

# Pre-AP Chemistry

**Instructor:** Vicki Dincher [vdincher@comcast.net](mailto:vdincher@comcast.net)

**Course Goal:** Following this course, the motivated student will be well prepared for the SAT II Chemistry subject test, Chemistry CLEP test, and/or a future AP Chemistry course. Success on these exams is dependent on student aptitude and desire/willingness to prepare for the exam.

**Course Description:** Chemistry is the study of connections between the everyday world and the molecular world, the structure and interactions of matter. It examines the smallest components of matter (atoms) and how atoms bond with each other to combine elements into compounds. Then it looks at chemical reactions: how energy is involved, the transfer of electrons or hydrogen ions, and factors that affect reaction rate. This course provides students with an understanding of chemical principles and skills that are needed for college. The study of chemistry includes laboratory investigation, problem solving activities, textbook study, lecture, and class discussion. The structure and properties of matter, organic and inorganic chemistry, energy, thermo chemistry, nuclear reaction, electrochemistry, acids, bases and salts and chemical bonding make up the content of this class. This class includes laboratory work and written lab reports. Students are encouraged to take the SAT II in Chemistry and/or the Chemistry CLEP test upon completion of this course and will be prepared for future AP Chemistry coursework.

- Open to students in 10th-12th grade
- College-preparatory class leading to CLEP/SAT Subject testing and future AP Chemistry coursework
- Students should be working toward college level reading and responsibility
- Weekly assignments and class notes posted Thursdays.
- 34 weeks. Coursework begins the last week of August
- To apply, request a student application from the instructor

**Cost:** \$549 (does not include text or lab supplies)

**Prerequisites:** Successful completion of Algebra I

**Lecture Content/Live Web-ex Discussions:** This class is asynchronous with a live discussion component, so all course lectures are recorded and available for students to playback at their convenience. I also post podcasts and short video clips explain course concepts as needed. Live discussions or problem-solving sessions will be held several times each month and will be recorded for those unable to attend. These sessions will be designed to provide students assistance with concepts and math problems assigned for homework. Regular Skype “office hours” will be listed after classes begin (survey of student time zones will determine the actual office hours) so students can reach me for immediate feedback or for individual or group homework help.

**Labs:** Approximately twelve hands-on experiments will augment the core concepts studied and fulfill the lab requirement for a high school science credit. These experiments can be completed at home (adult supervision is advised). Most use household materials or supplies readily available from homeschool science companies. A full list will be provided with the course syllabus.

**Scientific Writing:** Effective scientific writing is a vital skill required for success in college science

courses. To that end, instruction in the process of writing a formal physics lab report will be given and two to three formal lab write-ups will be required.

**Communications:** Course communication occurs through the message system on the course website and through email. Each year more interactive technology is added. Students may schedule individual tutoring through Google Hangouts and Skype by appointment and at regular “office hours”.

**Technical needs:** Broadband, high speed Internet and an e-mail account that accepts large files. Weekly assignments are downloaded as PDF files from the course website. The use of online interactive resources may require free downloading of shockwave flash players or other plugins. Most work will need to be scanned and uploaded, so a working scanner that will save to PDF is required.

**Time Commitment:** The qualified student will spend 5-7 hours per week on this class. This accounts for reading the assigned texts, answering review questions, calculating practice problems, hands-on lab experiments, and discussing class work and reading assignments with others in the forums.

**Class Meeting Time:** Students are not required to "meet" at a scheduled time, but all homework is due via e-mail by Sunday evenings, midnight EST, unless otherwise noted. Scheduled discussion times will be recorded for those unable to attend the live discussion times. I update the website syllabus the week before and send out class updates via e-mail as needed.

**Qualifications:** I have an M.S. in biology. I have experience teaching at both the high school and community college level. From 1995-present, I have taught biology and physics classes (both first year and AP levels) in the classroom and have been teaching online since 2010.

**Course Priorities:** While priority is given to prepare the student to take the SAT II Chemistry or Chemistry CLEP exam and to prepare them to take a future AP Chemistry course, those students who do not plan to take the exams but desire a strong foundation in chemistry will also find this course a good fit. Text preparation (for those students who opt for it) will be done through complete presentation of testable content, providing review materials during the second half of the course, explaining testing strategies, and providing scored practice exams. My goal is to expand your appreciation for the fundamental concepts and laws that govern the physical realm we live in.

**Required Texts:** Exploring Creation with Chemistry, Second Edition by Jay Wile published by Apologia Educational Ministries. Several additional topics, not covered in the text, will be provided by the instructor from Glencoe and Holt high school chemistry texts.

**Who should apply:** The well-prepared applicant also has completed a physical science course in the middle school years and has a good foundation in algebra. Also, online learning requires a great degree of organizational and time management skills on the part of the student. So students who are ready to improve in this area and are capable of taking responsibility for initiating interaction with the instructor if confused or discouraged should ask for an application.

For more information about Vicki's classes, visit [www.vickidincher.com](http://www.vickidincher.com). To apply or ask a question regarding this class, email Vicki at [vdincher@comcast.net](mailto:vdincher@comcast.net)