Ms. Shelley Casey 2022-2023

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**Chemistry 112**

**Course Outline – Prioritized Curriculum**

**Objective**

The objective of chemistry 112 is to build on the foundation given in Grade 10 science as well as develop students’ understanding of bonding, compound formation, and stoichiometry. The topics covered in this course help build comprehension of not only those relating to chemistry, but important skills required for further study in the sciences. Since stoichiometry is a major topic of study, it is suggested that those students enrolled are mathematically competent.

**Instructional Planning**

**Unit One: From Structures to Properties (38 hours)**

Underlying Structure of Matter

*Atoms, ions, molecules*

Elements and Compounds

*Elements combining to form compounds having characteristic properties*

Chemical Bonding

*Predicting types of compounds based on electronegativity, polarity*

Molecular Shape and Forces

*VSEPR Theory, molecular shape, intermolecular and intramolecular forces*

Properties

*Different types of bonds account for differences in compounds*

**Unit Two: Stoichiometry (52 hours)**

Chemical Changes

*Five types of reactions, predicting products, mole ratios*

The Mole

*Concepts of mole and molar mass, chemical equations, conversions*

Stoichiometry

*Mole ratio calculations, Limiting reagents, stoichiometric experimentation, applications of stoichiometry, gas laws & stoichiometry*

**Evaluation**

Structure to Properties 20%

Chemical Changes 15%

The Mole 15%

Stoichiometry 20%

Final Assessment 30%

Extra help will available as needed – mornings, lunch time or after school

If a student fails a summative assessment, they can apply for an opportunity for a redo to obtain a replacement mark of maximum 65%. The student must apply with a request to redo form, if approved, they must attend a help session on section(s) they struggled with on the assessment, and it must be completed within 2 weeks of original assessment.

Office 365 (Teams, OneNote, etc) will be used throughout the semester to aid in learning.