

NOUVEL CATHOLIC CENTRAL HIGH SCHOOL

Honors 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. Demonstrate an understanding of scientific reasoning and be able to apply this to design and evaluate valid science experiments;2. Describe the electron structure of an atom and use this to explain ionic and covalent bonding;3. Explain nuclear reactions and how humans use them in everyday life;4. Predict the products of 6 types of common reactions as well as balance their equations;5. Use stoichiometry to determine the relationships between chemicals in an equation;6. Classify compounds as ionic, covalent or polar covalent and explain the intermolecular forces holding them together;7. Name ionic and covalent compounds;8. Use kinetic molecular theory to explain common topics such as phase changes and gas behavior;9. Determine the pH of a sample as well as write equations of acid-base reactions;10. Understand the uses of oxidation-reduction reactions and be able to perform them;

	11. Draw and identify simple hydrocarbon isomers as well as identify common biological polymers.
COURSE ASSESSMENT PLAN:	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 often memorization and problem solving. Unit tests are a combination of memorization, problem solving 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.
SUPPLIES AND MATERIALS NEEDED:	<p>Students will be supplied with a copy of <u>Basic Chemistry</u> which they should generally leave at home and use for homework. We will use a class set of texts for in-class work. Take care of these books as you are responsible for any damage or loss.</p> <p>Students need plenty of pencils for doing problems and any work handed in. A notebook and extra loose paper are also required. A folder to hold returned work is needed.</p> <p>A calculator with an “Exp” or “EE” button is required. Many calculator brands have inexpensive models with this button. 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>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 option of extra work. Please come in ASAP after a poor quiz or test for help, not 5 weeks later when the marking period ends.</p>
INSTRUCTIONAL PHILOSOPHY:	We will use a combination of teaching styles from lecture, to class discussion, to demonstrations, to student based labs, to group

	<p>work and laboratory investigations in order to appeal to the many different learning styles of our students.</p> <p>Success in Honors Chemistry will require hard work and discipline. This is an advanced class and expectations will be high.</p>
<p>MAJOR COURSE PROJECTS AND INSTRUCTIONAL ACTIVITIES:</p>	<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 VSEPR molecular geometry; 4. A group project "Design Your Own Experiment"
<p>CLASSROOM EXPECTATIONS:</p>	<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>
<p>HOMEWORK POLICY AND GRADING SCALE:</p>	<p>Homework is a very important part of this course. Students need to keep up with the work and turn it in when due.</p> <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:	
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