**MATH 200/253 Term I, Summer 2013: MULTIVARIABLE CALCULUS**

In addition to the office hours of your instructor, there is DROP-IN HELP for Math 200/253 at the Math Learning Centre on Wednesday 1 - 3 and Thursday 12 - 4 PM in LSK 301/302.

**Textbook** *Multivariable Calculus* by J. Stewart, 7th Edition (which is included in *Calculus* 7th Edition by J. Stewart). Or equivalently, *Calculus / Multivariable Calculus: Early Transcendentals* by J. Stewart, 7th Edition.

**Exams and Grades**

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| WeBWorK - Online Homework | 20% |
| Midterm (Tuesday, June 4 at 4 PM) | 30% |
| Final Exam | 50% |

• WeBWorK online homework will be assigned weekly, due on Friday.

• There will be a 2 hour common **midterm on Tuesday, June 4 at 4 PM**. Make note of this time, and do not schedule anything else at this time.

• There will be a common 2.5 hour final exam for all sections of Math 200/253 in the formal exam week June 24-28 inclusive, and all students must be available to write an exam during this week. The exam schedule should be released during the first week of June.

**Course Policies**

• Grades will be scaled if necessary, to ensure fairness.

• Missing a homework 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. The instructor must be notified within 48 hours of a missed midterm, 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 midterm on that day.

There will be no make-up homework. If you miss a homework with a 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 a 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 homework and exams without a valid reason will receive a grade of 0.

• No books, notes, formula sheets, calculators or other electronic devices are permitted for use during the midterm or final exam.

**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*, 7th edition.

1. Vectors, quadric surfaces (Sections 13.1-13.6)
2. Partial derivatives, linearization, chain rule (Sections 15.1-15.5)
3. Directional derivative and Gradient (Section 15.6)
4. Max/min, Lagrange multipliers (Sections 15.7  15.8)
5. Double integrals (Sections 16.1-16.6)
6. Triple integrals (Sections 16.7-16.9)