Bromfield AP Chemistry 2020-2021

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Room 265

Course Overview 1

AP Chemistry is an in-depth, fast-paced second-year chemistry course for advanced, motivated science-oriented students. The course provides students with a thorough grounding in chemical principles and quantitative reasoning, with an intensive laboratory component.

A Class time will emphasize AP-level problem solving, laboratory experiments (virtual and/or in person), and discussion.

B All students enrolled in this course are prepared for and expected to take the AP exam in May.

Chemistry: The Central Science (12th edition)
Brown, LeMay, Bursten, Murphy & Woodward

Textbook

Supplemental online text: https://openstax.org/books/chemistry-2e/pages/1-introduction

Major Topics

- Matter, Measurement, Nomenclature
- Stoichiometry, Aqueous Reactions and Solutions
- Thermochemistry
- Gases
- Chemical Kinetics
- Chemical and Solution Equilibrium
- Acid-Base Equilibrium
- Chemical Thermodynamics
- Electrochemistry
- Atomic Structure and Periodicity
- Chemical Bonding and Molecular Geometry
- Intermolecular Attractions
- Properties of Solutions
- AP Exam Review

What to expect 2

Bring to class

Students should bring a calculator (graphing or non-graphing), pen or pencil, and a three-ring binder (to store class notes, problem sets and handouts) to in-person and virtual class meetings. Students need to have their MacBook charged and ready for use. Google Classroom will be the primary means of posting assignments, due dates, etc. and these are also posted at the course resources padlet.

Weekly assignment sheets will be posted in Google Classroom. Assignments will also be given regularly in AP Classroom.

Outside of class

Plan on spending 45 minutes a day to complete assignments for this course. Daily work may include assigned webcasts, readings, problem sets, and laboratory write-ups. Vacation work will be assigned. Expect multiple and overlapping deadlines.

Dr. V will host office hours from 1-1:30 pm on Mondays, Tuesdays, Thursdays and Fridays.

AP CHEMISTRY est. 2005

Tests will be announced, but the instructor reserves the right to give "pop" quizzes at any time.

Classroom tests and quizzes will be based solely on past AP exam questions or equivalent questions. 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.

Need extra time on a test? (This should be rare!) Make sure you finish it the same day you started the test.

Hygiene Protocols

Safety first!

- Keep your masks on, with your mouth and nose covered, except during scheduled mask breaks.
- Use hand sanitizer when entering or leaving room 265.
- Wipe down your work area and seat at the end of class.
- Sign out to use the restroom and sign back in.

Safety Goggle Time! 3

We will complete at least 16 lab experiments. Students are required to maintain a lab notebook with pre-lab questions and all data collected in lab. Labs may be done virtually or in person as appropriate. Lab notebooks will be checked for completeness during the experiments. Reports may be formal writeups or minilabs.

LABS

6 labs will be guided inquiry experiences, where students design their own procedures. These will require in-class planning time.

Students will be expected to follow all lab safety guidelines. Sign the safety agreement before doing any in-person labs.

Success in AP Chemistry 4

Grades in this course will be determined based on the percentage of points earned relative to total points assigned.

We will complete a variety of assignments and activities this year. It is in your best interest to complete every assignment and to turn in high quality work.

Classwork may be checked for completion and/or accuracy. It may be on paper or digital.

Homework/out work may be checked for completion and/or accuracy. Check Google Classroom and AP Classroom.

Quizzes on a single topic will be frequent. They may be unannounced or planned.

Unit tests on one or more chapters will always be announced in advance.

Labs explore the concepts in the lecture-on or virtual learning experience. Writeups may be minilabs or formal reports and will emphasize critical reasoning and data analysis.

Projects may explore a topic in greater depth or be used to place of a test or quiz. These will generally be after the AP exam in May.

Tip #1

Each student will present a "Reaction of the Day" during an in-person class each marking period—this will also be considered a quiz grade.

Tip #2

Each marking period, students will 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 to first-year chemistry students.

BROMFIELD SCIENCE FAIR

All AP Chemistry students will complete a science fair project as the final exam grade. (Students who take the AP exam are exempt from a written final in this class.) Specific due dates and expectations will be announced separately and posted in Google Classroom. (This is subject to change, if the science fair is canceled due to COVID-19 restrictions).

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.

nitty gritty details

Face to face classes with social distancing: Stay 6 feet apart at all times. No food or drinks are EVER allowed in room 265. Do not share materials.

Virtual class periods: Be on time for Zoom lessons. Turn your camera on when possible and turn your microphone off when asked. Avoid eating or drinking on camera! Only share your screen when prompted. Virtual backgrounds should be school appropriate and non-distracting (preferably solid). Make sure your real name is your screen name.

All classes (in person, remote or hybrid): Stay focused on the instructional activities and avoid distractions (apps, email and other websites) during class time. Ask questions verbally or in the chat. Use your classmate's names and be kind and supportive. Keep your comments and questions school appropriate.

Pro Tips from Dr V

Stay on top of your deadlines; don't procrastinate.
Use class time well.
Ask questions when you don't understand.
Get extra help if a topic doesn't make sense.
Set up a study group.
Practice is the key to success.
Bring a "can do" attitude!
Email Dr V (kvanderveen@psharvard.org) with any questions