

NOUVEL CATHOLIC CENTRAL HIGH SCHOOL

General Chemistry SYLLABUS

COURSE DESCRIPTION:	This class focuses on the structure of our universe with particular emphasis at the atomic and molecular level. Specific topics that will be studied include the physical and chemical properties of matter, general matter classification, general atomic structure, ionic and covalent bonding, forms of energy and energy transfer, kinetic molecular theory, acid-base reactions, and simple hydrocarbon chemistry.
MAJOR COURSE GOALS:	By the end of this year students will be able to: <ol style="list-style-type: none">1. Practice scientific reasoning and apply it by constructing, executing, and evaluating scientific investigations of chemical reactions;2. Use the kinetic molecular theory to describe physical and chemical changes as well as phase changes;3. Predict the bonding between atoms of various elements and accurately write their names and formulas. Classify compounds as ionic, covalent and explain the intermolecular forces holding them together;4. Understand and be able to diagram exothermic and endothermic chemical reactions. Determine the pH of a sample as well as write equations of acid-base reactions;5. Describe the electron structure of an atom and use this to explain ionic and covalent bonding;6. Explain nuclear reactions and how humans use them in everyday life;7. Predict the products of 3 types of common reactions as well as balance their equations;8. Use stoichiometry to determine the relationships between chemicals in an equation;9. Draw and identify simple hydrocarbon isomers as well as

	identify common biological polymers.
COURSE ASSESSMENT PLAN:	<p>Daily lectures with accompanying class and group discussions will allow students to practice the skills and ideas presented. Homework is assigned on a daily basis and primarily consists of problems and short essays. Either a quiz or a test will occur each week. Quizzes are sometimes memorization but usually entail problem solving based on their knowledge of the unit. Unit tests are a combination of memorization, problem solving/reasoning and short answer or essay. Students will have a lab at least once every two weeks over topics dealing with the current unit of study. Two projects are assigned each semester – this roughly translates into one project each marking period.</p>
SUPPLIES AND MATERIALS NEEDED:	<p>No student textbook will be assigned. If you feel that a book would help you study at home, feel free to come in and borrow the book, <u>Basic Chemistry</u>, for the year.</p> <p>We will work primarily with notes and handouts. It is imperative that students have a file/folder to hold loose sheets of paper.</p> <p>All work handed in should be done in pencil, and a good supply of pencils is important. A notebook and extra loose paper are also required.</p> <p>A calculator with an “Exp” or “EE” button is required. Many calculator brands have inexpensive models with one of these buttons. This does <u>not</u> need to be a \$100 TI Graphing Calculator.</p>
EXTRA HELP:	<p>I am available everyday from 7 AM until school starts, and for 30 to 40 minutes after school finishes. Students are encouraged to come in for help.</p> <p>Students and parents should always feel free to contact me for help. The best method is emailing me at the address below, which is also on the Nouvel website.</p> <p>If a student has failed or done poorly on a quiz or unit test, they are strongly urged to come in and discuss options for bringing that grade up. Poor grades are not written in stone – extra work can help boost scores.</p> <p>Unfortunately, those students who wait until the end of the semester/marketing period to seek help will not be granted this</p>

	option of extra work. Please come in ASAP after a poor quiz or test for additional help, not 5 weeks later when the marking period ends.
INSTRUCTIONAL PHILOSOPHY:	<p>We will use a combination of teaching styles from lecture, to class discussion, to demonstrations, to student based labs, to group work and laboratory investigations in order to appeal to the many different learning styles of our students.</p> <p>Success in General Chemistry will require hard work and discipline.</p>
MAJOR COURSE PROJECTS AND INSTRUCTIONAL ACTIVITIES:	<p>Expect the following projects, or similar projects during the course of the year:</p> <ol style="list-style-type: none"> 1. An Bohr diagram / electron configuration model for a heavy metal; 2. A comparison poster for ionic vs covalent bonding; 3. A group project for Stoichiometry; 4. A group project "Acids and Bases in the Home"
CLASSROOM EXPECTATIONS:	<p>Students are expected to arrive and be in their desks by the time the bell rings.</p> <p>During class discussions students must try and participate. An answer of "I don't know" will not be accepted. Students should attempt a solution and realize that an incorrect answer, given sincerely, is fine.</p> <p>Students must have pencils, notebook, folder and calculator for class everyday.</p> <p>Students should respect each other and the teacher.</p> <p>Extra credit is rarely given. Students are expected to learn and use the material taught, rather than rely on extra points.</p> <p>Students who expect to miss class due to sports or other reasons are expected to be responsible and give plenty of notice that they will be gone. In this way they can get assignments before they go.</p>
HOMEWORK POLICY AND GRADING SCALE:	Homework is a very important part of this course. Students need to keep up with the work and turn it in when due.

	<p>Work turned in late will result in loss of some credit (usually 50%).</p> <p>Work turned in more than 2 weeks late will usually receive no credit.</p> <p>Grades are determined by points earned. This roughly translates into the following percentages:</p> <p>Approximately 15-20% of the grade is the homework;</p> <p>Approximately 20% of the grade is labs and projects;</p> <p>Approximately 55% of the grade is quizzes and tests;</p> <p>Approximately 5-10% of the grade is participation.</p>
CONTACT INFORMATION:	
Teachers:	<p>Mark Bradtke</p> <p>Deb Yats</p>
Email Address:	<p>mbradtke@sacschools.org</p> <p>dyats@sacschools.org</p>
Phone Number:	The email above is the fastest and surest way of contacting us.