

Course Outline 2017/2018

SCH4U - Chemistry, Grade 12, University Preparation



All courses within HDSB are taught in learning environments that promote inclusive education, and identify and eliminate discriminatory biases, systemic barriers, and power dynamics that limit the ability of students to participate, learn, grow, and succeed. All students see themselves reflected in the curriculum, their physical surroundings, and the broader environment, so that they are engaged in and empowered by their learning experiences.

The expectations in Grade 12 Chemistry, University Preparation are organized in six strands, the first focusing on scientific investigation skills and the remaining five representing major topics in the study of chemistry. The six strands are as follows:

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| <p>Scientific Investigation Skills and Career Exploration</p> <ul style="list-style-type: none"> ❑ Demonstrate scientific investigation skills in four areas: initiating and planning, performing and recording, analysing 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. | <p>Organic Chemistry</p> <ul style="list-style-type: none"> ❑ Organic compounds have predictable chemical and physical properties determined by their respective structures. ❑ Organic chemical reactions and their applications have significant implications for society, human health, and the environment. |
| <p>Structure and Properties of Matter</p> <ul style="list-style-type: none"> ❑ The nature of the attractive forces that exist between particles in a substance determines the properties and limits the uses of that substance. ❑ Technological devices that are based on the principles of atomic and molecular structures can have societal benefits and costs. | <p>Electrochemistry</p> <ul style="list-style-type: none"> ❑ Oxidation and reduction are paired chemical reactions in which electrons are transferred from one substance to another in a predictable way. <p>The control and applications of oxidation and reduction reactions have significant implications for industry, health and safety, and the environment.</p> |
| <p>Chemical Systems and Equilibrium</p> <ul style="list-style-type: none"> ❑ Chemical systems are dynamic and respond to changing conditions in predictable ways. ❑ Applications of chemical systems at equilibrium have significant implications for nature and industry. | <p>Energy Changes and Rates of Reaction</p> <ul style="list-style-type: none"> ❑ Energy changes and rates of chemical reactions can be described quantitatively. ❑ Efficiency of chemical reactions can be improved by applying optimal conditions. ❑ Technologies that transform energy can have societal and environmental costs and benefits. |

Learning Skills & Work Habits

- ❑ Responsibility
- ❑ Organization
- ❑ Self-Regulation
- ❑ Independent Work
- ❑ Collaboration
- ❑ Initiative

Learning skills and work habits are an important part of your growth. Learning Skills and Work Habits will be taught, assessed, evaluated, and shared on your report card. This gives you and your parents/guardians valuable information about your learning.

How your grades will be determined

Your work throughout the semester accounts for **70%** of your final grade:

- Your teacher will collect and track evidence of your learning through observations of your work; conversations with you; and by evaluating the work you produce.
- Your teacher will provide feedback to help you with further study and improvement
- Your 70% work will be returned for your review and reflection.

15% **Knowledge & Understanding**: subject-specific content acquired (knowledge), and the comprehension of its meaning and significance (understanding).

20% **Application**: the use of knowledge and skills to make connections within and between various contexts.

20% **Thinking**: the use of critical and creative thinking skills and/or processes.

15% **Communication**: the conveying of meaning through various forms (oral, visual, and/or written).

(The Science Teacher Subject Council has determined the weightings of the above categories for this course)

The Final Evaluations account for **30%** of your final grade³:

- A portion of your Final Evaluation will take place in class at or near the end of your course. It will not require significant preparation outside of class time.²
- Another portion will take place during the Evaluation Block of time after classes end.

15% In Class Final Evaluation:

A performance task consisting of an investigation or an open-ended problematic situation; individual student effort; evaluated by teacher.

15% Evaluation Block Final Evaluation:

A 2 hour exam within a 2.5 hour time slot consisting of a variety of question types (e.g., short answer, multiple choice, extended response, problem solving, etc.); evaluated by teacher

Your **final grade** will be calculated by combining your Term (70%) grade and your Final Evaluations (30%).

For more information about what you need to know about...

1) [Meeting Timelines and Academic Honesty](https://goo.gl/KTAh40)¹ - goo.gl/KTAh40

2) [Final 30% Evaluations](https://goo.gl/W82PYL)² - goo.gl/W82PYL

3) [Determining Report Card Grade](https://goo.gl/FuzbMW)³ - goo.gl/FuzbMW

Your teacher can provide you with a paper copy of this information if required.