Basic Information

Course	Math 1000X/Y Differential and Integral Calculus I (3ch)
Lectures	Tu Th 8:35-9:55am, Dunn 304 (Fall), LSC C332 (Winter)
Instructor	Svenja Huntemann, svenja.huntemann@dal.ca, Chase 122
Office Hours	M-F 11am-12pm (Fall) or by appointment
Course Website	On Brightspace

Course Description

This course offers a self-contained introduction to differential and integral calculus. The topics include functions, limits, differentiation of polynomial, trigonometric, exponential and logarithmic functions, product, quotient and chain rules, applications of differentiation, antiderivatives and definite integrals, integration by substitution. A sequel to this course is MATH 1010.03. The XY version of this course covers the same material, but the course duration is spread over the Fall and Winter term. The format of the XY course (1.5 hour workshops twice a week, and the smaller class size) allows for a more interactive learning environment than in a regular lecture format.

Prerequisites

Nova Scotia Mathematics advanced 11 and 12 or pre-calculus. Pre-calculus is highly recommended.

Course Objectives/Learning Outcomes

- Understand the significance of limits, continuity, differentiability and integrability of functions.

- Understand the connection between differentiation and integration given by the Fundamental Theorem of Calculus.

- Understand the significance of the Intermediate Value Theorem as well as the Mean Value Theorem / Rolle's Theorem.

- Be able to sketch a reasonably accurate graph of a given function by hand, using calculus.

- Be able to use Calculus to solve optimization and related rates problems.

- Be able to compute derivatives as well as basic integrals.

Textbook

Single Variable Calculus - Early Transcendentals, Eighth Edition, by James Stewart. This textbook is also used for Math 1010. Alternatively, you may also use Calculus - Early Transcendentals, Eighth Edition, which contains the Single Variables version.

Assessment Overview

There are two marking schemes for this course. Your final grade will be the higher one of the two calculated using scheme 1 and scheme 2.

Scheme 1

Component	Weight	Dates
Assignments	20%	Weekly
Test I	15%	October 26, 2017
Test II	15%	January 18, 2018
Test III	15%	March 1, 2018
Final Exam	35%	Winter exam period

Scheme 2

Component	Weight	Dates
Final Exam	100%	Winter exam period

Note that it is uncommon that scheme 2 applies for the final grade. This is mainly given as an option for students not performing to their abilities throughout the term due to exceptional circumstances.

Percentage grades will be rounded to the nearest percentage point and then converted into letter grades according to the Dalhousie Common Grade Scale as follows (from Section 17.1 in the Undergraduate Calendar):

90-100%	85-89%	80-84%	77-79%	73-76%	70-72%
A+	A	A-	B+	B	B-

65-69%	60-64%	55-59%	50-54%	0-50%	
C+	C	C-	D	F	

Detailed Assessment Description

Assignments
There will be 22 weekly assignments throughout the two terms, the best 20 of which are counted, worth a total of 20% of your grade. Assignments will be done through WeBWorK. The links for each assignment can be found on Brightspace. They will be due on Fridays starting with week 2.

Tests and Final Exam
The tests will take place on October 26, 2017, January 18, 2018, and March 1, 2018 during class. They are each worth 15%. The tests will be cumulative, but the second and third test will have an emphasis on material covered since the previous test. You are responsible for material covered in class, the assignments, and the corresponding sections of the textbook.

The final exam will be during the winter term exam period (April 12-26, 2018) and will be scheduled by the registrar's office. The exam will be approximately 2.5 hours long, and worth 35% of your grade. It will be cumulative.

Important academic dates

September 5, 2017	First class
September 18, 2017	Last day to add this class
October 31, 2017	Last day to drop without a "W" grade
November 6-10, 2017	Study break - no classes
December 4, 2017 - January 7, 2018	no classes during exam period and over break
February 5, 2018	Last day to drop with a "W"
February 19-23, 2018	Study break - no classes
April 5, 2018	Last class
April 12-26, 2018	Exam period

Note in particular that on December 5, 2017 and April 10, 2018 we do not have class. These days, despite being Tuesdays, operate on a different weekday schedule.

Preliminary Schedule

The following is a preliminary schedule for the class. This might change throughout the term, but we will try to stick closely to it.

Wk	Days	Tuesday	Thursday
1	Sep 5, 7	Syllabus & Intro	1.4
2	Sep 12, 14	1.5	2.1
3	Sep 19, 21	2.2	2.2 & 2.3
4	Sep 26, 28	2.3	2.5
5	Oct 3, 5	2.6	2.7
6	Oct 10, 12	2.7	2.8
7	Oct 17, 19	3.1	3.1 & 3.2
8	Oct 24, 26	3.2	TEST I
9	Oct 31, Nov 2	3.2 & 3.3	3.3 & 3.4
	Study break		
10	Nov 14, 16	3.4	3.5
11	Nov 21, 23	3.5 & 3.6	3.6
12	Nov 28, 30	3.7	3.8
	Break		
13	Jan 9, 11	Review & 3.9	3.9
14	Jan 16, 18	3.10	TEST II
15	Jan 23, 25	4.1	4.2
16	Jan 30, Feb 1	4.2	4.3
17	Feb 6, 8	4.3	4.4
18	Feb 13, 15	4.4& 4.5	4.7
	Study break		
19	Feb 27, Mar 1	4.7	4.8
20	Mar 6, 8	4.9	5.1
21	Mar 13, 15	5.2	5.2& 5.3
22	Mar 20, 22	5.3	5.4
23	Mar 27, 29	5.5	Buffer
24	Apr 3, 5	Review	Review

Policies

Tests and exam
No calculators or other electronic devices will be allowed during the tests and the exam.
Late assignments are marked as zero points.
If you miss one of the tests without my prior permission or an officially valid excuse such as a medical doctor's note, then it will count as 0. If you have my prior permission or an excuse, you will write a different test at a later point with everyone else who is rewriting. If you also miss this test with my permission, the weight of the test is added to your exam.
If you miss the final exam without my prior permission or an officially valid excuse, then it will count as 0. If you have my prior permission or an excuse, you will write a different exam at a later point with everyone else who is rewriting. If you also miss this exam, you will be given a grade of 0.

Missing class, arriving late/leaving early
If you have to miss a class, arrive late, or leave early, please inform me prior to class. Further, please try to distract the class as little as possible if arriving late or leaving early.

Laptops and cell phones
Laptops should only be used for taking notes, ideally not at all since they are distracting to your classmates and yourself. Cell phones should be out of sight at all times. If you need to answer an important call, please leave the classroom to do so.

Extra help
If you need extra help, please come see me during my office hours, or visit the Learning Centre on the first floor of the Chase building.
Note that I will not answer mathematical questions by email.

Intellectual Honesty
If you receive help from a tutor or use other resources (online, other books,...) for your assignments, please inform me of this in writing before the deadline of the corresponding assignment. More information (which I expect you to read and understand) about intellectual honesty and how to avoid plagiarism and cheating can be found here:
http://www.dal.ca/dept/university_secretariat/academic-integrity.html