

Calculus for Engineering or Physics
Carleton University, Mathematics 1004F

INSTRUCTOR: Dr. Kazem Ghanbari

Email: kazem.ghanbari@carleton.ca

Lectures will be in person at:

Tuesdays and Thursdays, 19:35-20:55

Tutorials are Thursdays 21:05-21:55 which the TAs lead.

TEXTBOOK:

For the **2022 Digital edition** of The ABC's of Calculus, go to mingarelli.com and order it for the term, i.e., 150 days, for \$80. VISA and Cryptocurrency supported.

Softcover copies are now available in HP 4380 for \$100 (net/tax in); cash or e-transfer only, no credit cards.

Solutions Manual for 2022 Pandemic edition of the above textbook [Click here](#)

Solutions Manual for 2019/2020/2021 edition of the above textbook [Click here](#)

OFFICE HOURS: TBA

Calculators: Non-programmable ones only.

NOTE: Classes should be in person, as is usual, unless otherwise notified.

Classes start: September 8, 2022

Winter classes end: December 2022

Tutorials:

	Last 4 digits of student number	TA	Office hours	Location	TA's email
F1	0000-2503	Mohammad Dehghan		SA Room 402	MOHAMMADDEHGHAN3@cmail.carleton.ca
F2	2504-5388	Joel Crawford		LA Room A720	joelacrawford@cmail.carleton.ca
F3	5389-7408	Malak Saif El Nasr		UC Room 282	malaksaifelnasr@cmail.carleton.ca
F4	7409-9965	Anuj Radia		SA Room 516	anujradia@cmail.carleton.ca

Announcements:

You are responsible for keeping up with information announced in class or sent to your connect email account. The following **course schedule** is approximate, and may change subject to the progress of the class.

Detailed Class Outline

Week 1: Functions

Week 2: Limits and continuity of functions

Week 3: Derivatives

Week 4: Trigonometric functions and their derivatives

Week 5: Exponentials, logarithms and their derivatives

Week 6: Curve sketching basics

Break

Week 7: Anti-derivatives, Indefinite integral, Summation, Area, Definite integral, Riemann Integral

Week 8: Area, Trig identities (review), Integration by substitution (change of variable)

Week 9: Integration by parts (incl. all subsections)

Week 10: Integration of Partial fractions,

Integration of powers of sines and cosines

Week 11: Integration of powers of secants and tangents, Trigonometric substitutions, (incl. all subsections)

Week 12: Improper integrals, Area between two curves

Week 13: Volumes of solids of revolution, Arc length

Your final grade will be calculated as:

Tutorial attendance: expected but not graded.

2 online tests of 120 minutes TBA later: $15\% + 15\% = 30\%$

2 assignments $2 \times 15 = 30\%$

Final exam: 40%

Missed tests and assignments will be dealt with at a unique predetermined time before the end of term. Ask your instructor for more details.

The material covered on each test will be announced one week before the test.

Assignments due dates:

Oct. 20, Nov. 30

Late submissions 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.

Assignments must be submitted electronically in pdf format (please familiarize yourself with scanning apps, such as Cam Scanner). Late

submissions may be subject to penalty, at the discretion of the Professor. While unforeseen circumstances may arise, once solutions to the assignment are posted, no further amendments will be considered. Please note all submission details as they are announced.

Note that the academic withdrawal date this fall is November 11, 2022.

See the important dates of this year at
(<https://calendar.carleton.ca/academicyear/>)

Accommodations: In place of a doctor's note or medical certificate, students will be advised to complete the [self-declaration form](#) available on the Registrar's Office website to request academic accommodation for missed course work including exams and assignments. Students will also be encouraged to connect directly with their instructors to discuss required accommodations arising from the COVID-19 situation.

Miscellaneous:

It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are [a number of actions you can take](#) to lower your risk and the risk you pose to those around you including being vaccinated, wearing a mask, staying home when you're sick, washing your hands and maintaining proper respiratory and cough etiquette.

Feeling sick? Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you must follow Carleton's [symptom reporting protocols](#).

Masks: Carleton has paused the [COVID-19 Mask Policy](#), but continues to strongly recommend masking when indoors, particularly if physical distancing cannot be maintained. It may become necessary to quickly reinstate the mask requirement if pandemic circumstances were to change.

Vaccines: Further, while proof of vaccination is no longer required as of May 1 to attend campus or in-person activity, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible, and submit their booster dose information in [cuScreen](#) as soon as possible. Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus.

All members of the Carleton community are required to follow requirements and guidelines regarding health and safety which may change from time to time. For the most recent information about Carleton's COVID-19 response and health and safety requirements please see the [University's COVID-19 website](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca.

Students with disabilities requiring academic accommodations in this course are encouraged to contact the [Paul Menton Center for Students with Disabilities](#) (500 University Center: Call 613-520-6608 or email pmc@carleton.ca)