Elementary Calculus I
(Math 1007 I, Winter 2021)

Instructor: Dr. Gang Li

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Class Schedule

Class Times:	Monday & Wednesday	16:35 - 17:55	culearn
Tutorial Times:	Monday	13:35 - 14:25	culearn
Office Hours:	Monday & Wednesday	16:35 - 17:55	culearn
	OR by appointment		

Marking Scheme

In Class Quiz	10 (count best 8 out of 10)	40% total
Online Assignments	11(count best 10 out of 11)	20% total
Final Exam		40% total

Textbook

University Calculus: Early Transcendentals, by J. Hass, C. Heil, P. Bogacki, M.D. Weir, and G.B. Thomas, Jr., 4th edition, Addison Wesley, 2019.

Prerequisite

Ontario Grade 12 Mathematics: Advanced Functions; or MATH 0005 and MATH 0006; or equivalent

Course Overview

Limits. Differentiation of the elementary functions, including trigonometric functions. Rules of differentiation. Applications of differentiation: max-min problems, curve sketching, approximations. Introduction to integration: definite and indefinite integrals, areas under curves, fundamental theorem of calculus.

MyMathLab

This course will be using Pearson **MyMathLab** for weekly assignments, quizzes and possiblely final exam.

- You may purchase MyMathLab in one of three options outlined below:
  - ✓ Option 1: MyMathlab Access Only .
  - ✓ Option 2: MyMathlab Access Card and eText Access .
  - ✓ Option 3: MyMathLab Access Card, Loose-Leaf Textbook, and eText Access (Bookstore).
- If you already had access to MyMathlab from the last time you took this 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.

Course Policies

- **Class:** The first class(Jan 11th) and the last class (April 12th) will be synchronous classes, all other classes will be asynchronous classes, lecture videos will be posted before the scheduled class time.
- **Tutorial :** You are required to attend all tutorials.
  - ✓ Tutorial questions will be taken from similar questions from the online assignment and quiz due that week.

- ✓ First day of tutorials is Jan 25, 2021.

- **In Class Quiz** You are expected to take all the quizzes.
  - ✓ There will be a **weekly 30-minutes, open book, online(using Pearson MyMathLab)** quiz given during regular class session on ***Wednesday, 17:25–17:55.***.
  - ✓ First day of quiz is January 27, 2021.
  - ✓ The best 8 out of 10 quizzes will be used to determine the quiz component of your final mark 40%.
  - ✓ The quiz will be found in MyMathLab.
  - ✓ The quiz questions will be taken from the "Additional Practice" found in MyMathLab, so it will be very helpful to work on the additional practice questions to prepare for the quiz.

The following is the **quiz schedule**:

Quiz Number	Quiz Date
1	January 27, 2021
2	February 3, 2021
3	February 10, 2021
4	February 24, 2021
5	March 3, 2021
6	March 10, 2021
7	March 17, 2021
8	March 24, 2021
9	March 31, 2021
10	April 7, 2021

- **Online Assignments:** There will be weekly online assignments(using Pearson **MyMathLab**) for this course due each Sunday at 11:59 pm.
  - ✓ There are NO extensions in the online assignments, so be sure to manage your time.
  - ✓ All assignments are posted in advance in MyMathLab so that you can get a head start and go as far as you like right from the beginning of the class.

The following is the **assignment schedule**:

Assignment Number	Due Date
1	January 24, 2021
2	January 31, 2021
3	February 7, 2021
4	February 21, 2021
5	February 28, 2021
6	March 7, 2021
7	March 14, 2021
8	March 21, 2021
9	March 28, 2021
10	April 4, 2021
11	April 11, 2021

For more details about the assignments, please see the online Assignment Help document posted in CuLearn.

- **Checking the Quiz/Assignemnt Grades**:
  - ✓ It is your responsibility to make sure that your quiz/assignment marks recorded correctly by visiting **MyMathLab**.
  - ✓ Deadline to make any corrections on your quiz/assignment marks is within one week when you receive them.
- **Final Exam** will be 3-hours, open book exam based on whole term.
  - ✓ The questions will be similar to those seen on the quizzes, tutorials, and in the homework assignments.
  - ✓ It is the responsibility of each student to be available at the time of the examination. In particular, no travel plans for the examination period in ***April, 2021*** should be made until the examination schedule is published.
  - ✓ Students wishing to see their examination papers must make an appointment within three weeks of the examination to do this. This examination review is for educational purposes only and NOT for negotiation of your grade. Please remember that we do not change your grade on the basis of your needs (such as scholarships, etc).

