

2023 Course Outline
SCH4U1
Mr. M. Steel

Contact Information

email Address: mark.steel@tdsb.on.ca

Course Description

This course enables students to deepen their understanding of chemistry through the study of organic chemistry, the structure and properties of matter, energy changes and rates of reaction, equilibrium in chemical systems, and electrochemistry. Students will further develop their problem-solving and investigation skills as they investigate chemical processes, and will refine their ability to communicate scientific information. Emphasis will be placed on the importance of chemistry in everyday life and on evaluating the impact of chemical technology on the environment. **Prerequisite Courses:** Chemistry, Grade 11, University Preparation (mandatory)

Assessment & Big Ideas

Energy Changes and Rates of Reaction

- 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.

Chemical Systems and Equilibrium

- 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.

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 industry, health and safety, and the environment.

Organic Chemistry

- 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.

Structure and Properties of Matter

- 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.

Assessment and Evaluation

Assessment: Assessment is regular and continuous and is used for the ***improvement of teaching and learning and not for grade reporting.*** The purposes of assessment are to:

- ***Diagnose*** and track student progress & achievement;
- Provide ***feedback*** to students and parents/guardian about student progress and achievement;
- To allow students ***to assess*** their own progress & achievement;
- To implement and ***improve instruction***, curriculum and programs for ***all students.***

Evaluation: Evaluation is varied and will be done on particular ‘chunks’ of work (after opportunities for learning, practice and feedback). Where skills are developed throughout the course, there will be an emphasis on the most ***recent and consistent*** achievement.

To promote student success, ongoing formative assessment and feedback will be given to students. As required by the Ministry of Education, students will be assessed in the four areas of the achievement chart. The chart below provides percentages for each category.

Assessment Category	Percentage
Knowledge and Understanding	25%
Thinking	25%
Communication	25%

Application	25%
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The final grade will be determined as follows (in accordance with Ministry of Education standards):

Term Work (70%) <ul style="list-style-type: none"> ● Based on evaluations from throughout the course <ul style="list-style-type: none"> ○ tests + quizzes (40) ○ assignments/activities/labs (30) 	
Culminating Activity (30%) <ul style="list-style-type: none"> ● Final Exam (20) ● Culminating Activity (10) 	

Learning Skills Assessment

Learning Skills (*Responsibility, Organization, Independent Work, Collaboration, Initiative, Self-regulation*) will be assessed, evaluated, and reported separately from the achievement grade on the report card.

Skills: Responsibility Organization Independent Work Collaboration Initiative Self-regulation	Rating Scale: E – Excellent G – Good S – Satisfactory N – Needs Improvement
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Expectations

- 1) All labs/quizzes/tests are to be completed on time. **Refer OFTEN to the course outline and due dates.**
- 2) It is expected that you log in to your teacher’s website often to check for updates. New material and/or announcements will be posted regularly.
- 3) I can see everything in your BrightSpace account, such as login times, how long you logged in for and so on. Be responsible when you are online.

Academic Honesty- Hand in Your Own Work

Students are expected to be academically honest and submit their own work, so that the mark received reflects their own academic achievement.

Students are expected to be academically honest by submitting their own original work, and the grades they receive are intended to reflect their own academic achievement. Academic dishonesty in any form is a serious offense.

What Does “My Own Work” Mean Exactly?

When working with others online, sharing ideas, and explaining answers to each other is often allowed. Taking answers or giving out answers directly without explanation is not allowed.

Here are some common situations to help make it more clear:

Example 1: A teacher opens a worksheet to be completed individually, online. A student messages you to go through the answers. You submit your work in the drop box. The teacher sees the two worksheets are identical and when asked about it, the other student says “we were just working together”.

Q: Did the student copy your work?

A: Yes, because....

Example 2: A teacher opens up a group assignment. Each student submits their own assignment to the drop box. Your group members do not understand the work as well as you, and they write their answers exactly as yours. Turnitin notifies the teacher that the worksheets are 98% identical. When the teacher asks the other students in your group, they say “it was group work, you told us to work together”.

Q: Did the students in your group copy your work?

A: Yes, because ...

For a research project or presentation, people often download text, pictures and video from the internet.

Q: Is this plagiarism?

A: Well, the answer is complicated...

You CANNOT use the text directly in a written assignment, project or in a spoken presentation, unless you clearly say they are not your own words, you put them in quotes with a web URL as a reference (outside of school, you would need to have permission from the owner).

You CANNOT take pictures directly from a website unless you tell the reader or listener what specific web URL you got the picture from (outside of school, you would need to have permission from the owner).

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