

MATH1002A — Calculus and Introductory Analysis I

Fall 2019/Winter 2020, Carleton University

Professor: Charles Starling
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Office Hours: To be determined.

Before I set my office hours, I want to take your schedules into account. Please send me your course schedule by **Sunday, September 15** to have it taken into consideration.

I will be making all important course announcements on CULearn and will be posting midterm and assignment solutions there. In this course, you are expected to check it and your Carleton email address regularly.

Prerequisite: Grade 12 Mathematics: Advanced Functions, and Grade 12 Mathematics: Calculus and Vectors, with grades of at least 75% in each; or MATH 0005 and MATH 0006 with grades of at least B in each; or equivalents; and ii) MATH 1800 (may be taken concurrently); or permission of the School of Mathematics and Statistics.

Lectures:

1. **Fall:** Tuesdays and Thursdays, 8:35 – 9:55 in the Minto Centre, room 5050.
2. **Winter:** Tuesdays and Thursdays, 8:35 – 9:55 in **TBA**

Tutorial: Thursdays 11:35–12:55. Rooms to be determined. Check CULearn in the first week of classes.

Evaluation: This is a two-semester course, with a 3-hour final exam taking place in the April 2019 exam period. There will be midterm exams in each semester and also at the end of the Fall semester (**October 15**, **December 3** and **February 11** during tutorial hours). Finally, there are weekly assignments to be handed in and graded.

Assignments (worst 4 dropped)	20%	
Midterm 1	10%	October 15 in your Tutorial
Midterm 2	10%	December 3 in your Tutorial
Midterm 3	10%	February 11 in your Tutorial
Final exam	50%	April exam period, TBA

Text: *Elementary Analysis* (second edition) by Kenneth A. Ross. This textbook appears to be available to download through the Carleton library. Navigate to <https://catalogue.library.carleton.ca/record=b3457476> and click SpringerLink.

Course content: Elementary functions. Limits. Continuity. Differentiation. L'Hôpital's rules. Indefinite and definite integrals. Improper integrals. Sequences and series, Taylor's formulae. Introduction to differential equations. Proofs and theory.

- **Fall:** Sections 3–5, 7–11, 14, 17–20, 28–30
- **Winter:** Sections 32–34, 36, 15, 23, 37, 24–26, 31

No calculators will be permitted (or needed) on any test.

Help: This is Honours Calculus, and is a challenging course. The following resources are available to you for extra help.

- **The Math Tutorial Centre (MTC):** The MTC is a study space for any student who wishes to study mathematics or statistics individually or in group while receiving support from a teaching assistant. Note that it can get very busy during midterm/exam period.
- **Mathematics and Statistics Learning Assistance Program (MS-LAP):** MS-LAP supports first year mathematics and statistics courses. This free of charge program helps students in achieving their goals. It provides learning support and solutions to homework questions through assistance videos. These services are available on CULearn.

MS-LAP gives students tools to succeed while explaining step-by-step particular problem strategies and associated theory. The program is for anyone who wants to deepen their understanding at their own pace, and in the comfort and privacy of their home.

- **Problem solving sessions:** In addition to your usual tutorials, there are extra problem solving sessions offered for the Honours courses 1002/1102. The dates and times of these are to be announced.

For more information about any of the above, contact Kyle Harvey kyle.harvey@carleton.ca

Academic Accommodation: Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Students must confirm their need for accommodation with the Instructor no later than one week before the first quiz. If students require special arrangements to meet their academic obligations, please review the course outline and write me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

Pregnancy or Religious Obligation: Please email me requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see the Student Guide.

Notes:

- You are expected to attend all classes and tutorials. I will be scanning the notes that I lecture from and I will be putting them on CU Learn. However, they are not a complete record of everything I say in class.
- Students who miss the final exam may be eligible for a deferral. Application for a deferral must be made, with appropriate documentation, to the Registrar's Office within five business days of the examination.