

Sir Wilfrid Laurier Secondary School
Grade 12 College Chemistry – SCH4C
1.0 credits
Course Outline

Course Description

This course introduces students to the concepts that form the basis of modern chemistry. Students will study qualitative analysis, quantitative relationships in chemical reactions, organic chemistry and electrochemistry, and chemistry as it relates to the quality of the environment. Students will employ a variety of laboratory techniques, develop skills in data collection and scientific analysis, and communicate scientific information using appropriate terminology. Emphasis will be placed on the role of chemistry in daily life and in the development of new technologies and products.

Strands and Subgroups

<p>Matter and Qualitative Analysis</p> <ul style="list-style-type: none"> • models of the atom • ionic and covalent bonding • chemical formulas • chemical equations • types of reactions • predicting solubility 	<p>Quantities in Chemistry</p> <ul style="list-style-type: none"> • atomic mass and molecular mass • Avogadro constant and the mole • percentage composition • concentration of solutions • stoichiometry • percentage yield • limiting reactants
<p>Organic Chemistry</p> <ul style="list-style-type: none"> • organic compounds • classifying and representing hydrocarbon compounds – alkanes, alkenes, alkynes • functional groups – alcohols, ethers, aldehydes, ketones, carboxylic acids, esters, amines and amides • reactions of hydrocarbons • fractional distillation • polymers 	<p>Electrochemistry</p> <ul style="list-style-type: none"> • oxidation-reaction reactions • galvanic cells • cell potential and spontaneity • corrosion—factors that affect & prevention
<p>Chemistry in the Environment</p> <ul style="list-style-type: none"> • physical and chemical properties of water • water pollution • acids and bases – strength, pH, reactions • acid rain • greenhouse gases • air/water quality 	

Evaluation

The final report card mark will be determined as follows:

Term Work – 70%	Summative – 30%
Unit Tests Lab Reports Quizzes Classwork	Exam and/or Performance Task

Attendance & Missed Evaluations

Regular attendance is an integral part of learning. Students are responsible for completing all work missed due to absence. Any missed term evaluation (e.g. test or lab) will result in a mark of zero, unless the absence is excused. Students must complete the missed evaluation immediately upon return to school, during out-of-class time.

End-of-course evaluations, i.e. the summative activity and final examination are time-sensitive. Attendance is mandatory for these evaluations. Any absence will result in a mark of zero, unless validated by a doctor's certificate.

If a student participates in **academic fraud** (e.g. cheating on tests, plagiarism in assignments), he / she is deemed not to have met the expectations associated with that particular evaluation; a mark of zero will be assigned.

A mark of zero will be given for late assignments/labs/projects that exceed the limits. (10% deduction per day; mark of zero on fifth day if not handed in)

General Course Information

Students must bring the following materials to each class:

- textbook
- separate Chemistry binder (to hold notes, tests, quizzes, handouts)
- pencil case (to hold pencils, erasers, ruler)
- scientific calculator
- lined paper

Course Text: Chemistry 12 (College Preparation), Nelson (\$78.00, GST included).

The student will be issued a text, and will be responsible for the cost of replacement, or repair, if the text is lost or damaged.
