

MATH 1004 E - CALCULUS FOR ENGINEERING OR PHYSIS

Fall 2020

Instructor: Seema Zubair

Email: Seemazubair@cmail.carleton.ca

Office Hours: By Zoom/BBB

Place: Online via CuLearn

Course Pages:

1. <https://www.carleton.ca/culearn/>
2. <https://students.carleton.ca/>

Lectures: Lecture notes and pre-recorded lectures will be uploaded weekly on cuLearn.

Textbook: The ABC's of Calculus, Volume 1, by Angelo Mingarelli, Nolan Company, July 2019 edition will be available in the Carleton University [Bookstore](#) and the free online version of (2016) is [here](#)

Solution manual: [here](#)

Addition Reference:

1. The Tutorial Compendium for First Year Calculus, 2nd Edition by Mark Blenkinsop, Prometheus Press, available through Haven Books.
2. James Stewart "Single Variable CALCULUS Early Transcendentals," 6th Edition, Thomson Brooks/COL,

Prerequisites: Ontario Grade 12 Mathematics: Advanced Functions and Introductory Calculus; or an OAC in Calculus, or MATH 0007, or equivalent.

Tutorials: Tutorials will be held every Wednesday online, from 16:35 pm to 17:25 pm via BigBlueButton. Tutorials will be devoted to problem solving and its start on September 23, 2020. The following table gives more details

Tutorial	Student Sure name	TA name	TA email	Time	Room
E1	A—Disu	Michael Sloan	michaeljsloan@cmail.carleton.ca	Wednesday 16:35-17:25	BBB1
E2	Doy—Leo	Sihao Shen	alanshen@cmail.carleton.ca	Wednesday 16:35-17:25	BBB2
E3	Liu—Raja	Denisse Perez	DenissePerezFernande@cmail.carleton.ca	Wednesday 16:35-17:25	BBB3
E4	Rash—Z	Mihail Santean	MIHAILSANTEAN@cmail.carleton.ca	Wednesday 16:35-17:25	BBB4

Office Hours: Weekly Sessions will be held to summarize and wrap up key ideas of the week via BigBlueButton(BBB)/Zoom, check CuLearn for more details. Any questions related to course operation should be emailed to the Professor. Any questions regarding tutorial or homework should be emailed to your TA (TA email addresses will be posted on CuLearn).

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Grading Policy:

1 : 2 Tests each 15%+15%

2 : 3 Assignments $3 \times 15\% = 45\%$,

3 : Final examination: 25%.

Test: There will be 2 50-minute tests on Oct 16 and Nov 18. The format of the tests will be announced later and there are no make-up tests.

Assignments: There will be 3 assignments with deadlines Oct 7, Nov 4 and Dec 2. You will need to upload your assignments for marking, via cuLearn, on the due date, before 11:59 pm.

Final Exam: There will be a 3-hour exam scheduled during the usual exam period. It is the responsibility of each student to be available at the time of the final examination. The exam will be hosted online on a remote server, accessible through cuLearn. The option of 100% Final Exam is NOT available.

Course Policy:

- If you miss the test you will receive a zero unless you provide me with a proper documented reason (e.g., Self-declaration form or Doctor's note), in which case the weight of the test will be shifted to the final exam.
- Late submissions of Assignment may be subject to penalty, at the discretion of the instructor. While unforeseen circumstances may arise, once solutions to the assignment are posted, no further amendments will be considered
- Selected exercises, mainly from the text, will be assigned for your practice. These exercises are not to be handed in and will not be graded. However, to succeed in the course it is absolutely essential that you do the exercises on a regular basis.

Calculators: ONLY non-programmable calculators are allowed for tests and for the final exam.

Important Dates:

9 Sept First day of all classes

18 Sept First day of tutorial

9 Oct December examination schedule

12 Oct Statutory holiday

26 - 30 Oct Reading week (no classes, no office hours)

11 Dec Last day of all classes which follows a Monday schedule

12 - 23 Dec Exam period

The Calendar Year, 2019 - 2020: [here](#)

Tentative Course Outline:

1	Chapter 1, Appendices A, B, C, D	Functions, Review of Chapter 1, Trigonometry
2	2.1-2.6, 3.1-3.2	Limits and Continuity, Evaluating limits at infinity, derivatives.
3	3.3, 3.4, 3.5	The Chain Rule, Implicit differentiation
4	3.7, 3.8	Derivatives of trigonometric functions, Inverse function
5	3.9, 3.10, 3.12	Inverse trigonometric functions and their derivatives, L'Hospital's Rule
6	4.1-4.6	Exponentials and logarithms and their derivatives
7	6.1-6.2	Anti-derivatives, The indefinite integral, Definite integrals
8	Oct 26-Oct 30	Fall Break
9	6.3, 6.4, 7.1, 7.2	Area, integration by substitution (change of variable)
10	7.3	Integration by parts
11	7.4, 7.5.1, 7.6	Partial Functions, Powers of Sines and Cosines, Trigonometric substitutions
12	7.7, 8.2	Improper integrals , Area between two Curves
13	8.3	Volumes of Solids of Revolution

Note: This outline is subject to change depending on the progress of the course. All necessary changes will be announced in class and on CULearn. It is the responsibility of the student to keep up to date with any such modifications.

Academic Accommodations:

- 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. Documented disabilities include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC every term to have a Letter of Accommodation sent to the Instructor by their Coordinator. In addition, students are expected to confirm their need for accommodation with the Instructor no later than two weeks before the first assignment is due or the first in-class test/midterm. If you require accommodations only for formally scheduled exam(s) in this course, you must request accommodations by the official accommodation deadline published on the PMC [Website](#).
- Accommodations for other reasons such as religious obligation, or parental leave, will be done only in accordance with University policy. These policies are administered by the office of Equity Services.

Note: Please be aware by registering in this course you acknowledge that this course may use online proctoring tools. These online proctoring tools could require you to identify yourself via webcam. Additionally, while you are completing the proctored exam, your activities will be monitored. This could include direct observation via webcam and through the use of screen recording software. Evidence of academic misconduct during an exam will be treated seriously.