**Course Outline**

**Teacher:**  Marie-Eve Owen

**Class schedule:**  Semester 2, period 3 12:15-13:35

**Teacher contact:**  marie-eve.owen@yesnet.yk.ca or tel. (867) 667-8044, ext. 141

**Website:**  www.m-eowen.weebly.com

**Textbook:**  Hebden Chemistry 12 Workbook (Hebden)

**Supplies:**  Binder, lined paper, pencil, pen, eraser, ruler, scientific calculator

**Recommended:**  Mastery of Pre-calculus & Chemistry 11

**Course Description**

Problem-solving and math skills are used in understanding, predicating and manipulating acid-base neutralization and redox reactions in Chemistry 12. Students will learn concepts pertaining to reaction rates, equilibrium solutions, acid-base and redox reactions. They will analyze patterns and relationships in chemical processes and naming. They will also practice precise and accurate measurements and conversions using stoichiometric calculations. Students will learn to analyze cause-and-effect relationships in the world of chemistry.

**Student Behaviour:** Students will:

* Follow all laboratory safety rules and show respect.
* Be responsible for any missed material.
* Come prepared and on time. Cell phones are never to be used as a calculator.

**Evaluation:**  Students will demonstrate understanding of the curricular content and the ability to perform the curricular competencies

* 10 Quizzes 10%
* 6 Tests 45%
* 3 Projects/assignments/labs 30%
* Final Exam 15%

**Absences:** It is expected that in the case of absence, the student is responsible for catching up missed material online.https://m-eowen.weebly.com/chemistry-12.html

**Plagiarism and cheating** will result in an automatic zero.

**Curricular Content:** Hebden, Chemistry 12: A Workbook for Students

Unit 0: Introduction and Safety 1 week

Unit 1: Reaction Kinetics 3 weeks

Unit 2: Equilibrium 3 weeks

Unit 3: Solutions and Equilibrium 3 weeks

Unit 4: Acids, Bases and Salts 3 weeks

Unit 5: Oxidation-Reduction 3 weeks

Course Review 2 weeks

**Big Ideas:** By the end of this course students will be expected understand the following big ideas: • Atoms and molecules are the fundamental building blocks of matter

* Reactants must collide to react, and the reaction rate is dependent on the surrounding conditions.
* Dynamic equilibrium can be shifted by changes to the surrounding conditions.
* Saturated solutions are systems in equilibrium.
* Acid or base strength depends on the degree of ion dissociation.
* Oxidation and reduction are complementary processes that involve the gain or loss of electrons.

**Curricular Competencies:**  By the end of this course students are expected to be able to do the following:

* Questioning and predicting (purpose/hypothesis)
* Planning and conducting (procedure, lab skills, observations)
* Processing and analyzing data and information (analysis questions, graphing)
* Evaluating (drawing conclusions, identifying sources of error and ideas for further experimentation)
* Applying and innovating (Use curricular content to solve problems, design projects etc.)
* Communicating (Use curricular content to express your opinion, create models, develop an argument, or reflect on personal experiences, and worldviews

**Core Competencies:**  The following core competencies will be incorporated into the delivery of this course:

* Communication
* Creative and critical thinking
* Positive personal identity, awareness and responsibility
* Positive social and cultural identity and responsibility

*For more detailed information visit: https://curriculum.gov.bc.ca*