AP Chemistry
Course Syllabus
2023-2024

Instructor: Mrs. Emily Stafford
Room 2117
estafford@mauryk12.org

Course Description:
Welcome to AP Chemistry! Over the course of this year, we will explore in much greater depth the concepts you have learned in Chemistry I as well as new material that will build upon your previous knowledge. Ultimately, this class will serve several functions. It will give you a chance to experience what a college class may be like, it will challenge you with new information, it will prepare you to take the AP exam next May, and you will develop a greater understanding of how chemistry affects the total environment in which we live.

This course is not a revamped, upgraded version of Chemistry I, but rather an in-depth study of more advanced chemical concepts. It is structured around the six big ideas articulated in the AP Chemistry curriculum framework provided by the College Board. You will be challenged academically, yet the workload is not unbearable. You should review your work every night, and *under no circumstances should you allow yourself to fall behind*. If you need help, it is always available. I also suggest that you form peer groups for study sessions or form on-line discussion groups for help with homework and study. You will need to set aside time to study the material, come to class **prepared**, and ask many questions!

Units	Exam Weighting
Unit 1: Atomic Structure and Properties	**7–9%**
Unit 2: Molecular and Ionic Compound Structure and Properties	**7–9%**
Unit 3: Intermolecular Forces and Properties	**18–22%**
Unit 4: Chemical Reactions	**7–9%**
Unit 5: Kinetics	**7–9%**
Unit 6: Thermodynamics	**7–9%**
Unit 7: Equilibrium	**7–9%**
Unit 8: Acids and Bases	**11–15%**
Unit 9: Applications of Thermodynamics	**7–9%**

Textbook and Supplemental Materials:
Brown, Theodore L., et. Al., Chemistry: The Central Science, 11th Edition, Upper Saddle River, NJ, Pearson Prentice Hall, 2009.

College Board, *AP Chemistry Guided-Inquiry Experiments: Applying the Science Practices*

Required Materials:
- Calculator: students must have calculators with them daily.
- 3-ring binder with paper with dividers for units (10 units)
- Supplies for Science Fair (tri-fold board; project notebook which can be composition, spiral, or binder)
- Pens and pencils
- Highlighters/ Colored Pencils

Laboratory:
A comprehensive laboratory experience is essential to your success in AP Chemistry. In order to achieve that experience, a portion of the total instructional time will be spent doing hands-on laboratory activities. The labs completed require following or developing processes and procedures, taking observations, and data manipulation. Students communicate and collaborate in lab groups; however, each of you will submit your own lab report. The Laboratory Notebook is an important record of all the work you have done in the lab. It is documentation of the quality of work that you have performed. Various types of laboratory reports will be submitted. A specific format will be given to the student for each lab. Students must follow that format.

Tests:
Tests are composed of AP exam questions and AP style essays. Tests will be taken in a period and time is limited, just as it is on the AP exam. No additional time will be given.

Grading:
A student's grade is a weighted average of the following:

Tests & Science Fair	40%
Quizzes & Labs	30%
Homework	15%
Quarter Exams	15%

*AP classes receive 5 points on the overall average, but only if AP projects are completed for Q1, Q2, Q3, and the student sits for the AP exam in May.

Behavior Expectations:
You are expected to arrive to class on time and have your materials every day. Each student is expected to act seriously and responsibly during class and activities. Mature behavior will increase the level of learning for all students. Disruptions will be dealt with accordingly. Simply put, students are expected to respect themselves, each other, me, and the classroom as a learning environment.

Specific rules and procedures to demonstrate that respect are listed below:
• Come to class and be on time.
• **Keep cell phones, headphones and air pods put away during class**.
• Bring all of your materials including your device and charger to class every day.
• Do all of the work asked of you and turn it in on time.
• If you don't understand something, ask.
• Always clean up your area before you leave the room.
• Do the best you can and enjoy learning!!!!

In this class, I want you chasing 100! That doesn't mean that you will earn a 100 on everything but it does mean that you are giving it your ALL every day.

