



FOREST HILL CI

SCH4C GRADE 12 COLLEGE PREP CHEMISTRY COURSE OUTLINE

PREREQUISITE: GRADE 10 SCIENCE(SNC2D OR SNC2P)

Resources

Textbook: The grade 12 Chemistry textbook is “Chemistry 12” by Nelson. The replacement cost of the textbook is **\$80**.

Tools for Success/Learning Skills

Responsibility	<ul style="list-style-type: none">Understand and follow this course outline and the policies outlined in the Student Agenda.Arrive on timeCome prepared to work with all necessary tools
Organization	<ul style="list-style-type: none">Keep an organized notebookKeep an organized calendar of important dates
Independent Work	<ul style="list-style-type: none">Stay on taskAvoid disrupting the learning of others.Do homework regularly and complete all assigned workReview/study the work often
Collaboration	<ul style="list-style-type: none">Be a responsible group member.Help your peers succeed by sharing ideas, tutoring and studying togetherPrepare for labs as a team with a focus on each other’s safety
Initiative	<ul style="list-style-type: none">Be active participants in the classroomAsk questions when unsure of the material & seek extra help when needed.Ensure that you get any missed handouts and catch up on missed work
Self-Regulation	<ul style="list-style-type: none">Set goals and make good choices regarding academic success.Respect yourself, classmates and teachers.

Academic Honesty: Cheating and Plagiarism

Students are expected to submit only their own original work on evaluations done in class or out of class. Plagiarism is the passing off the ideas or writings of another as one’s own. Cases of academic dishonesty (cheating and/or plagiarism) will be dealt with on a case-by-case basis, but each case will involve investigation, communication with the student and his/her parent/guardian, and a mark of zero for plagiarized work. Whether the student has an opportunity to demonstrate his/her learning in another assignment will be at the discretion of the teacher and/or Principal.

Assessment and Evaluation

The primary purpose of assessment and evaluation is to improve student learning. Assessment can take on one of three forms (described below). In accordance with *Growing Success*, a student’s most recent and consistent work will be taken into account.

Diagnostic	Assessment FOR learning determines how learning should proceed at the beginning of a unit.
Formative	Assessment AS learning provides feedback for a student to determine where improvement is needed. An example of this is homework.
Summative	Assessment OF learning evaluates what a student has learned at the conclusion of a unit/course. Examples include tests, quizzes, assignments and labs.

Evaluation of student achievement will be defined by four broad **Achievement Categories** (described below). The category weighting for semester work is shown.

Semester Work		70%
Knowledge & Understanding	Specific content acquired in the course and the comprehension of its meaning and significance.	25%
Thinking & Investigation	The use of critical and creative thinking skills and inquiry, research, and problem-solving skills.	25%
Communication	The conveying of meaning through various forms.	25%
Application	The use of knowledge and skills to make connections within and between various contexts.	25%
Exam		30%

Academic Integrity: Missed Classes, Evaluations and Assignments

It is the **responsibility of the student** to notify **all** appropriate parties (teachers, office, coach, etc) **in advance** where appropriate and in compliance with school policies and procedures as per student agenda if the student will be absent. This allows for both the student and teacher to make alternative arrangements regarding missed assignments or evaluations. In the event that advance notice is not possible, students should seek out the teacher first thing (before school) with the appropriate documentation (e.g. Doctor’s note, photocopied note from the office) in order to ensure that they have the opportunity to make-up the missed evaluation/assignment and course work.

Overall Course Expectations

A. SCIENTIFIC INVESTIGATION SKILLS AND CAREER EXPLORATION

Throughout this course, students will:

- demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analyzing and interpreting, and communicating);
- identify and describe a variety of careers related to the fields of science under study, and identify scientists, including Canadians, who have made contributions to those fields.

B. Matter and Qualitative Analysis

- The properties of matter can be predicted and analysed qualitatively
- Substances can be identified based on their distinct properties
- Qualitative analysis of matter is used in many different fields of endeavour

By the end of this course, students will:

- evaluate the effects of chemical substances on the environment, and analyse practical applications of qualitative analysis of matter
- investigate matter, using various methods of qualitative analysis
- demonstrate an understanding of the basic principles of qualitative analysis of matter

C. Organic Chemistry

- Organic compounds have predictable chemical and physical properties determined by their respective structures
- Organic compounds can be synthesized by living things or through artificial processes
- Organic chemical reactions and their applications have significant implications for society, human health, and the environment

By the end of this course, students will:

- Evaluate the impact on society, human health, and the environment of products made using organic compounds
- Investigate the physical and chemical properties of organic compounds, and analyse some common organic chemical reactions
- Demonstrate an understanding of the structure and the physical and chemical properties of organic compounds

D. Electrochemistry

- Oxidation and reduction are paired chemical reactions in which electrons are transferred from one substance to another in a predictable way
- The control and applications of oxidation and reduction reactions have significant implications for society and the environment

By the end of this course, students will:

- analyze technological applications or processes relating to oxidation-reduction reactions, and assess their impact on the environment

- investigate the oxidation-reduction reaction that occurs in a galvanic cell
- demonstrate an understanding of the concepts of oxidation and reduction, and the principles of oxidation-reduction reactions

E. Chemical Calculations

- Relationships in chemical reactions can be describe quantitatively
- Quantitative relationships of chemical reactions have applications in the home, workplace, and the environment

By the end of this course, students will:

- Analyse processes in the home, the workplace, or the environmental sector that use chemical quantities and calculations, and assess the importance of accuracy in chemical calculations
- Investigate chemical compounds and chemical reactions using appropriate techniques of quantitative analysis, and solve related problems
- demonstrate an understanding of the mole concept and its quantitative relationships in chemical reactions

F. Chemistry in the Environment

- Air and water quality can be affected by both natural processes and human activities
- Quantitative relationships of chemical reactions can be used to assess air and water quality

By the end of this course, students will:

- Evaluate the importance of government regulations, scientific analyses, and individual actions in improving air and water quality, and propose a personal plan of action to support these efforts
- Investigate chemical reactions, using appropriate techniques of quantitative analysis
- demonstrate an understanding of chemical reactions that occur in the environment as a result of both natural processes and human activities