

Pre-AP Chemistry Syllabus
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iTunes U Course Enroll Code: ESL-SCY-YDA

Course Information

The Pre-AP Chemistry course is a college prep class intended for students who plan on majoring in the sciences. It is taught at a college level, and tends to be very demanding. The course goals are to prepare students for the first semester course of college chemistry and to prepare students for the AP Chemistry course. Together with AP chemistry, this course is designed to be the equivalent of a full 6 – 8 credit college chemistry lecture and lab course. At the end of AP chemistry, students are encouraged to take the national exam given by The College Board. The exam scores may enable the student to receive credit for the first year of chemistry at many colleges and universities.

The MISD course catalog provides the following information about this class: “This course is designed for students who show an advanced aptitude toward the physical sciences. Areas of study will include the essential elements and objectives of those in the regular chemistry course with greater depth and at a more accelerated rate. Emphasis will be placed on the ability to evaluate, outline, organize, and report scientific information.”

Course Design

This course emphasizes atomic structure, bonding, stoichiometry, and gases. Students begin the course with little experience with solution chemistry; introductory acid-base theory and equilibrium concepts; oxidation-reduction reactions and electrochemistry; and nuclear chemistry. These concepts are introduced and emphasized throughout this course. The scope of material in the outline and the pace at which it is taught is sometimes varied in order to ensure the students' mastery of concepts. Most units take two to three weeks to cover.

Units are accompanied by assigned reading materials, instructional sessions, laboratory activities, quizzes, tests, and sample problems from the textbook and free-response section of previous AP Exams. The class format involves lectures, demonstrations, group work, and various activities. Laboratory activities include a post-lab question set designed to analyze concepts, such as procedures, calculations, and effects of errors that are appropriate for the AP Exam. Tests are similar in style but shorter than the AP Exam and consist of several sections: multiple-choice items (without a calculator); free response questions, including those from previous AP Exams; and calculations (with a calculator).

Textbook:

Zumdahl, Steven S., et. al., Chemistry, 9th Edition. Boston, New York, Houghton Mifflin Company, 2013.

Reading will be assigned on a regular basis. Notes must be taken over the reading. I will check these in class. I expect students to review their notes (from class and readings) regularly in order to better retain the material.

Course Outline:

Chapter	Title in Zumdahl Chemistry	Chemistry Topic Covered
1	Chemical Foundations	Scientific Processes and matter
2	Atoms, Molecules, and Ions	Atomic Theory
3	Stoichiometry	The Mole, Balancing Equations, Stoichiometry
7	Atomic Structure and Periodicity	Electromagnetic Radiation, Orbitals, Periodic Trends
2	Atoms, Molecules, and Ions	Nomenclature
8	Bonding: General Concepts	Bonding, Polarity, Lewis Structures, VSEPR
3	Stoichiometry	Stoichiometry
4	Types of Chemical Reactions and Solution Stoichiometry	Reaction Types (Precipitation, Redox, Acid-Base) & Solution Stoichiometry
11	Properties of Solutions	Molarity, Solubility
14	Acids and Bases	Acids and Bases, pH Scale, K_a calculations
5	Gases	Gas Laws, Gas Stoichiometry, Kinetic Molecular Theory
6	Thermochemistry	Energy, Enthalpy, Calorimetry
10	Liquids and Solids	Intermolecular Forces, Liquids, Polarity

Big Idea 1 – Structure of matter, Big Idea 2 – Properties of matter-characteristics, states and forces of attraction, Big Idea 3 – Chemical reactions, Big Idea 4 – Rates of chemical reactions, Big Idea 5 – Thermodynamics, Big Idea 6 – Equilibrium.

Calendar:

A calendar of assignments and assessments will be emailed each six weeks as well as posted in my iTunesU course.

Materials

1. Calculator: You will need a calculator that has scientific capabilities.
2. 2 Spiral Notebooks
 - Single-subject - for notes and textbook problems
 - Single subject - for lab report write-ups
3. Other products (optional)
 - Facial tissue paper
 - Hand soap
 - Hand sanitizer
 - Paper towels

Lecture Notes: Students are expected to take notes during class. These notes must then be reviewed as soon as possible. We will discuss how to best retain the information by reviewing them often for short periods of time. I expect to see that student notes are complete and show evidence of review (circling, underlining, highlighting, higher level questions, writing summaries, etc.)

Test Retakes

If a student fails a major test/assessment (below 70%), they may retake a test once for a grade of up to a 70%.

Students have to make arrangements with the teacher to retake a major test after school.

All retakes must be completed prior to the end of each six week grading period.

Students are required to attend at least one tutorial before retaking a test.

Students will organize a date to take any test if they were absent on the test day. Missed tests will not be administered during class.

Late Work

Students may be assessed a penalty of no more than 30 points per day for up to one class period before a zero may be given for work not turned in on time.

All assignments must be completed prior to the end of each six week grading period.

Lab Safety

For safety purposes, students may be referred to their assistant principal for any act that compromises the safety of anyone in the classroom.

Student safety is of the utmost importance and it is therefore imperative that students understand the rules and procedures set forth in this class. Please understand the inherent dangers associated with the science labs and the necessity to carefully follow the rules set forth.

Students will be issued a Lab Safety Contract to be signed prior to any work in the lab.

Academic Dishonesty

Academic dishonesty—cheating or plagiarism—is not acceptable. Cheating includes the copying of another student's work—homework, class work, test answers, etc.—as one's own. Plagiarism is the use of another person's original ideas or writing without giving credit to the true author. A student found to have engaged in academic dishonesty will be subject to loss of credit.

Grading

A. Tests/Projects	50%
B. Lab Reports	30%
C. Dailywork/Quizzes	20%

Participation is expected but will not be graded.

The final exam for each 18-week session will be worth 20% of that eighteen week's period grade.

Furthermore, this exam will include some essay questions.

Student will be evaluated from a minimum of eight grades with at least two grades in each category per six weeks.

Attendance/Tardies

If a student misses an assignment or exam due to absence, the assignment will be due the number of days absent plus one. Exams will be arranged with the teacher to be taken out of normal class time.

Regular school attendance is essential for a student to make the most of his or her education—to benefit from teacher-led and school activities, to build each day's learning on the previous day's, and to grow as an individual. Absences from class may result in serious disruption of a student's mastery of the instructional materials; therefore, the student and parent should make every effort to avoid unnecessary absences. Two state laws—one dealing with compulsory attendance, the other with attendance for course credit—are of special interest to students and parents. They are discussed below.

An absence is defined as missing 20 minutes or more of any class.

Checking In to School during the Day (Student responsibility): A student who is late to school, must sign in in the Attendance Office with acknowledgement by the attendance clerk. A student who does not sign in without the approval of the attendance clerk or Assistant Principal will be considered truant from school and will receive an unexcused absence for each class missed.

Attendance for Credit: To receive credit in a class, a student must attend at least 90 percent of the days the class is offered.

Classroom Rules

1. Be on time. Please be in your seat when the bell rings.
2. Bring the proper supplies: textbook, notebook, calculator, pencil.
3. Respect other people's rights and property.
4. Come to class prepared by doing your homework/having studied for your test.
5. No food or drink of any kind in the lab area when working with chemicals.

Office Hours

Students are encouraged to pace their studying and not cram for exams. Tutoring will mostly provide an opportunity for other students to come and work through problems amongst themselves. Although the teacher will be there, collaboration and working in groups will be emphasized.

Office Hours available:

Lujan - Tuesday and Thursday (3:00 PM – 3:30 PM)

Nieman –Monday and Wednesday (3:00 PM - 3:30PM) and by appointment