

MATH 1004 E Fall 2024

Calculus for Engineering or Physics

Instructor: Dr. Mohammad R Sadeghi,

Herzberg Physics, Office: 4367 HP

Email: msadeghi@math.carleton.ca

Office hours: Mon & Wed.: 3:00 – 4:00 pm

Textbook: The ABC's of Calculus (A.B. Mingarelli) 2022 Digital edition (Single variable). Purchase: TBA

Tutorial Booklet: “*Tutorial, Math 1004, Abstract of Calculus*” by Mohammad R. Sadeghi & Farzane Amirzade (available only from the authors in their offices, 4367 HP, time TBA).

Lectures: Mon. & Wed. 16:05:00 – 17:25 pm at AT 101

Classes begin: Wed., Sept 4, **Classes end:** Wed. Dec. 4.

Tutorials Wed, 13:35 - 14:25 pm. Begin Sep 11

A Teaching Assistant (TA) will be presented, to answer questions, students must work on some suggested problems provided by the Tutorial Booklet and the TA mark students based on their effort during tutorial.

Sec.	Student's Last Name	Location	TAs name	TA's email
E1	A. – Ci.		Zahra Mohammadaghahi	ZahraMohammadaghahi@gmail.carleton.ca
E2	Cl. – Ho.		Karran Dhillon	KARRANDHILLON@gmail.carleton.ca
E3	Hu. – Ma.		Chris Middlebrook	ChrisMiddlebrook@gmail.carleton.ca
E4	Mc. – Rh.		Jesse Niyo	jesseniy@gmail.carleton.ca
E5	Ro. – Z.		Ali Hosseini	AliHosseini@gmail.carleton.ca

Evaluation:

1: Term mark 40% (best 3 out of 4 tests),

2: Tutorial attendance 10%,

3: General knowledge test (algebra, trigonometry, logs, exponentials) 5%,

4: Final examination 50.

+1 % Bonus Assessment Quiz (see Brightspace)

Term Tests: There will be four 50-minute tests in the tutorial hours on

Sept 25, Oct 16, Nov 6, Nov 20.

Note: The "best 3 of 4" rules allow you to miss some of the term events for any reason (medical or otherwise). In other words, under normal circumstances, if you miss a test for a medical or other reason then we still choose the best 3 out of 4 tests you will have written.

There will be **NO make-up tests** as we have limited resources.

This is the reason why the students are allowed to miss one test without penalty. The instructor reserves the right not to answer the individual emails concerning make-up tests.

Final Examination: TBD, Cumulative formally scheduled exam during December exam period.

Calculators: NOT allowed for tests and the exam.

Additional Resources

- . Math Tutorial Centre (MTC) <https://carleton.ca/math/math-tutorial-centre/>
- . Mathematics and Statistics Learning Assistance Program (MS-LAP)
<https://carleton.ca/math/math-learning-assistance-program/>
- . Science Student Success Centre (SSSC) <https://sssc.carleton.ca/>

Topics:

1. **Functions, Review of Chapter 1, Trigonometry (Chapter 1, Appendices A, B, C, D).**
2. **Limits and Continuity, Evaluating Limits at Infinity, Derivatives, The Chain Rule (2.1-2.6, 3.1-3.3).**
3. **Implicit differentiation, Derivatives of trigonometric functions, Inverse functions (3.4, 3.5, 3.7, 3.8).**
4. **Inverse trigonometric functions and their derivatives, L'Hospital's Rule (3.9, 3.10).**
5. **Exponentials and Logarithms and their derivatives, (4.1-4.6).**
6. **Anti-derivatives, The Indefinite Integral, Definite Integrals (6.1, 6.2).**
7. **Integration by substitution (change of variable) (6.3, 7.1, 7.2).**
8. **Integration by Parts (7.3).**
9. **Partial Fractions, Powers of Sines and Cosines, Trigonometric substitutions (7.4-7.6).**
10. **Improper Integrals, Area between Two Curves (7.8, 8.2).**
11. **Volumes of Solids of Revolution (8.3-8.5).**

Accommodation Policies

The Paul Menton Centre for Students with Disabilities (PMC) provides academic accommodations and support services to students with Learning Disabilities (LD), mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a permanent, persistent/prolonged, or temporary disability requiring academic accommodations in my course, please contact the PMC at 613-520-6608 or pmc@carleton.ca for a formal intake.

If you are already registered with the PMC, please request your accommodations for this course through the Ventus Student Portal at the beginning of the term, and no later than 10 business days before the first scheduled test or exam requiring accommodation. Requests made within 10 business days will be reviewed on a case-by-case basis. For the final exam, the deadline to request accommodations is published in the University's Academic Calendars.

After requesting accommodations through the Ventus Student Portal, please meet with me to discuss your accommodation needs and how they will be implemented in my course

- . Accommodations for other reasons such as religious obligation, student activities or parental leave will be made only in accordance with University policy.