MATH 1007 G - Elementary Calculus I – Winter 2022

Last updated: December 16, 2021. The content is subject to change.

Basic Information:

Course Instructor:	Dr. Elena Devdariani
Email:	elenad@math.carleton.ca
Course Webpage:	All course material will be available on Brightspace.
Class Schedule:	Wednesdays and Fridays 10:00 – 11:30 am. Lectures will be delivered asynchronously on Brightspace course website.
Tutorial Schedule:	Fridays 1:35 – 2:25 pm (starting January 21st)
Office Hour Schedule:	Via BBB on Brightspace, by appointment.
TAs Office Hours:	TBA

Course Information:

Prerequisites: Ontario Grade 12 Mathematics: Advanced Functions (or equivalent), or MATH 0005 & MATH 0006.
If you do not have the prerequisite, you will likely have a very difficult time in this course. It is suggested to drop it and take MATH 0005 + MATH 0006 before taking this course if you did not do Grade 12 Advanced Functions (or equivalent).

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

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

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

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

Note: When making purchases from the above links, you will be prompted to create an account with Pearson. Make sure to use your Carleton cmail email address to create that account.

- Same as above, but from the Carleton Bookstore. The prices may be different.

After purchasing the access code, follow the **Registration Instructions** posted on the course Website in order to register MyLab Math with Brightspace.

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 of your instructor.

Tutorials — Live on Brightspace, Fridays 1:35 – 2:25 pm (starting January 21st). The class will be subdivided into the tutorial groups alphabetically, according to the last names. The BBB (Big Blue Button) links to the tutorials will be posted on the Brightspace course webpage, inside the module "BBB to TAs and Tutorials". The groups and the TAs' names and emails: TBA

Assessment:

Online Assignments (20%): There will be weekly online assignments for this course due each **Friday at 23:59**. **There are no extensions in the online assignments**, so be sure to manage your time. All assignments will be posted in MyLabMath. **The best 10 out of 11 will be counted.**

Assignment Number	Due Date
1	Jan 21
2	Jan 28
3	Feb 4
4	Feb 11
5	Feb 18
6	Mar 4
7	Mar 11
8	Mar 18
9	Mar 25
10	Apr 1
11	Apr 8

Online Quizzes (40%): During the beginning of most of the most tutorials, there will be a 20-minute long quiz. The quiz will be found in MyLab Math. Many of the quiz questions will be taken from the "Additional Practice" found in MyLab Math, so it will be very helpful to work on the additional practice questions to prepare for the quiz. **The best 7 out of 9 quizzes will be counted towards your final grade.**

Quiz Number	Quiz Date
1	Jan 21
2	Jan 28
3	Feb 4
4	Feb 18
5	Mar 4
6	Mar 11
7	Mar 25
8	Apr 1
9	Apr 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.)

Online Tests (20%): There will be two 50-minute long test during the tutorials on the dates listed below.

Test Number	Test Date
1	Feb 11
2	Mar 18

Tests will be "open-book", and you are permitted to use a calculator. Further instructions will be emailed a week prior to each test date.

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

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 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 Options:

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 and found in Brightspace. http://www5.carleton.ca/math/math-tutorial-centre/

MS-LAP: Online support is available for this course through MS-LAP. You should automatically be registered in MS-LAP via Brightspace. 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/

List of Topics:

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'Hôpital's Rule
Antiderivatives
Definite and Indefinite Integrals
Fundamental Theorem of Calculus
Area Under Curves & Area Contained Between Curves