



Grade 11 University Preparation Chemistry

COURSE CODE	SCH3U	GRADE	11
TEACHER(S)	Haidle	CREDIT VALUE	1.0
DEPARTMENT	Science	PREREQUISITE	SNC2D

COURSE DESCRIPTION:

This course enables students to deepen their understanding of chemistry through the study of the properties of chemicals and chemical bonds; chemical reactions and quantitative relationships in those reactions; solutions and solubility; and atmospheric chemistry and the behaviour of gases. Students will further develop their analytical skills and investigate the qualitative and quantitative properties of matter, as well as the impact of some common chemical reactions on society and the environment.

Additional information can be found at:
<http://www.edu.gov.on.ca/eng/curriculum/secondary/subjects.html>

COMMUNICATION

Please direct all questions or concerns regarding student progress or program of study to the course teacher. Please call the main office to leave a message at 416-395-3240.

CONCRETE LEARNING RESOURCES

McGraw-Hill Chemistry 11 (Replacement Cost: \$90)

DIGITAL LEARNING RESOURCES

My School Day App - An app that allows you to stay up-to-date with in-class tasks and receive reminders about upcoming evaluations.

Apps such as Khan Academy and Ed Puzzle

GEORGE S. HENRY ACADEMY'S COURSE WORK POLICY

For each evaluation, the teacher will inform students of the **due date** and the **ultimate deadline**. The ultimate deadline is the last opportunity for students to submit an assignment for evaluation. Teachers may also use a variety of other methods for dealing with late and missed assignments at their discretion.

Strategies to assist students in meeting deadlines include:

- Peer tutoring
- Using the school app
- Using a personal agenda
- Seeking extra help from teachers
- Requesting for assistance with time management and organizational skills
- Getting help from parents/guardians

- Getting help from a caring adult in the school

ASSESSMENT AND EVALUATION OF STUDENT ACHIEVEMENT

Each course follows an achievement chart which enables teachers to make judgements about student work that are based on clear performance standards and on a body of evidence collected over time. Additional information can be found on the Ministry of Education website noted within the course description.

ACHIEVEMENT CHART CATEGORIES

Knowledge and Understanding (K & U): Subject-specific content acquired in each course (knowledge), and the comprehension of its meaning and significance (understanding)

Thinking (T): The use of critical and creative thinking skills and/or processes

Communication (C): The conveying of meaning through various forms

Application (A): The use of knowledge and skills to make connections within and between various contexts

COURSE WORK (70% of your overall grade)

Categories	%	Possible Assessments of Learning
K & U	30%	<ul style="list-style-type: none"> • knowledge of content (e.g., facts, terminology, definitions, safe use of equipment and materials) • understanding of content (e.g., concepts, ideas, theories, principles, procedures, processes)
T	20%	<ul style="list-style-type: none"> • use of initiating and planning skills and strategies (e.g., formulating questions, identifying the problem, developing hypotheses, selecting strategies and resources, developing plans) • use of processing skills and strategies (e.g., performing and recording, gathering evidence and data, observing, manipulating materials and using equipment safely, solving equations, proving) • use of critical/creative thinking processes, skills, and strategies (e.g., analysing, interpreting, problem solving, evaluating, forming and justifying conclusions on the basis of evidence)
C	20%	<ul style="list-style-type: none"> • expression and organization of ideas and information (e.g., clear expression, logical organization) in oral, visual, and/or written forms (e.g., diagrams, models) • communication for different audiences (e.g., peers, adults) and purposes (e.g., to inform, to persuade) in oral, visual, and/or written forms • use of conventions, vocabulary, and terminology of the discipline in oral, visual, and written forms (e.g., symbols, formulae, scientific notation, SI units)
A	30%	<ul style="list-style-type: none"> • application of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) in familiar contexts • transfer of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) to unfamiliar contexts • making connections between science, technology, society, and the environment (e.g., assessing the impact of science on technology, people and other living things, and the environment) • proposing courses of practical action to deal with problems relating to science, technology, society, and the environment

FINAL EVALUATION (30% of your overall grade)		
Type	Description	%
Culminating Task(s)	TBA such as Practical lab exam, presentation	10%
Exam	Formal written exam during exam week.	20%

UNITS OF STUDY/COURSE ROAD MAP (subject to change)

A. Scientific Investigation Skills and Career Exploration:

- A1. demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating);
- A2. identify and describe careers related to the fields of science under study, and describe the contributions of scientists, including Canadians, to those fields.

B. Matter, Chemical Trends, and Chemical Bonding:

- B1. analyse the properties of commonly used chemical substances and their effects on human health and the environment, and propose ways to lessen their impact;
- B2. investigate physical and chemical properties of elements and compounds, and use various methods to visually represent them;
- B3. demonstrate an understanding of periodic trends in the periodic table and how elements combine to form chemical bonds.

C. Chemical Reactions:

- C1. analyse chemical reactions used in a variety of applications, and assess their impact on society and the environment;
- C2. investigate different types of chemical reactions;
- C3. demonstrate an understanding of the different types of chemical reactions.

D. Quantities in Chemical Reactions:

- D1. analyse processes in the home, the workplace, and the environmental sector that use chemical quantities and calculations, and assess the importance of quantitative accuracy in industrial chemical processes;
- D2. investigate quantitative relationships in chemical reactions, and solve related problems;
- D3. demonstrate an understanding of the mole concept and its significance to the quantitative analysis of chemical reactions.

E. Solutions and Solubility:

- E1. analyse the origins and effects of water pollution, and a variety of economic, social, and environmental issues related to drinking water;
- E2. investigate qualitative and quantitative properties of solutions, and solve related problems;
- E3. demonstrate an understanding of qualitative and quantitative properties of solutions.

F. Gases and Atmospheric Chemistry:

- F1. analyse the cumulative effects of human activities and technologies on air quality, and describe some Canadian initiatives to reduce air pollution, including ways to reduce their own carbon footprint;
- F2. investigate gas laws that explain the behaviour of gases, and solve related problems;
- F3. demonstrate an understanding of the laws that explain the behaviour of gases.

Lab & Inquiry Activities

In this course you will complete several labs and inquiries, in addition to appropriate computer simulations, including:

- ✓ Investigating properties of the periodic table
- ✓ Investigate chemical reactions qualitatively
- ✓ Perform quantitative analysis on chemical reactions to determine percent yield
- ✓ Perform titration of acids and bases

GEORGE S. HENRY ACADEMY'S LATE & MISSED EVALUATION POLICY

It is the responsibility of the student to make arrangements with their teacher for any missed course material and/or assignments. Extenuating circumstances will be considered on a case-by-case basis.

GEORGE S. HENRY ACADEMY'S ACADEMIC DISHONESTY POLICY

Cheating and plagiarism will not be condoned. For more information, refer to the Academic Honesty Policy found in the Student Handbook. The Student Handbook can be found in the George S. Henry Academy app.

SPECIALIST HIGH SKILLS MAJOR (SHSM) REQUIREMENTS

GRADE 11 AND 12 CREDITS	ENVIRONMENT	HEALTH & WELLNESS	HOSPITALITY & TOURISM
Major Credits	4	4	4
English (<i>including a CLA*</i>)	2	1	1
Mathematics (<i>including a CLA</i>)	1	1	1
Science or Social Sciences and Humanities (<i>including a CLA</i>) (<i>May be substituted with 1 coop credit</i>)	-	1	-

Business Studies or Science <i>(including a CLA) (May be substituted with 1 coop credit)</i>			1
Cooperative Education	2	2	2
TOTAL	9	9	9

*Contextualized Learning Activity