

BC Calculus 2

Dr. Janice Krouse, Dr. Brent Yen

Spring Semester, 2020

Dr. Janice Krouse Email: krouse@imsa.edu

Dr. Brent Yen Email: byen@imsa.edu

Course Description

BC Calculus is a three-semester sequence, which includes the material covered in the Advanced Placement BC Calculus syllabus. This second course will continue the study of derivatives and begin work on concepts and applications of integrals. With help from technology, these will be seen from graphical, numerical, and analytic points of view.

Required Materials

- Text: Hughes-Hallet, Gleason, McCallum. (2009). *Calculus - Single Variable*, 5th ed. Pearson.
- Graphing calculator

Course Structure

Class Structure/Course Expectations

- This course will be taught similar to other courses in the sequence. Learning will often take place via meaningful collaboration on worksheets designed by IMSA faculty. Homework assignments will be given daily, and quizzes will occur every 1-3 weeks. It is up to the students to determine if additional practice is necessary to be prepared for quizzes. It is an expectation that students are taking detailed notes and reading in the text to remain fully comfortable with the material.

Assessments

- Homework will be given daily, consisting of problems from the text, worksheets, and occasional supplemental problems. Students are expected to use precise mathematical language and reasoning. Not all problems will be graded. The instructor will either check completion/accuracy of homework, or we will have a closed-note quiz where students will complete a selection of their assigned problems.
- Homework assignments will be posted on Google Classroom.

- In addition, you will be given longer homework assignments known as Take Homes. Students will be given at least one week to complete them and all problems will be graded.
- There will be approximately 1-2 quizzes for each unit. There are no retakes for any quizzes.

Grading Policy

Your semester grade will be calculated under the following guidelines.

Quarter grade

- 75% from Quizzes
- 25% from Homework (HW, Take-Homes, HW quizzes)

Semester grade

- 80% from cumulative semester work
- 20% from semester final exam

Course Policies

During Class

Unless instructed otherwise, please refrain from using cell phones, laptops, or listening to music during class as it hinders the learning of you and the students around you.

Policies on Late Assignments

Late work for daily homework assignments may not be accepted for full credit. For Take-Homes, the students will be penalized approximately 10% for each day that the assignment is late.

Schedule and weekly learning goals

The course will be broken down into six units. These units are not finalized and are subject to change:

Unit 1: Optimization, L'Hôpital's Rule

Unit 2: Parametric Equations

Unit 3: Area Approximation, Definite Integrals

Unit 4: Euler's Method, Fundamental Theorem of Calculus

Unit 5: Integration Techniques

Unit 6: Area & Volume with Integrals

Disclaimer

The instructor reserves the right to make changes to the syllabus. Please consult Google Classroom for any updates.