# Honors Real Variables II
# Math 418 – Lecture Q1
# January – April 2009

**Time and Place:** MWF 9:00 – 9:50, CAB 229.

**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 10:00-11:00 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 417 or equivalent.

**Topics to be covered:** Differentiation and integration; Lebesgue-Stieltjes integral; functions of bounded variation; Metric spaces, Baire category; Product Measures; Fubini's Theorem; Convolution; Banach spaces; $L_p$-spaces; Hilbert spaces; Trigonometric series.

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

| | |
|---|---|
| 55% | Final (09:00–12:00, Tuesday, April 21) |
| 45% | In class quizzes (Jan. 30, Feb. 13, March 13, Apr. 3) |

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** on Saturday, May 9, at 09:00.

**Quizzes** will be written at the end of Friday's classes Jan. 30, Feb. 13, Mar. 13, Apr. 3. 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.

**Dates:** *First Class:* Jan. 5; *Reading week (no classes):* Feb. 16 – Feb. 20; *Last Class:* Apr. 8; *Quizzes:* Jan. 30, Feb. 13, March 13, Apr. 3, *Final Exam:* Apr. 21, *Deferred exam:* May 9.

**University regulations:** Policy about course outlines can be found in Section 23.4(2) of the University Calendar. The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at *www.ualberta.ca/secretariat/appeals.htm*) and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.