

**Grade 11 University Chemistry – SCH 3UI**  
**Course Overview 2016 - 2017**

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**Course Type:** University Level  
**Teacher:** Mr. White  
**Textbook:** Chemistry 11 by McGraw-Hill

**Grade Level:** 11  
**Department:** Science

**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.

Prerequisite: Science, Grade 10, Academic

**Big Ideas:**

Matter, Chemical Trends, and Chemical Bonding

- Every element has predictable chemical and physical properties determined by its structure.
- The type of chemical bond in a compound determines the physical and chemical properties of that compound.
- It is important to use chemicals properly to minimize the risks to human health and the environment.

Chemical Reactions

- Chemicals react in predictable ways.
- Chemical reactions and their applications have significant implications for society and the environment.

Quantities in Chemical Reactions

- Relationships in chemical reactions can be described quantitatively.
- The efficiency of chemical reactions can be determined and optimized by applying an understanding of quantitative relationships in such reactions.

Solutions and Solubility

- Properties of solutions can be described qualitatively and quantitatively, and can be predicted.
- Living things depend for their survival on the unique physical and chemical properties of water.
- People have a responsibility to protect the integrity of Earth's water resources.

Gases and Atmospheric Chemistry

- Properties of gases can be described qualitatively and quantitatively, and can be predicted.
- Air quality can be affected by human activities and technology.
- People have a responsibility to protect the integrity of Earth's atmosphere

**Overall Expectations:**

Matter, Chemical Trends, and Chemical Bonding

- B1. Analyze 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.

Chemical Reactions

- C1. Analyze 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.

### Quantities in Chemical Reactions

- D1. Analyze 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.

### Solutions and Solubility

- E1. Analyze 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.

### Gases and Atmospheric Chemistry

- F1. Analyze 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.

### **ASSESSMENT AND EVALUATION:**

- A variety of assessment tasks will be used to evaluate student progress.
- **Late and Missed Assignments** – To achieve success in this course, all essential course components must be demonstrated. Incomplete work is **NOT** an option.
- **Cheating and Plagiarism** – It is important for students to do their own best work. If a student is suspected of cheating or plagiarizing, the teacher in consultation with administration, will determine the next steps and/or consequences.
- **Learning Skills and Work Habits** – The areas of Responsibility, Organization, Independent Work, Collaboration, Initiative, and Self-regulation are important and will be assessed and reflected on the provincial report card.
- **Attendance**– Attendance and punctuality in classes are important parts of learning and an expectation of student behaviour. Lates are to be avoided to benefit from full instructional time and not disrupt other's learning time. When a student is absent, a parent/guardian must call the school's attendance line on the date of absence, or provide a note explaining the absence for the student to submit the following day. Students are responsible for missed work during their absence.

### **Course Evaluation:**

Matter, Chemical Trends, Chemical Bonding --10%	Solutions and Solubility --- 10%
Chemical Reactions --- 10%	Gases and Atmospheric Chemistry --- 10%
Quantities in Chemical Reactions --- 10%	Laboratory Activities / reports --- 12%
Nomenclature --- 8%	Final Evaluation --- 30%

WEBSITE: <https://mrwhite.updog.co>

QUIZLET: Grade 11 University Chemistry

SCHOOLGY: \_\_\_\_\_

By signing this course outline, I acknowledge that I have read and understood the expectations and requirements for successful completion of this course.

\_\_\_\_\_  
Student's Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent/Guardian Signature

\_\_\_\_\_  
Date

## ***Submission of Late Assessments***

The Science Department at Huron Heights is committed to ensuring fairness in our evaluation procedures. The WRDSB has determined policy relating to the submission of late/missing assessments. The Assessment, evaluation and reporting handbook grades 9 to 12: WRDSB, c2013 informs:

Many experts in the field of assessment and evaluation discourage deducting marks or giving zeros for late and missed assignments, arguing that such measures do not motivate students to change their behaviour. Students must understand that there may be consequences for not completing assignments for evaluation or for submitting those assignments late. Lateness is an issue of student responsibility and time management, as well as academic fairness. It must be made clear to students early in the school year that they are responsible for providing evidence of their achievement of the overall expectations within a time frame negotiated with the teacher. Marks may not be deducted for assignments that are handed in late; rather, instances of lateness can be reflected in the student's Learning Skills and Work Habits.

This has lead to the development of the following expectations by the HHSS Science Department:

- 1. All work will be assigned a "Due Date". This is the date that student work is to be submitted. The advantage for the student who meets the "Due date" will be the opportunity of their work to receive feedback from their teacher as well as receiving a grade.*
- 2. If a student misses the "Due Date" then they will be given a 1-week extension in which they may still submit the work. This work may receive feedback and will be assigned a grade.*
- 3. If the 1-week extension is missed, the student is still required to submit the work. They will receive no feedback and no grade. The teacher will record the work as "complete". The student has missed an opportunity to earn a mark through demonstrating their knowledge.*

## ***Student Work Expectations***

At Huron Heights we are committed to ensuring fairness in our evaluation procedures. Your son/daughter will, on occasion, have the opportunity to work collaboratively with other students on activities and assignments within the context of their Science class. In order to ensure fairness for all, we will apply the following expectations for work submitted by our students.

- 1. All submitted work must be entirely produced by the student who earns credit/marks for that work.*
- 2. When completing assignments, research, and laboratory reports students must work from the premise that their submitted work reflects their own thoughts, ideas, words, designs, products, images, shapes, or intellectual property. Failure to do so may result in an academic consequence.*
- 3. If students use material from another source, it must be clearly cited/referenced.*

**Note: During laboratory activities students will share the performance of the lab duties and the collection of data. It is expected that students independently complete the interpretation, analysis, conclusions, and final writing of their laboratory reports.**