

COURSE OUTLINE 2019-2020  
**MATHEMATICS 200, Section 104** (3 credits)  
**CALCULUS III**

**Prerequisite:**

One of MATH 101, MATH 103, MATH 105, MATH 121, SCIE 001.

**Instructor:**

Joel Feldman

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office hours	Mon 2:00–3:00, Tue 11:00–12:00, Thurs 2:00–3:00

**Text:**

**Joel Feldman, Andrew Rechnitzer and Elyse Yeager, CLP-3 Multivariable Calculus.**

<http://www.math.ubc.ca/~CLP/CLP3/>

See the common syllabus page for other possible references.

The common syllabus page for all sections of Math 200 is in Canvas

<https://canvas.ubc.ca/>

The Section 104 web page is

<http://www.math.ubc.ca/~feldman/m200/>

**Topics**

- I. 3-Dimensional Geometry (Chapter 1, except §1.6)
  - Three dimensional coordinate systems,
  - Vectors, arithmetic, dot and cross products,
  - Equations of lines and planes,
  - Equations of surfaces.
- II. Differentiation of Multivariable Functions (Chapter 2)
  - Functions of several variables,
  - Limits and continuity,
  - Partial derivatives,
  - Tangent planes and linear approximations,
  - Chain rule,
  - Directional derivatives, gradient,
  - Maximum and minimum values, Lagrange multipliers.
- III. Integration of Multivariable Functions(Chapter 3 except §3.4, 3.8)
  - Double and iterated integrals,
  - Double integrals in polar coordinates,
  - Applications,
  - Triple integrals,
  - Triple integrals in cylindrical and spherical coordinates.

**Grading**

There will be weekly webwork assignments worth 10% of the overall grade. There will be four tests (Sept 20, Oct 11, Oct 25, Nov 15) accounting for 35% of the overall grade. The final exam will account for 55% on the overall grade. All grades will be scaled.

September 1, 2019  
Joel Feldman

### Test Schedule

	Mon	Wed	Fri
Sep	2 no class	4	6
	9	11	13
	16	18	20 Test 1
	23	25	27
Oct	30	2	4
	7	9	11 Test 2
	14 no class	16	18
	21	23	25 Test 3
	28	30	1
Nov	4	6	8
	11 no class	13	15 Test 4
	18	20	22
	25	27	29 last class