- **Quiz/Exam rules:** Quizzes/Exam will be open book,
  - ✓ Quizzes/Exam will be open book.
  - ✓ you are ONLY permitted to use a nonprogramble calculator(Not online calculator).
  - ✓ You are not permitted to discuss the quiz questions with anyone else(other students, tutors, web-forums, etc...) during the quiz/exam.
- **Passing Conditions:** Students who fail to achieve a term mark of at least 20/60 will automatically receive a letter grade of F, regardless of the result of the final exam.
- **Homework:** Selected exercises, mainly from the text, will be posted on **cuLearn**. These exercises are not to be handed in and will not be graded. However, to succeed in the course it is **ABSOLUTELY ESSENTIAL** that you do the exercises on a regular basis.
- **Calculators:** **Only non-programable calculators** are allowed for the quizzes and the final examination.
- **Course Information:** All course related materials (slides, assignments, solutions, grades, announcements) will be posted on **cuLearn**.
  - ✓ It is your responsibility to keep up with information announced in class, on **cuLearn**, or sent to your Carleton e-mail account.
- **E-mail:** According to Carleton University policy under the Freedom of Information of Privacy Act (FIPPA),
  - ✓ Please use your Carleton account ONLY for all course related email,
  - ✓ Write your course code **MATH 1007 on the subject line**. Failing to start your heading with the course code might send your e-mail to the spam folder.
  - ✓ Be patient. Don't expect an immediate response. Please allow 24-48 hours for a reply.
- **Copyright:** All course related materials (including vedioes, slides, assignments, solutions, and tests) are intended for personal use only and MAY NOT be reproduced or redistributed without prior written consent of the author(s).

Tentative Schedule and Syllabus

Week	Textbook Sections	Topics
Week 1	Sec 1.1	Review of Basic Concepts. Function Notation.
Week 2	Sec 1.1-1.3	Domain and Range. Odd and Even Functions. Parent Functions and Transformations. Trigonometry.
Week 3	Sec 1.5-1.6	Inverse Trigonometric Functions. Log Laws. Piecewise Functions.
Week 4	Sec 2.1-2.2	Limit Notation& Graphical Representations. Evaluating Limit Expressions Using Limit Laws.
Week 5	Sec 2.4-2.6	Continuity and Intermediate Value Theorem. Limits Involving Squeeze Theorem. Limits Involving Infinity.
Week 6	Sec 3.1-3.4	Instantaneous Rates of Change& Average Rate of Change, Derivative Definition. Derivatives Rules using Constant Rule. Power Rule. and Sum Rule.
Week 7	Sec 3.5-3.6	Derivatives Rules using Product Rule. Quotient Rule. and Chain Rule.
Week 8	Sec 3.7-3.9, 3.11	Derivatives of Trigonometric Functions. Exponential Functions. and Inverse Functions. Implicit Differentiation. Logarithmic Differentiation. Linearization & Differentials.
Week 9	Sec 4.1-4.4	Absolute and Local Extrema & Critical Points. First Derivative Test. Concavity & Inflection Points. Second Derivative Test.
Week 10	Sec 4.5, 4.8	L'Hopitals Rule ($\frac{0}{0}$, $\frac{\infty}{\infty}$, 1^{∞}, ∞^{0} and 0^{0}).
Week 11	Sec 5.3-5.4, 5.6	Mean Value Theorem. Antiderivatives. Definite and Indefinite Integrals. Fundamental Theorem of Calculus. Curve Sketching. Area Under Curves & Area Contained Between Curves.
Week 12	Sec 5.6 & Review	

- This schedule is subject to change depending on the progress of the course.
- Please note that the order of presentation will not always be the same as in the text.

University Policies

- **Academic Integrity:** Students are required to be familiar with Section 10 of the Academic Regulations of Carleton University.
  - ✓ All 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/`
- **Students with disabilities** requiring academic accommodations in this course must contact a coordinator at the Paul Menton Centre for Students with Disabilities to complete the necessary Letters of Accommodation. After registering with the PMC, make an appointment to meet and discuss your needs with me in order to make the necessary arrangements as early in the term as possible. Please note the deadline for submitting completed forms to the Paul Mention Centre is ***March 19, 2021.*** For more details visit the PMC website.
- **Pregnancy obligation:** write to me 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 visit the Equity Services website.
- **Religious obligation:** write to me 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 visit the Equity Services website.

Extra Help Options

- **Math Tutorial Center:** 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 CuLearn. For information visit the website `https://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 CuLearn. 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/

Important Dates

- **Withdrawal:** The last day for academic withdrawal from the course is ***April 14, 2021***.
- For more information, please visit Dates and Deadlines.

The End

Last modified: Thursday 17th December, 2020, 11:56