CALCULUS III, MATH 200
SUMMER TERM 1, 2025

1. General Information

- Course: Math 200 (Calculus III), Summer (Term 1) 2025.
- Instructor: Sabin Cautis, cautis@math.ubc.ca
- Time: MWF 10-12pm, Tu 10-11am
- Location: ESB-Floor 1-Room 1013
- Course website: includes syllabus and additional information
  http://www.math.ubc.ca/~cautis/math200/index.html
- Text: **CLP-3 Multivariable Calculus** by J. Feldman, A. Rechnitzer, and E. Yeager
  available here https://personal.math.ubc.ca/~CLP/CLP3/

Homework: Online homework for the course will be provided via the WeBWorK system (which should be accessible through Canvas). There will be one assignment posted per week, each due the following week, as per the course schedule. The lowest score will be dropped.

Please note the following items:

(1) You may attempt each question more than once. There is no penalty for a wrong answer. This is to help you correct your own mistakes, and to get instant feedback on your attempts.
(2) The questions are generated randomly, and the numbers are different for each student.
(3) Please try to do the problems by yourself, and without the use of other calulators or software. Since calculators and software are not allowed in the exams, you should practice working without them.
(4) If you really get stuck, you can request help by clicking the email instructor button. However, it may take some time to get a response, so please dont wait till the last minute. v) In general, its a good idea to start the assignments early rather than waiting till the last minute. The deadlines are enforced by the system, and it will shut down automatically when time is up, so give yourself plenty of extra time in case of problems.

Tests: There will be two midterm exams (in class) and a final exam. The tests will be closed book-closed notes tests. Calculators will not be allowed.

The (tentative) dates for the two midterms are: Wednesday May 28th and Wednesday June 11th.

Grades: Grades will be computed as the maximum of the following:
- Homework 10%, Midterms 20%+20%, Final exam 50% or
- Homework 10%, Best midterm score 20%, Final exam 70%.

Synopsis: The course will cover more or less the material described below in the (rough) schedule.

Calculus is in essence the study of how to reduce more complicated (nonlinear) equations and phenomena to linear ones so that techniques in linear algebra can be applied.

Usually one starts by studying simpler functions in one variable, such as $f(x) = \sin(x)$ and develops the theory of derivatives and integrals. This course extends this study to multivariable functions such as $f(x, y) = \sin(x^2 + y^2)$.

The goal of the course is to teach students to:

(1) manipulate vectors to perform geometric calculations,
(2) calculate and interpret derivatives and integrals of functions in several variables,
(3) apply these techniques to a range of applications.

Random Advice: Unlike a novel, reading mathematics is a slow process which is often not linear. One could very well spend hours reading one page but then skim over the next ten. So read things carefully until you understand. Be patient!

2. Schedule

Here is a rough course schedule, subject to later adjustments.

- Week 1. Sections 1.1-1.2, 1.4-1.5
- Week 2. Sections 1.7-1.9, 2.1-2.3
- Week 3. Sections 2.4-2.7
- Week 4. Sections 2.7,2.9-2.10, 3.1
- Week 5. Sections 3.1-3.3, 3.5
- Week 6. Sections 3.6-3.7

3. Official statement about the University's values and policies

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here:

https://senate.ubc.ca/policies-resources-support-student-success