

AP Chemistry

Guidelines and Expectations

The Bromfield School
2016-2017 Academic Year

AP Chemistry is an in-depth, fast-paced second-year chemistry course for advanced science-oriented students. The course will provide students with a thorough grounding in chemical principles and quantitative reasoning, with an intensive and necessary laboratory component. The workload is equivalent to a first-year college introductory chemistry course, with an emphasis on inorganic chemistry. The laboratory program will require an extra time commitment. Self-motivated, independent learners who have demonstrated strong abilities in previous science and math courses are encouraged to take this rigorous, but rewarding course. All students enrolled in this course are prepared for and expected to take the AP examination in May.

Textbook: Chemistry—The Central Science (11th edition) by Brown, LeMay and Bursten
Instructor: Dr. Vanderveen

Program of Study and Proposed Timetable:

1. Matter, Measurement, and Nomenclature—Summer Work
2. Stoichiometry—6 days, plus summer work
3. Aqueous Reactions and Solution Stoichiometry—10 days
4. Thermochemistry—5 days
5. Gases—7 days
6. Chemical Kinetics—10 days
7. Chemical Equilibrium—12 days
8. Acid-Base Equilibria and Solution Equilibria—17 days
9. Chemical Thermodynamics—10 days
10. Electrochemistry—10 days
11. Atomic Structure and Periodicity—11 days
12. Chemical Bonding and Molecular Geometry—12 days
13. Intermolecular Forces, Liquids, and Solids—4 days
14. Properties of Solutions—8 days
15. Descriptive, Organic and Nuclear Chemistry—10 days, plus vacation assignments
16. Review and Exam Preparation

What to Expect

Class time will emphasize AP-level problem solving, laboratory experiments, and discussion. All requirements as outlined in the [2013 Course and Exam Description](#) will be met. Students should bring a calculator (graphing or non-graphing), pen or pencil, and binder (to store class notes and handouts) to class daily. Students are encouraged to maintain two 3-ring binders for class: one large one for class notes and problem sets, and a smaller one for lab reports, etc. Students will be expected to complete a considerable amount of independent daily work, which may include assigned podcasts, readings, problem sets, and laboratory write-ups. The assignments for each unit will be summarized on a unit assignment sheet. Textbook or online homework assignments will be turned in weekly, as noted on the assignment sheet. **Plan on spending at least an hour a day (5-7 hours per week) to complete assignments for this course.** Vacation work will be assigned. In general, tests will be announced, but the instructor reserves the right to give “pop” quizzes. Students are encouraged to establish study groups—peer to peer learning can be a powerful tool. Given the fast pace of this course, it will be absolutely essential to keep up with the work. If you have questions or difficulties, get extra help as soon as possible; as the instructor, my goal is to help you learn, so conference with me during my planning period or after school. Active involvement in class combined with ongoing practice of skills is a recipe for success.

Lab experiments will be conducted approximately once per cycle, including 6 guided inquiry experiments, and a pre-lab assignment and writeup (either formal or informal, as assigned) will be required for each experiment. Guided inquiry experiments will include in-class time for planning. All students will maintain an appropriate laboratory notebook. Pre-lab assignments and lab notebooks will be checked during the progress of the laboratory experiment. Typically students will have one week to complete a lab write-up. Many course materials will be available at the class website, www.dr Vanderveen.com.

Grading

Grades in AP Chemistry will be determined using a weighted average, outlined as follows:

- Labs, both formal and informal: 25%
- Unit or Chapter Tests: 45%
- Quizzes: 20%
- Homework: 10%

Homework will include problems from the text-book, problem sets, or on-line assignments such as CALM. Homework may be checked in class, checked via pop-quiz, or collected at the instructor's discretion. Students will also be able to earn "good citizen points" (which will count as a quiz grade) by helping to set up or clean up laboratory experiments and by offering extra help sessions to students in either Honors or College Prep Chemistry. Each student is expected to present a Reaction of the Day—this will be considered a quiz grade.

For the first three marking periods, expect 4-5 tests, multiple short quizzes, homework (including CALM) for each unit, 2-3 formal lab reports, and 2-3 informal lab reports. For the final marking period, the emphasis will be on test preparation and completion of the required laboratory program. Students will present problem solving strategies to the class for quiz grades. Students will also create study materials—practice tests, outlines, and/or study guides—for selected chapters as part of the Term 4 grade. We will also complete multimedia projects as part of the Term 4 grade. All AP Chemistry students will participate in the Science Fair, which will be graded as the final exam for the course. You will be given a timetable of science fair checkpoints, with specific due dates you will be expected to meet. Students who do not take the AP exam will also be required to take a teacher-written final exam, which will be averaged with the grade from the science fair to determine the final exam grade.

All assignments are expected on the scheduled due date; **absence is not an excuse for missing a deadline**. Daily homework will not be accepted after the due date; other graded assignments will be accepted for 50% if handed in one day late and will not be accepted after one day. If you are in school at any time during the day, it is your responsibility to stop by room 265 and pick up your materials before leaving and to turn in any assignments due that day. If extra time is needed to complete a test, the test must be completed on the original test date. Tests missed due to absence for any reason are to be made up the next day. Class time is not available for make-up work; lab materials will be available for makeup purposes for one week after the original lab date. **It is your responsibility to make sure missed work is completed and turned in**; since this is a college-level course, do not expect your instructor to remind you of missing major assignments. Check Powerschool and the course website for assignments due. If you are absent for three or more consecutive days, special arrangements can be made regarding make-up work.

Any required assignments to be turned in or checked for a grade are expected to be the student's own, individual work—instances of academic dishonesty will be treated as outlined in the student handbook.

Classroom tests and quizzes will be based **solely** on past AP exam questions or equivalent items, which are challenging, high-level assessment items. Students need to learn to take tests both quickly and accurately. Therefore, classroom tests will be timed and will be given under conditions closely matching those of the actual AP exam. As a rule, extra credit will not be available.

Classroom Rules

Students are expected to be present and on time for every class. Every moment of class time is precious, so students should make every attempt to be in class. Students will be required to make up missed labs or tests by the end of the week on their own time (in study hall or after school). Students in AP Chemistry will be expected to work cooperatively with everyone in the class and will choose their own lab partners. No abusive or disrespectful language will be tolerated. No food or beverages are allowed in Room 265.

The laboratory portion of this course will use a significant portion of class time, as mandated by the College Board. All students must sign and return the Laboratory Safety Agreement before participating in any lab activities. All lab safety guidelines will be rigorously followed in class; students who do not comply will be removed from the lab setting and receive a grade of zero for the lab.

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I have read and understood the Guidelines and Expectations for AP Chemistry.

Student Name

Student Signature

I have read and understood the Guidelines and Expectations for AP Chemistry.

Parent Name

Parent Signature

NOTE: This page is double sided. Be sure to sign both sides