Success in this Course:
AP Chemistry will demand more from you than Chemistry I and the pace of the class will be much different from other classes. I realize many of you are taking other AP classes and have much work for those classes as well. Given this, the burden is on you to study and learn much of the material. I will do everything possible to help you be successful but considerable effort must be made on your part. *The College Board suggests you spend about an hour a day on AP Chemistry or about 5 hours per week.* My take on that is this: you know how well you want to do, you know the grade you want to earn from this class, you have your own expectations and only you can meet them. You must put forth the necessary effort to meet your goals. I would like for all of you to earn an excellent grade in this class and urge you to strive for that.

In order for you to be successful in this course keep the following in mind as we continue throughout the year:

1. You must PRACTICE!!!!! This means that you have time in class to practice solving problems in small groups. Sharing information and problem-solving strategies and working on them with your fellow students will be of great help to you. You must practice at home as well and homework will be devoted to your practice or essential concepts. The more you practice deciphering and solving problems the more success you will have on quizzes, tests, and the AP exam.

2. You must WRITE!!!!! This means you must learn to write answers and explanations for problems and practice this. Part of the AP exam involves you writing answers that must communicate your thoughts concisely and clearly. You will also be assigned a formal lab report each semester that will require you to write in a different manner than you will find in your language classes. We will practice writing answers to questions, conclusions to laboratory experiments, and essential elements of formal reports.

AP Information:
AP Chemistry is a course designed and regulated by The College Board. The College Board website is www.collegeboard.org and we will be using this website often. There are many review videos and questions on the site. AP Chemistry is an inquiry-based course, which will require students to think outside the box and REALLY understand science. You will have an opportunity to take the AP test on May 6, 2024. The cost of the exam is approximately $97. You can score a range of 1-5 on the exam. Depending on your score and your chosen university, you may receive a general chemistry college credit from the AP Chemistry course.

Students: This is the app I most often use to communicate information. You MUST check Teams daily. This is also where you will find helpful files, links, and videos for the science fair and individual units.	Parents: The Remind app and email are how I most often communicate information to you. I use Microsoft Teams for student communication as it is the easiest platform to attach files, videos, etc. Please make sure your student is checking it frequently.

Columbia Central High School Chemistry Lab Safety Contract

Dear Students and Parents/Guardians,

We are excited to be able to provide students with basic experimental lab experiences. Students need to understand the importance of the safety policies that apply to the equipment and the materials in the science lab. Specific rules and lab procedures will be discussed with the students prior to any projects and experiments and are posted in the classroom. In addition, we would like you, as a parent/guardian, to review the attached Science Safety Rules with your student, then sign and return the signature page. If you have any questions or clarifications, please do not hesitate to contact your child's teacher via email or phone.

- Follow all directions and procedures closely.
- Ask questions if you are unsure of directions or procedures.
- Work carefully and use equipment/materials wisely and as directed.
- Wash hands before and after performing an experiment.
- If any chemicals are spilled or equipment broken, inform the instructor immediately.
- Properly use and care for the equipment and lab area.
- Properly dispose of waste as directed.
- Remain at your lab station during the lab, unless given specific permission. (Commotion and horse play causes accidents.)
- Keep phone and electronic devices put away. These cause students to be distracted and can lead to accidents.
- Clean lab area as directed when finished with experiment.

Although these rules seem simple and obvious, it is very important to follow them stringently, as it provides a safe environment for all students. Learning science is a hands-on experience. You will be doing many laboratory activities, which involve the use of chemicals and other materials that may be considered hazardous if not handled properly and carefully. Safety in the science classroom is our #1 priority for students, teachers, and parents. Students using any lab or emergency material, or equipment improperly may lose his/her lab privileges and be subject to further disciplinary action. Violation of lab rules and misconduct will require students to write out an explanation of the safety violation and what corrective action should occur to ensure student and equipment safety. Recurrent problems will cause a loss of lab privileges for the remainder of the year. We do not anticipate students losing lab privileges but look forward to a safe, interactive, and productive year.

Sincerely,

CHS Chemistry Department

Scan the appropriate QR code to the right in order to acknowledge you have read and understand the AP Chemistry Syllabus and Safety Contract.

Parents

AP Chemistry Syllabus and Safety Contract Parent Acknowledgement

Students

AP Chemistry Syllabus and Safety Contract Student Acknowledgement