

Chemistry 12

Learning Outcomes: The activities in this course are based on the core competencies and curricular competencies as provided by the Ministry of Education of BC and will introduce students to five key ideas: 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, and oxidation and reduction are complementary processes that involve the gain or loss of electrons.

View the complete Ministry of Education learning outcomes for this course: [Chemistry 12](#)

Resources: Most activities can be completed with materials found at home. In some cases, it may be necessary to make arrangements with a Science teacher (in a regular school setting) to complete certain tasks. All other resources are provided within the course. Students will need good access to the Internet and will be required to use online tools.

Exams: All exams require a password and are to be invigilated by a teacher at your school or an approved testing center. Exams may be rewritten if needed. Exams may cause anxiety for some students. See your teacher for study skills if necessary. Quizzes may be rewritten, so use them as practice or review.

Communication: Assignments are submitted directly through your course. Constant communication with your teacher is key to success in a DL course. Phone or email or message your teacher for help whenever necessary.

Goal Setting: This course is self-paced and self-directed. Students should plan on working 5-6 hours a week on this course. It is highly recommended that the student creates a calendar of monthly, weekly and even daily goals. Contact your teacher if help is needed doing this.

Learning Guides/Projects: Print out unit learning guide, complete and upload in pdf form. Once mastered, select and complete a unit project, then upload in pdf form. Please ensure these are neat and organized. Learning guides must be submitted before writing unit exams.

Unit 1: Reaction rates and the factors that affect them. Reaction mechanisms - understanding the steps that reactants might take to become products, including the role of catalysts.

Unit 2: Dynamic equilibrium from both a general and mathematical perspective.

Unit 3: Solution Chemistry

Unit 4: Acids, bases, and salts

Unit 5: Theoretical oxidation and reduction and its application to electrochemical cells.

Assessment

Midterm and Final Exam

*all supervised exams must be written at your school or an approved testing center.

This 4-credit course will be broken down as follows:

Learning Guides - 10% of the overall grade.

Projects - 15% of the overall grade.

Practice Exams - 5% of the overall grade.

Unit Exams - 20% of the overall grade.

Midterm Exam - 20% of the overall grade.

Final Exam - 30% of the overall grade.