Chemistry 12

Course Outline

Course Overview

Chemistry 12

Chemistry 12 explores chemical reactions: why and how they happen, and chemical systems in equilibrium. This course builds on students' knowledge of core chemistry concepts and focuses on big ideas related to reaction rates, dynamic equilibrium, saturated solutions, acid and base strength and oxidation/reduction. The course is divided into five units each focused on one big idea. Each topic has video lessons, supplemental material, and suggested workbook readings. There are quick-check quizzes, quizzes, assignments and a unit test to both improve and measure learning.

Course Content and Suggested Timelines

The suggested timeline indicates the approximate time that will spent on each unit of study:

Unit 1: Reaction Kinetics In this unit we will use collision theory and reaction mechanisms to explain the significance of reaction rates, demonstrate how rates can be measured and explain how rates are altered.	Suggested time: ~ 15 hours
Unit 2: Equilibrium Reversible reacting systems will be analyzed with reference to Le Chatelier's Principle and the concept of the reaction constant.	Suggested time: ~ 20 hours
Unit 3: Solubility Equilibrium The concept of the equilibrium constant is used to demonstrate and explain solute-solvent interactions in saturated solutions.	Suggested time: ~ 20 hours
Unit 4: Acids, Bases, and Salts	Suggested time:

We will describe the characteristics of acids and bases using a Bronstead-Lowrey model. The acid-base constants and the ionization constant of water will be used to calculate pH and pOH of different acid-base equilibria. The use of titration to determine quantities of materials will be examined.	~ 25 hours
Unit 5: Electrochemistry The essential components of reacting systems that involve electron transfer will be described. The stoichiometry of redox reactions will be determined by balancing redox reactions.	Suggested time: ~ 20 hours

Course Materials

The textbook for this course is Chemistry 12: A Workbook for Students (Hebden, 1998). Data pages are also provided for students to use throughout the course; these pages contain important values and tables. All other resources are provided with the online course.

The prescribed learning outcomes for this course as outlined by the Ministry of Education are available at: Chemistry 12 New Curriculum.

Assessment Information

Quick Check Quizzes	10% of course
Assignments	30% of course
Quizzes	10% of course
Unit Tests	50 % of course

Quick Check Quizzes: (10%)

At the end of each section you will be given a brief quiz on the topic learned to check your understanding. You may use your textbook and other resources to answer them. You will have two attempts on each quiz, so if you don't achieve at least 75% on the first try please review the material again before making your second attempt. If you need to use your second attempt, the highest score you achieve will be recorded. Please review the feedback while the quiz is still open as it will help you to improve on your second attempt. Your quiz mark will be given to you immediately and your gradebook will be updated.

Assignments: (30%)

For each unit there is at least one assignment that needs to be completed. These assignments are displayed on the course website and can be accessed directly from there. You may use your textbook and other resources to help you with the assignment. When you have completed your assignment, you will need to submit it to be marked. Once the assignments have been marked you can view them in your gradebook.

Quizzes: (10%)
There will be at least one quiz for each chemistry 12 unit. Please note that quizzes are "**closed book" tests**, which means that you are **not permitted** to use the textbook or any other reference materials to help answer the questions. You are permitted to use a calculator and data booklet if needed.

Unit Tests (50%)
There are five unit tests in this course. Unit tests 1,3, and 4 are home-supervised tests. The unit 2 and 5 tests will be invigilated. All tests are closed book. Students are expected to abide by the EBUS Student Integrity Policy. A calculator and the Chemistry 12 data booklet are permitted. Unit tests contain multiple choice and short answer questions. Marks are also given for correct significant figures and units.

Home-Supervision: Any adult (may be a relative). Complete the supervisor form associated with this course. Once approved, the teacher will send the test passwords to the supervisor.

Invigilation for Unit 2 test and Unit 5 tests: at an EBUS approved testing center (information on how to book your tests is found in the course). Please **contact me AT LEAST 1 week prior** to when you want to write your invigilated tests.

When students are not meeting the learning outcomes/ falling behind

When students fall behind the expected pace or plan, they will be contacted via email or phone and if there is no improvement or response, parents will also be contacted. If deemed necessary, contact with the student's home school may also occur to help determine a solution.

Students are expected to let the course teacher know when they are struggling with course content. In response, the course teacher will provide appropriate help or strategies to support learning. The course teacher will also provide feedback on course work to support learning and help students improve. Parents will be made aware if their child is actively working but struggling to meet the learning outcomes of the course.

Students falling behind in a manner where it does not appear that they will complete the course within a year will be sent reminder emails. Without a response or renewed efforts in the course, the student may be assigned an F or withdrawn. Should they begin actively working in the course, the student may be given an alternate completion date.

Inactivity and Communication

Students are expected to login and submit work in their online courses on a weekly basis. EBUS teachers monitor student participation, work submission and periods of inactivity in their courses. Students who are have not accessed their course for a period of ***two weeks or longer*** will receive an ***online gentle reminder email*** to inquire about progress and reasons for inactivity; parents will

also receive a copy of the email. Students who receive a reminder email must contact their teacher to communicate their intentions for the course and any other information that will help support their learning. If a student has been inactive for a period of *eight consecutive weeks* or longer, has received *three online reminders* and has *not responded to communications* from their online teacher, the student may be withdrawn from the course.

Communication between students and teachers is important. EBUS Academy offers a flexible learning environment and we understand that various circumstances can arise that prevent students from engaging in their courses. When students anticipate being absent from their online course, they should contact their teacher in advance, whenever possible.

Expectations

- Adhere to the EBUS Academic Integrity Policy
- Contact your teacher when help is needed
- Review feedback from assignments and tests, where applicable
- Work to complete the course in a timely manner
- Communicate respectively
- Review weekly progress reports

Reporting to Parents:

There are 4 term report cards that can be downloaded from the student dashboard. A notice will go out when these report cards are available.

The teacher will send out a weekly or bi-weekly progress report showing the student's progress, on weeks that EBUS is in session.

Contacting Your Teacher:

Your teacher will be available Monday to Friday during regular school hours. If you are having trouble with any concepts, please contact your teacher right away! There are also weekly drop in V-classes for help.
Please contact your teacher via email at tclark@sd91.bc.ca

All the best,

Mr. Clark