

MATH 200/253 Term I, Summer 2012: MULTIVARIABLE CALCULUS

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Textbook *Early Transcendentals*, or *Multivariable Calculus* by **James Stewart**, *Edition 6e*. Other versions may have different section numbers, but material and questions are similar in each edition for the same section title. We cover the sections on: Vectors and the Geometry of Space, Partial Derivatives, and Multiple Integrals. The text is mainly used for reference and assignments.

Exams and Grades

Quizzes/Homework	20%
Midterm (Friday, May 25 at 4 PM)	30%
Final Exam (Friday, June 15 at 4 PM)	50%

- Quizzes are tentatively scheduled for each Friday in class, however, the instructor reserves the right to adjust these dates or assign homework instead.
- There will be a 2 hour common **midterm on Friday, May 25 at 4 PM**.
- There will be a common 2.5 hour final exam for all sections of Math 200/253.

Exam Policies:

- Your grades will be scaled if necessary, to ensure fairness.
- Missing a quiz or midterm normally results in a mark of 0. Exceptions may be granted in two cases: prior consent of the instructor or a medical emergency. In the latter case, the instructor must be notified within 48 hours of the missed exam, and presented with a doctor's note immediately upon the student's return to UBC. A physician's note should specifically state that the student was medically unfit to write the missed exam on that day. If you miss a quiz with valid reason, the weight will be transferred to the final exam. We will schedule a make-up midterm for students who missed the midterm with valid reason. In the event that the makeup midterm is also missed for a valid reason, the weight will be transferred to the final exam. Missed exams without valid reason will receive a grade of 0.
- No books, notes, formula sheets, calculators or other electronic devices are permitted for use during quizzes or midterms.

Course Outline

This is an introduction to calculus of several variables. The main topics are partial derivatives and multiple integrals. An appreciation of three-dimensional geometry is essential. Section numbers refer to Stewart, *Multivariable Calculus*, sixth edition.

1. Vectors, quadratic surfaces (Sections 13.1-13.6)
2. Partial derivatives, increments, chain rule (Sections 15.1-15.5)
3. Directional derivative and Gradients (Section 15.6)
4. Max/min, Lagrange multipliers (Sections 15.7 15.8)
5. Double integrals (Sections 16.1-16.5)
6. Triple integrals (Sections 16.6-16.8)

Homework

As we progress in the course material, you should complete all of the posted practice problems. While homework will not be collected for grading, you are strongly advised to work out the problems in detail as they will give you practice in the techniques learned in class and provide essential help in preparing for quizzes, the midterm, and final exam.