MATH 1007 D - Elementary Calculus I – Fall 2021

Basic Information

Course Instructor	Paul Mezo
Email	mezo@math.carleton.ca
Class Schedule	asynchronous lectures posted in Brightspace

TA office hours:

Fridays	13:05 – 14:25 (D1 and DW both online)
Fridays	16:35 – 17:25 (DW online)
Fridays	16:35 – 17:25 (D1 in-person Tory Building room 236)

These office hours will start on **Sept 17**

Instructor office hours:
Wednesdays 14:00-15:00 (online)
or by appointment (online/in-person)

Prerequisites: Ontario Grade 12 Mathematics: Advanced Functions (or equivalent), or MATH 0005 & MATH 0006.
If you do not have the prerequisites, you will likely have a very difficult time in this course! Take MATH 0005 & MATH 0006 before taking this course if you did not do Grade 12 Advanced Functions (or equivalent).

Textbook: *Single Variable University Calculus, Early Transcendentals*, 4th ed., by Hass, Weir, and Thomas.

Required Resources: This course will be using Pearson's *MyLabMath* for weekly homework assignments and quizzes. **You will be required to purchase *MyLabMath*** using one of three options below:

1. MyLabMath Access Only Via (less Expensive)
https://pearsonhighered.onthehub.com/WebStore/OfferingDetails.aspx?o=623f781a-6a91-ea11-812b-000d3af41938

2. MyLabMath Access and eText Access (more Expensive)
https://pearsonhighered.onthehub.com/WebStore/OfferingDetails.aspx?o=58872712-6aee-ea11-812e-000d3af41938

Note: For the above links, you will need to create a separate account using your Carleton cmail address to access these prices.

3. From the Carleton Bookstore. The prices may be different.
https://www.bkstr.com/carletonstore/home

If you are repeating the course:
If you already had access to *MyLabMath* from the last time you took the course, you may be eligible for free access to allow you to repeat the course. Please contact Jeremy.Guimond@pearsoned.com to see if he can give you access. He will require your Pearson account email/username, the section of your current course, and the email address of your instructor.

Lectures Lecture videos are broken down into small lessons. It is recommended to keep up with the lessons in preparation for the assignments and quizzes. You will find suggested weekly doses of lessons on Brightspace.

Assessment:

Online Assignments (20%): There will be weekly online assignments for this course due **Fridays at 23:59**. **There are no extensions for the assignments**, so be sure to manage your time. All assignments are posted in advance in *MyLabMath* so that you can get a head start and go as far as you like right from the beginning of the class. **The best 10 out of 11 assignments will be counted towards your final grade.**

Assignment Number	Due Date
1	Sep 24
2	Oct 1
3	Oct 8
4	Oct 15
5	Oct 22
6	Nov 5 (Due After Fall Break)
7	Nov 12
8	Nov 19
9	Nov 26
10	Dec 3
11	Dec 10

Online Quizzes (40%): During the "Lecture Timeslot" on **Wednesdays 13:05 – 13:35**, there will be a weekly quiz. The quiz will be 30 mins in length. The quiz will be found in *MyLabMath*. Many of the quiz questions will be taken from the "Additional Practice" found in *MyLabMath*, so it will be very helpful to work on the additional practice questions to prepare for the quiz. **The best 8 out of 10 quizzes will be counted towards your final grade.**

Quiz Number	Quiz Date
1	Sep 29
2	Oct 6
3	Oct 13
4	Oct 20
5	Nov 3
6	Nov 10
7	Nov 17
8	Nov 24
9	Dec 1
10	Dec 8

Quizzes will be open book, and you are permitted to use a calculator.
You are **not permitted to discuss the quiz questions with anyone** during the quiz (other students, tutors, web-forums, etc…).

Final Exam (40%): The final exam will be a three-hour exam to be held during the exam period set by Carleton University. The final exam will be held online. The questions will be similar to those seen on the assignments, quizzes, and additional practice problems.

The final exam will be open book, and you are permitted to use a calculator.
You are **not permitted to discuss the final exam questions with anyone** during the final exam (other students, tutors, web-forums, etc…).

Policies:

Academic Integrity:	All tests, assignments, quizzes, and exams are to be done independently. Any instance of suspected cheating or plagiarism will not be tolerated. Suspected cheating will be reported to the Dean, according to the policies stated in General Regulations. For more information, please consult: https://carleton.ca/registrar/academic-integrity/
Deferrals, Petitions and Appeals	Students are expected to be available for the duration of a course including the examination period. Dates and deadlines are made available to students in the Carleton University Undergraduate Calendar well in advance of registration. For more information, please consult: https://carleton.ca/registrar/special-requests/deferral/
Pregnancy or Religious Obligation	Contact the instructor 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. For more details see https://carleton.ca/edc/teachingresources/administrative-pedagogy/academic-accommodations/

Academic Accommodations for Students with Disabilities:
The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/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 disability requiring academic accommodations in this course, please contact the PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable).
After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally scheduled exam. For more information, see: https://carleton.ca/pmc/

Extra Help:

Tutorial Centre:	The Tutorial Centre is a drop-in centre where you can work with a TA to answer your questions/work on problems. This term, the Tutorial Centre will be online. http://www5.carleton.ca/math/math-tutorial-centre/
MS-LAP:	Online support is available for this course through MS-LAP (Mathematics and Statistics Learning Assistance Program). You should automatically be registered in MS-LAP. You have access to online tutorial videos free of charge. For more information and tutorials on how to access MS-LAP, please see: https://carleton.ca/math/math-learning-assistance-program/

Course Topics:
Below is a list of topics that will be covered over the course of the semester.

Review of Basic Concepts
Function Notation
Parent Functions and Transformations
Domain and Range
Trigonometry
Inverse Trigonometric Functions
Log Laws
Piecewise Functions
Odd and Even Functions
Limit Notation & Graphical Representations
Evaluating Limit Expressions Using Limit Laws
Continuity and Intermediate Value Theorem
Limits Involving Squeeze Theorem
Limits Involving Infinity
Instantaneous Rates of Change & Average Rate of Change
Derivative Definition
Derivatives Rules using Constant Rule, Power Rule, and Sum Rule
Derivatives Rules using Product Rule, Quotient Rule, and Chain Rule
Derivatives of Trigonometric Functions, Exponential Functions, and Inverse Functions
Implicit Differentiation
Logarithmic Differentiation
Linearization
Critical Points
Absolute and Local Extrema
First Derivative Test
Concavity & Inflection Points
Second Derivative Test
Curve Sketching
L'Hopitals Rule ($\frac{0}{0}$ and $\frac{\infty}{\infty}$)
L'Hopitals Rule (1^{∞} and $(\infty)^0$ and 0^0)
Antiderivatives
Definite and Indefinite Integrals
Fundamental Theorem of Calculus
Area Under Curves & Area Contained Between Curves