basis.

\*\*AVID students may elect to participate in the notebook system and keep their notebook in a page protector in their AVID binder OR they may participate in an organization system approved by me AND their AVID teacher.

**Homework:** Homework will be assigned on a regular basis and will be graded based on completion.

**Additional Policies and Procedures:**

**Class Attendance Policy:** Attendance is mandatory. If you are absent, the CMS Attendance policy states that any student who has missed more than 10 days will fail the course unless he/she makes up the absence by attending after-school tutorials to make up time and missed assignments.

**Makeup Work Policy:**

All students have the ability to make up any missed work due to an absence. Missing homework will not count for a student if he/she is absent the day it is assigned or due. Students may print missed assignments in the library from the class website or take any extra copies from the absentee binder if there are any.

All make up work is due to the student's respective teacher within 5 school days of their absence!\* If an assignment is not completed and turned in to their teacher, those missed assignments turn into a zero.

**\*If a student is absent on the day of an exam, he/she will be expected to make it up during class time the day he/she returns.** Exceptions will be made for students who have been absent for 3 or more consecutive days.

**Late homework will not be accepted.** An extensive late homework assignment will be offered at the end of the quarter for those who failed to complete homework on a timely basis.

**Tardy:** If a student is late to class without an official pass from faculty/staff member, he/she will be required to document that tardy in the tardy log. In accordance to West Mecklenburg High School's tardy policy, any student who is late 4 times will receive a referral. Further action will be handled by an administrator.

**Restroom Policy:** Students will not be allowed to use the bathroom during class time.\* Students should use the bathroom between classes or during their lunch break. If necessary, they should utilize a tardy pass prior to coming to class.

\*Exceptions will be made for students who provide prior documentation from a doctor/physician.

**Technology:** Students will be expected to maintain an account on castlelearning.com and Gaggles! Both of these learning sites are secure and have been approved/paid for by CMS or West Mecklenburg High School. Throughout the semester, students will be expected to complete assignments and submit projects through these websites. If a student does not have access to the computer/Internet at home, they have access to the school's Media Center after school or during lunch. With prior arrangements, students are also welcome to use the classroom computers after school.

**After-School Tutorials:** Tutorials will be offered after school on Tuesdays and Thursdays from 2:30-3:30 pm if students need extra help and can be set up with the teacher on an individual or group basis.

**How to Contact Me:** I look forward to working with you throughout the semester. Please feel free to contact me at ANY time with any questions/concerns you have.

**Parent Conferences:** Parent conferences can be scheduled by contacting the teacher and/or guidance counselor.

**Class website:** <http://macekchemistry.weebly.com/>

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**Phone:** 980-343-6080

**Join our class listserv by checking YES on the parent survey and stay updated on upcoming assignments/due dates!**