



Calculus 12 Course Outline

Course Overview

Calculus 12 will give students a basic understanding of calculus which will help those who wish to go into post-secondary math, science, engineering, business, or computer science programs.

Curriculum and Suggested Timelines

The course focuses on four big ideas.

1. The concept of a limit is foundational to calculus.
2. Differential calculus develops the concept of instantaneous rate of change.
3. Integral calculus develops the concept of determining a product involving a continuously changing quantity over an interval.
4. Derivates and integrals are inversely related.

Chapter 1: Functions (10 hours)

Chapter 2: Limits and Continuity (15 hours)

Chapter 3: Differentiation (20 hours)

Chapter 4: Applications of Derivatives (15 hours)

Chapter 5: Integration (20 hours)

Chapter 6: Applications of Integrals (15 hours)

Chapter 7: Differential Equations and More Riemann Sums (15 hours)

Chapter 8: Supplemental Topics (Optional)

Course Materials

There is no textbook issued for this course. Instead, lessons are provided through StudyForge. Access to StudyForge will be granted upon enrolment.

To complete the course, you will need: a scientific non-graphing calculator, access to the internet, a computer, printer, and a digital camera (phone/tablet cameras work) or scanner. If any of these are not easily accessible, please contact your teacher for help getting what you need or an alternative.

The prescribed learning outcomes for this course are available at:
<https://curriculum.gov.bc.ca/curriculum/mathematics/12/calculus>

Information

Grade breakdown:

25%	Portfolio: The purpose of the portfolio is for the learner to record and share evidence of their learning. The learner shows how their evidence connects with the curricular competencies and content.
20%	Assignments/Activities: There is at least one assignment that needs to be completed in each chapter. The AP labeled assignment are required if you would like to earn an extending grade.
15%	Projects: There are two projects in total for this course.
0%	Quizzes (not for marks): There are two quizzes in each chapter (except for chapter 8 – only one quiz). Each quiz can be attempt twice (three times in chapter 1).
5%	Notes: Each chapter requires notes. These should be completed after your learning of the chapter content. They represent what you need help with remembering. Some may describe this as a reference guide.
20%	Chapter Tests: There are 6 chapter tests for this course. The Chapter 3 Test must be INVIGILATED by an EBUS approved invigilator. Please contact your teacher AT LEAST 1 week prior to when you want to write your chapter 3 test.
15%	Final Exam: The final exam is comprised of multiple-choice and written response questions. The exam must be INVIGILATED by an EBUS approved invigilator. Please contact your teacher AT LEAST 1 week prior to when you want to write your final exam.

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

Contact information for your teacher can be found on the course website in which you are enrolled. If you are having trouble with any concepts, please contact your teacher right away!