MATH 1007 D - Elementary Calculus I – Fall 2022

Basic Information:

Course Instructor: Dr. Tushar Bag
Email: TusharBag@cunet.carleton.ca
Course Webpage: All course material will be made available through Brightspace.
Class Schedule: Tuesday & Thursday 8:35 - 9:55 am, Mackenzie Building 3380.
Office Hours: TBA, Herzberg Lab 4220.

Tutorial Schedule: Thursday 13:35 - 14:25 starting on Sept 20th.

Section	Last 5 digits of your student id	Room Number	Your TA is
D1	00961 - 63806	Southam Hall 404	Yaroslav Veselovskiy
D2	64010 - 74898	Southam Hall 403	Sumaiya Alfi Zaman
D3	75049 - 91016	St. Patrick's Building 435	Rafia Tabassum

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 the course and take MATH 0005 + MATH 0006 before taking this course if you did not do Grade 12 Advanced Functions (or equivalent)!

- **Textbook:** University Calculus: Early Transcendentals, by J. Hass, C.E. Heil, P. Bogacki, M.D. Weir and G.B. Thomas, 4th Edition, Pearson.

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

  – MyLabMath Access Only Via (Less Expensive): Link
  – MyLabMath Access and eText Access (More Expensive) : Link

  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 see https://support.pearson.com/getsupport/s/contactsupport for assistance.

Important: A full list of important dates is available here. Please note that the academic withdrawal dates have changed to November 11, 2022. The compassionate grading policy from the previous two years (SAT/UNS) is no longer in effect.

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 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. Your are advised to do the online assignments early as long as the material has been covered,instead of working at last minute. No doctor's note or self-declaration form will be accepted for missed assignments except for extraordinary situations. The best 10 out of 11 assignments will be counted towards your final grade.

Assignment no.	Due Date
1	Sep 23
2	Sep 30
3	Oct 7
4	Oct 14
5	Oct 21
Break Week	Oct 28
6	Nov 4
7	Nov 11
8	Nov 18
9	Nov 25
10	Dec 2
11	Dec 9

- **In-person Quizzes (30%):** During the "Tutorial Time slot" on Thursdays 13:40 - 14:20, there will be a biweekly in-person quiz. The quiz will be 40 mins in length. 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 5 out of 6 quizzes will be counted towards your final grade.

Quiz no.	Quiz date	Time
1	Sep 22	13:40 - 14:10
2	Oct 6	13:40 - 14:10
3	Oct 20	13:40 - 14:10
4	Nov 3	13:40 - 14:10
5	Nov 17	13:40 - 14:10
6	Dec 3	13:40 - 14:10

  You are asked to bring your own blank paper to write the quizzes. Quizzes will be closed book, and you are not permitted to use a calculator or other such electronic aids. You are required to attend all tutorials.

- **Final Exam (50%):** The final exam will be a three-hour 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.

Note: No make-up, early, or delayed quizzes will be held. Any missing quiz will be counted as zero except for medical reasons, in this case a self-declaration form must be presented within 3 work days. We do not simply transfer the weight to the final.

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 here.
- **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 here.
- **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 here.
- **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 here.

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, please see here.
- **Math & Stat-Learning Assistance Program (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 here.

Textbook Content: Sections 1.1-1.3, 1.5, 1.6, 2.1, 2.2, 2.4-2.6, 3.1-3.9, 3.11, 4.1-4.5, 4.8, 5.1-5.4, 5.6 of the textbook, with certain topics omitted or abbreviated, plus your own reading of Appendices 1 and 3. The order of presentation will not always be the same as in the text.

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 ($\frac{0}{0}$ & $\frac{\infty}{\infty}$)
L'Hopitals Rule (1^{∞}, 0^{∞} & 0^{0})
Antiderivatives
Definite and Indefinite Integrals
Fundamental Theorem of Calculus
Area Under Curves & Area Contained Between Curves.