



Chemistry 11 Course Outline

Course Overview

Chemistry 11

Chemistry 11 explores the world of science on an atomic level and is designed to build students' knowledge of core chemistry concepts. The course focuses on big ideas related to atoms, molecules and moles, chemical reactions and energy, solution chemistry, and organic chemistry. Chemistry 11 emphasizes real-life applications of chemistry and helps students connect their learning to the world around them. Several virtual labs and one hands-on home lab deepen student understanding of content and scaffold important lab skills that will be required for future science courses and a variety of post-secondary programs. Chemistry 11 provides a solid foundation for students carrying on to Chemistry 12.

Course Content and Suggested Timelines

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

Unit 1- Introduction to Chemistry (Suggested time: 2-3 hours)

You will learn about how to work safely in the lab and what to do in case of an emergency. How to use common laboratory equipment and emergency equipment will be studied. Finally, you will learn about laboratory hazards and general safety rules.

Unit 2 - Measurement and Density (Suggested time: 5 hours)

A review of metric unit conversions and density calculations will be covered. You will learn about significant figures, experimental uncertainty and how to read a scale.

Unit 3- Matter and Energy (Suggested time: 10-15 hours)

You will learn about the properties of matter and how matter is classified (pure substances, mixtures and solutions). You will learn how to practically separate different substances. You will review physical changes/ chemical changes and understand how to read temperature-energy graphs for phase changes. You will complete one virtual lab in this unit.

Unit 4- Nomenclature – Naming Compounds (Suggested time: 10 hours)

A review of naming chemical formulae and writing formulae from the chemical name will be covered.

Unit 5- Mole Concepts (Suggested time: 15 hours)

You will review the nature of atomic mass and use this concept to calculate the molar mass of elements and compounds. You will define the mole and use it to perform calculation relating the number of particles, moles, and mass.

Midterm 1 Review (Suggested time: 5 hours)**Unit 6 - Chemical Reactions (Suggested time: 20 hours)**

You will review the different types of reactions and how to balance them. Also, you will learn how to predict products for each type of reaction. Finally, you will learn the difference between exothermic and endothermic reactions and relate energy to bond breaking. You will complete two virtual labs during this unit.

Unit 7 - Atomic Theory (Suggested time: 15 hours)

The four models of atomic theory will be reviewed. Also, you will review the Periodic Table and the patterns found within. Isotopes will be studied in detail. Different types of bonds and how they are formed will also be studied. Finally, you will learn about electron dot diagrams and structural formulae.

Unit 8- Solution Chemistry (Suggested time: 10 hours)

You will learn about solutions, solutes and solvents. Characterizing common solvents as polar and non-polar will be covered. You will also learn about electrical conductivity in solutions. Finally, you will learn how to write dissociation or ionization equations and calculate the molarity of the solution.

Unit 9 - Organic Chemistry (Suggested time: 10 hours)

Carbon is the backbone of organic chemistry. You will learn about all the different ways that carbon can bond with other atoms and how those compounds are used in the world today. You will define the different groups of organic compounds and structural isomerism.

Midterm 2 Review (Suggested time: 5 hours)**Course Materials**

A textbook (titled “Hebden Chemistry 11: A Workbook for Students”) will be issued for you once the Density Assignment has been marked.

Labs are an important component to this course. In this course you are required to complete virtual labs and one formal home- lab. Lab materials for the home lab will not be sent out but are readily available around the home.

The prescribed learning outcomes for this course are available at: [New Curriculum Chemistry 11](#)

Assessment Information

Quizzes	10% of course
Assignments	10% of course
Labs	30% of course
Unit Tests & Projects	30% of course
Midterm Exam 1	10% of course
Midterm Exam 2	10% of course

Quizzes: (10%)

At the end of each section you will be given a brief quiz on the topic learned. 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: (10%)

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.

Unit Tests & Projects: (30%)

There are five unit tests in this course (chapters 2,3,4,5,7). Not all units contain an end-of unit test; some units contain a lab, project or optional practice test. Projects in this course focus on real-life applications of chemistry and global issues. Unit tests are home-supervised and "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 your data pages and your calculator.

Labs: (30%)

Labs are an important part of science and are necessary to build lab-specific skills. This course contains virtual interactive labs as well as one home lab. The virtual interactive labs help you make connections between the course material and real-life chemistry. In addition, these labs guide you in writing a

laboratory report. The home lab is to be done at home and you will be able to choose between several labs. Please note that all lab materials are common materials and the lab is safe to perform at home. Completion of the labs is mandatory.

Midterm 1: (10%)

There will be a midterm exam for chemistry 11 covering units 2-5. The exam is CLOSED BOOK, 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 your data pages and your calculator.*** Your Midterm exam must be ***INVIGILATED by an EBUS approved invigilator.*** Please contact me **AT LEAST 1 week prior** to when you want to write your midterm exam.

Midterm 2: (10%)

There will be a second midterm for chemistry 11 covering units 6-8. The exam is CLOSED BOOK, 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 your data pages and your calculator.*** Your midterm exam must be ***INVIGILATED by an EBUS approved invigilator.*** Please contact me **AT LEAST 1 week prior** to when you want to write your midterm exam.

Supervised and Invigilated Tests/Exams:

Supervised exams are exams that can be taken at home with parent or other adult supervision. All unit tests are to be supervised by an adult.

Invigilated exams are exams that need to be invigilated by EBUS approved invigilators. There are two invigilated midterm exams for chemistry 11.

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 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 respectfully
- 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.

There are currently two teachers for the course; please contact the teacher of the course in which you are enrolled. You will see your teacher's contact information in the course.

Stephanie Sedgwick (email): ssedgwick@sd91.bc.ca

Tyler Clark (email): tclark@sd91.bc.ca