# Honors Real Variables I

# Math 417 – Lecture A1

# September – December 2008

**Time and Place:** MWF 10:00 – 10:50, CAB 357.

**Instructor:** Alexander Litvak
Office:    CAB 525,    tel: 492-3397,    e-mail: `alexandr@math.ualberta.ca`
Homepage: `http://www.math.ualberta.ca/~alexandr/`
Office Hours: MW 11:00–12:00 or by appointment.

**Recommended books (no textbook needed):**
1. Royden, "Real Analysis",
2. Rudin, "Real and Complex Analysis",
3. C. D. Aliprantis and O. Burkinshaw, Principles of Real Analysis,
4. Gariepy and Ziemer, "Modern Real Analysis".

**Prerequisite:** Math 317 or equivalent.

**Topics to be covered:** Elements of set theory, cardinality, brief construction of real numbers. Lebesgue measure and Lebesgue integral. Differentiability, Riemann-Stieltjes integral and functions of bounded variation.

**Grading Policy:**
Your course grade will be based upon your marks in examinations weighted as follows:

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|---|---|
| 55% | Final (09:00–12:00, Wednesday, December 10) |
| 45% | In class quizzes (Sept. 26, Oct. 17, Nov. 7, Nov. 28) |

There will be **no curve**, but the actual distribution of marks will be taken into account. If you miss the final exam and obtain a formal (in writing) University accepted excuse for your absence you might write a **deferred exam**.

**Quizzes** will be written at the end of Friday's classes Sept. 26, Oct. 17, Nov. 7, Nov. 28. They will be based on the material and exercises given in the class and on my webpage. There will be a total of 4 quizzes for the term. Your quizzes grade will be based on your **best 3 out of 4**. Please note, there will be **no deferred quizzes**, so I **strongly recommend** to write all the quizzes.

**Important Remark.** Calculators, notes, books, etc. **are not allowed** during quizzes/exams.

**Assignments:** There will be no homework assignments, but many drill problems (exercises) will be given. I strongly recommend that you do all the drill problems. The quiz problems will be very similar to the drill problems.

**Dates:** *First Class*: Sept. 3; *No classes:* Oct. 13 and Nov. 10 *Quizzes:* Sept. 26, Oct. 17, Nov. 7, Nov. 28. *Last class:* Dec. 3; *Final exam:* Dec. 10.