

Math 100: Differential Calculus

Fall Term, 2010

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v1.0 (September 9, 2010)

Main Course Website	http://www.math.ubc.ca/~nagata/m100-180_common/
Section Website	http://www.math.ubc.ca/~lior/teaching/1011/100_F10/
SLATE site	https://slate.math.ubc.ca/slate/Slate/2010-2011/Winter_Term1/MATH100/105/
Contact me at	MAT 229B — 604-827-3031 – lior@math.ubc.ca
My Website	http://www.math.ubc.ca/~lior/
Class	MWF 14-15 at the Mathematics Building room 100
Office Hours	Mondays, 15-16:30.
Required Textbook	Stewart, <i>Calculus</i> (Early Transcendentals), 6th Edition.

About the course

[Physics] is written in this grand book—I mean the universe—which stands continually open to our gaze, but it cannot be understood unless one first learns to comprehend the language and interpret the characters in which it is written. It is written in the language of mathematics,

Galileo Galilei, *The Assayer*

The goal of this course is to learn some of the language by which scientists describe the world around us. The key concept is that of the *function* – we will investigate propert

Teaching and learning

Learning goals

See the detailed document at http://www.math.ubc.ca/~nagata/m100-180_common/objectives.pdf.

What you can expect from me

- To come prepared for class: knowing what we want to achieve, and how we will achieve it.
- Various approaches to the material including lecturing, classroom discussion and groupwork.
- Responses to your questions and concerns: continuously in class and during my office hours, within reasonable time by e-mail outside class.
- Timely and clear explanations of what is correct in your work and what is not, and how you can improve.

What's expected from you

- Come prepared to class, having read the relevant material in the textbook or notes and having done homework exercises and problem sets.
- Actively participate in the course: do the reading, think about the material, and then ask questions.
- Written work that is readable and communicates your ideas.
- Asking questions when you don't understand, or want to learn more: most importantly in class; but also during office hours. Also, ask your colleagues questions outside of class – you will both benefit from the discussion!
- Working on the homework and problem sets is *absolutely essential* for learning the material. **It is extremely rare for students who skip quizzes and problem sets to do well on exams.**

Official Policies

Learning

- For every lecture, there will be assigned pre-class reading (usually from the textbook). The discussions in class will assume that you have read these chapters beforehand. Your main goals are to *work through the examples* and become *familiar with the vocabulary and notations* we will use, as well as think about the *ideas* presented.
- Every week there will be suggested homework exercises.
 - These are intended to for technical practice of the material you have learned, and also to explore new ideas that will be covered in class later.
 - This homework is not to be handed in; quiz questions will be drawn from it, however.
 - Solutions for homework problems may be found in the student solutions manual.

Assessment

- Written work should be presented carefully, in complete English sentences, and with sufficient detail. A “correct sequence of formulas” will only merit partial credit. Worked examples will be distributed together with the first problem set.
- Missed work (quizzes, problem sets, midterm exams) will be scored zero. In exceptional circumstances (a proof of the emergency and advance notification if possible will be required) the missed work will not count toward your average of that component of the course.
- Every week there will be a 10-minute in-class quiz, featuring 2-3 problems from the suggested homework.
 - You must use the quiz sheets that will be distributed at the beginning of that class.
 - Quiz answers will only be graded as “substantially correct” or “substantially incorrect”.
- There will be several regular problem sets, to be handed in at the beginning of class on the due date indicated.
 - The problem will be posted online, on the section website.
 - The problem sheet must be printed and used as cover sheet for your solutions. Further instructions will appear on it.

- You are encouraged to work on solving the problems together. However, each of you must write your solutions independently, in your own words. You may (and should) share your ideas but you may not share your written work.
- It is possible that only certain problems from a problem set will be selected for grading. Complete solutions will be posted in any case.
- There will be a two midterm exams, administered in class: on Monday, Oct. 4th and on Monday, Nov. 8th.
 - If you need special accommodations when taking written exams, please contact the Office of Access & Diversity (access.diversity@ubc.ca).
 - If a midterm exam conflicts with a religious observance, please contact me *at least two weeks ahead of time* so we can make appropriate arrangements.

- Your course grade will be calculated as follows:

Problem sets and quizzes: 10%
Midterm I: 20%
Midterm II: 20%
Final Exam: 50%

- The Term Mark (two Midterm Tests contributing 20% each to the Final Grade, Marked Homework assignments contributing 10% to the Final Grade) is SCALED after the Final Exam is written, according to this section's performance on the common Final Exam.