Instructor: Alan Surovell
Chase 201
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1-902-494-6342

Lectures: Monday, Wednesday 9:05 - 12:25

## 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.

## Course 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

## Course Materials

**Textbook:** Single Variable Calculus { Early Transcendentals, Eighth Edition, by James Stewart. This textbook will also be used in Math 1010.

**Brightspace**: All information about the course can be found on Brightspace.
To access your Math 1000 course on Brightspace you may login to
https://dal.ca/brightspace.dal.ca/d2l/login
Alternatively, you can select the OWL link that appears on the Dalhousie homepage (http://www.dal.ca). It is important that you familiarize yourself with the systems requirement for proper access to Brightspace.

Information about the course may be given during class. It is the responsibility of the students to ensure that they are made aware of what occurs during classes.

## Course Content

The material to be covered consists of the contents of Chapters 2 - 5 of the text book. I will try hard to stick to the lecture schedule I've entered in the *Class Schedule*.

## Accommodation Policy For Students

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic protected under Canadian Human Rights legislation. The full text of Dalhousie's Student Accommodation Policy can be ac-cessed here: www.dal.ca/dept/university_secretariat/policies/academic/student-accommodation-policy-wef-sep--1--2014.html

Students who require accommodation for classroom participation or the writing of tests and exams should make their request to the Advising and Access Services Centre (AASC) prior to or on the first day of the course. More information and the Request for Accommodation form are available at www.dal.ca/access.

## Academic Integrity

Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. It is the responsibility of all students to be familiar with behaviours and practices associated with academic integrity. Instructors are required to forward any suspected cases of plagiarism or other forms of academic cheating to the Academic Integrity Officer for their Faculty. The Academic Integrity website (academicintegrity.dal.ca) provides students and faculty with information on plagiarism and other forms of academic dishonesty, and has resources to help students succeed honestly. The full text of Dalhousie's Policy on Intellectual Honesty and Faculty Discipline Procedures is available here:

www.dal.ca/dept/university_secretariat/academic-integrity/academic-policies.html

## Student Code of Conduct

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course. In general:

"The University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect

the integrity and proper functioning of the academic and non-academic programs and activities of the University or its faculties, schools or departments;

the peaceful and safe enjoyment of University facilities by other members of the University and the public;

the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University's premises;

the property of the University or its members."

The full text of the code can be found here:

www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

You will need at various times to gain information from different areas of Brightspace. Most importantly:
1. The course outline as well as a link to the online assignments can be found under Content
2. Your marks, as well as a link to the homework assignments, can be found by clicking on Progress.

WeBWorK: Your online assignments will appear in WeBWorK, accessed through a link appearing under Content in BrightSpace

# Student Resource Center

The Math & Stats Student Resource Center is located in Room 119 of the Chase Building. A calculus tutor will be available on weekdays and evenings on a first come, first served basis, free of charge. There are large tables where you can work together (on Math or Stats only, please). To see the summer schedule, please visit the Resource Centre's webpage at

# Course Assessment

The Final Grade will be computed as the maximum of the grades obtained from the following two schemes:

Scheme I:

| Component | Weight (% of Final Grade) | Date |
|---|---|---|
| Online Homework | 15 | Daily |
| Midterm Exam | 35 | May 23 |
| Final Exam | 50 | June 13 |

Scheme II:

Final Exam 100%

*Warning: Most students do better on the midterm than on the final exam. You are strongly urged to do your best on all three components of your grade.*

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale:

| | | |
|---|---|---|
| A+: ($\geq 90$) | A: ($\geq 85$ but $< 90$) | A-: ($\geq 80$ but $< 85$) |
| B+: ($\geq 77$ but $< 80$) | B: ($\geq 73$ but $< 77$) | B-: ($\geq 70$ but $< 73$) |
| C+: ($\geq 65$ but $< 70$) | C: ($> 60$ but $< 65$) | C- ($\geq 55$ but $< 60$) |
| D: ($\geq 50$ but $< 55$) | F: $< 50$ | |

# Course Policies

A missed midterm exam can be excused due to documented illness or upon receipt of equivalent proof of inability to write at the scheduled time. However, should you miss the midterm exam for those legitimate reasons, there will be **no** makeup exam. Instead, Scheme I will be changed to 85% Final Exam and 15% Homework.

On exams, we recommend that answers be left in unsimplified form.

Calculators will NOT be allowed during tutorial quizzes, the midterm or the final examination. In fact, only writing utensils (pencils, lead, erasers, pens, white-out) will be allowed.

# Services Available to Students

| Service | Support Provided | Location | Contact |
|---|---|---|---|
| General Academic Advising | Help with<br>-understanding degree requirements and academic regulations<br>-choosing your major<br>-achieving your educational or career goals<br>-dealing with academic or other difficulties | Killam Library Ground Floor<br><br>Room G28<br><br>Bissett Center for Academic Success | In person: Killam Library Room G28<br><br>By appointment: e-mail advising@dal.ca<br><br>Phone: 1-902-494-3077<br><br>Book online through MyDal |
| Dalhousie Libraries | Help to find books or articles for assignments<br>Help with citing sources in the text of your paper and preparation of bibliography | Killam Library Ground Floor<br><br>Librarian offices | In person: service point (ground floor)<br><br>By appointment: identify your subject librarian and contact by email or phone to arrange a time<br>dal.beta.libguides.com/sb.php?subject_id=34328 |
| Studying for Success (SFS) | Help to develop essential study skills through small group workshops or one-on-one coaching sessions<br>Match to a tutor for help in course-specific content (for a reasonable fee) | Killam Library Third Floor<br><br>Coordinator: Room 3104<br><br>Study coaches: Room 3103 | To make an appointment:<br><br>Visit main office (Killiam Library main floor Room G28)<br><br>Call 1-902-494-3077<br><br>email Coordinator at sfs@dal.ca or<br><br>Simply drop in to see us during posted office hours<br><br>All information can be found on our website, www.dal.ca/sfs |
| Writing Center | Meet with coach/tutor to discuss writing assignments (e.g., lab report, research paper, thesis, poster)<br>-Learn to integrate source materials into your own work appropriately<br>-Learn about disciplinary writing from a peer or staff member in your field | Killam Library Ground Floor<br><br>Learning Commons and Room G25 | To make an appointment:<br><br>-visit the Center (Room G25) and book an appointment<br>-call 1-902-494-1963<br>-email writingcentre@dal.ca<br>-book online through MyDal<br>We are open six days a week |

MATH1000 Differential & Integral Calc I (Sec 01) - 2018 Summer

# Course Schedule

### Monday, May 7, 2018

2.1, 2.2, 2.3

### Wednesday, May 9, 2018

2.5, 2.6, 2.7, 2.8

### Monday, May 14, 2018

3.1, 3.2, 3.3, 3.4

### Wednesday, May 16, 2018

3.5, 3.6, 3.7

### Friday, May 18, 2018

* Midterm Exam -- 2 Hours

* 10 A. M. - Noon

* Covers all material to 3.7

* Location to be announced

### Monday, May 21, 2018
Victoria Day -- No Class

### Wednesday, May 23, 2018
3.8, 3.9, 3.10

**Monday, May 28, 2018**

4.1, 4.2, 4.3

**Wednesday, May 30, 201**

4.4, 4.5, 4.7

**Monday, June 4, 2018**

4.8, 4.9, 5.1

**Wednesday, June 6, 2018**

5.2, 5.3

**Monday, June 11, 2018**

5.4, 5.5

**Wednesday, June 13, 2018**

* Final Exam -- 3 Hours
* Covers All Course Material
* Same Room As Class