

SOUTH CARLETON HIGH SCHOOL**Ottawa-Carleton District School Board****COURSE OUTLINE****SCH4C - GRADE 12 University Prep Biology**

Credit Value: 1 credit

Hours: 110

Prerequisite: SNC2P/SNC2D/SNC2DF

Expectations

This course enables students to deepen their understanding of chemistry through the study of matter and qualitative analysis, organic chemistry electrochemistry, chemical calculations, and chemistry as it relates to the quality of the environment. Students will use 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 the effects of technological applications and processes on society and the environment.

Big Ideas

Unit Title	Chemistry Focus For Learning Expectations
<i>Matter and Qualitative Analysis</i>	<ul style="list-style-type: none"> • <i>The properties of matter can be predicted and analyzed qualitatively.</i> • <i>Substances can be identified based on their distinctive properties.</i> • <i>Qualitative analysis of matter is used in many different fields of endeavor.</i>
<i>Organic Chemistry</i>	<ul style="list-style-type: none"> • <i>Organic compounds have predictable chemical and physical properties determined by their respective structures.</i> • <i>Organic compounds can be synthesized by living things or through artificial processes.</i> • <i>Organic chemical reactions and their applications have significant implications for society, human health, and the environment.</i>
<i>Electrochemistry</i>	<ul style="list-style-type: none"> • <i>Oxidation and reduction are paired chemical reactions in which electrons are transferred from one substance to another in a predictable way.</i>
<i>Chemical Calculations</i>	<ul style="list-style-type: none"> • <i>Relationships in chemical reactions can be described quantitatively.</i> • <i>Quantitative relationships of chemical reactions have applications in the workplace and the environment.</i>
<i>Chemistry in the Environment</i>	<ul style="list-style-type: none"> • <i>Both natural processes and human activity can affect air and water quality.</i> • <i>Quantitative relationships of chemical reactions can be used to assess air and water quality.</i>

**NOTES: a. Specific learning expectations are available for each unit of study. b. The sequence of topics may not be exactly as listed above.*

Accommodations for Exceptional Students

The Science department makes every effort to accommodate the identified needs of exceptional (IPRC'd) students and will attempt to differentiate curriculum delivery methods, student modes of expression, and assessment methods as recommended by the student's individual education plan (IEP).

Career Planning

The Science department makes every effort to ensure that students are aware of career opportunities related to various fields of science under study, and describe the contributions of scientists, including Canadians, to those fields.

Technology and Textbooks

The school will supply all laboratory resources and materials.

Textbook: *Chemistry 12 College Preparation (Nelson)* replacement cost = \$68.00

Evaluation

Term Evaluations (70%)	Summative Evaluation (30%)
Students will be evaluated according to the overall expectations of the Ontario curriculum. Assessment tools include both summative and formative tasks including but not limited to; tests/quizzes, assignments, projects, lab reports, skill based performance tasks and rich assessment tasks	<p><i>The exam portion of the summative will occur during the exam period in Jan/June and will evaluate the whole semester's work. All students must be present unless a medical certificate is provided.</i></p> <p><i>Project or assignment summative evaluation will be completed before the exam period begins.</i></p>

More information on South Carleton High School's policy on Assessment and Evaluation, on Academic Integrity, on punctuality, absenteeism and examinations can be accessed on our school website.