**UBC MATH 217, 2014/15 Term1**

*Multivariable and Vector Calculus*

**Text**: Stewart, *Multivariable Calculus* (7th. ed.)

**Instructor**: Julia Komjathy, MATHX 1103, komyju@math.ubc.ca

**Course web page**: www.win.tue.nl/∼jkomjath/multivariable.html/

**Lectures**: Tue/Thu 9:30-11, LSK 201; Wed 11-12, Irving K. Barber Learning Center 182

**Grading**:

- weekly homework assignments and/or quizzes: 10 %
- 2 midterm exams (Oct. 7, Nov. 4): 40 %
- final exam (date TBA): 50 %

**Policies**: missing an assignment, quiz, or midterm exam, except in case of a medical emergency (doctor's note required) or with the instructor's prior consent, will result in a mark of zero. Homeworks are always due to hand in at the beginning of the Wednesday class.

**Tentative Schedule by Week** (with suggested reading from the text)

1. Vectors and the geometry of space. Reading: 12.1-12.6.
2. Vector functions. Reading: 13.1-13.4.
3. Functions of several variables. Reading: 14.1-14.2.
4. Partial derivatives and the gradient. Reading: 14.3-14.6.
5. Maxima and minima. Reading: 14.7-14.8.
6. Double integrals. Reading: 15.1-15.4.
7. Applications of double integrals. Reading: 15.5-15.6.
8. Triple integrals. Change of variables. Reading: 15.7-15.10.
9. Vector fields. Fundamental theorem for line integrals. Reading: 16.1-16.3.
10. Green's theorem. Reading: 16.4.
11. Divergence and curl. Parametric surfaces. Reading: 16.5-16.6.
12. Surface integrals and Stokes' theorem. Reading: 16.7-16.8.
13. The divergence theorem. Applications of the fundamental theorems. Reading: 16.9-16.10.

*Sep. 4, 2013*