

# Honors Real Variables II

## Math 418 – Lecture Q1

### January – April 2005

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

**Instructor:** Alexander Litvak, Office: CAB 525, Tel: 492-3397,  
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Office Hours: MWF 10:00-11:00 or by appointment.

**Recommended books (no textbook needed):**

1. Gariepy and Ziemer, “Modern Real Analysis”,
2. Royden, “Real Analysis”,
3. Rudin, “Real and Complex Analysis”.

**Prerequisite:** Math 417 or equivalent.

**Topics to be covered:** Metric spaces, Baire category; Elements of Measure and Integral Theory, Product Measures, Fubini’s Theorem; Convolution; Banach spaces,  $L_p$ -spaces, Hilbert spaces.

**Grading Policy:**

Your course grade will be based upon your marks in exams and assignments weighted as follows:

60%	Final (09:00-12:00, CAB 229, Wednesday, April 20)
30%	Midterm (09:00-09:50, CAB 229, Monday, March 7)
10%	Assignments

There will be no curve, but the actual distribution of marks will be taken into account. There is no deferred midterm. If you qualify for an excused absence on the midterm the weight will be transferred to the final exam. 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 14, at 09:00-12:00 in CAB 243.

**Dates:** *First Class:* Jan. 10; *Reading week:* Feb. 21 – Feb. 25; *Midterm exam:* Mar. 7; *No classes:* Mar. 25 and 28; *Last Class:* Apr. 15; *Final Exam:* Apr. 20, *Deferred exam:* May 14.

**Assignments:** Homework problems will be assigned in every lecture and all the problems assigned in the current week will be due at the **beginning** of the Wednesday class of the next week in the lecture room CAB 229. **Please note**, late assignments will not be accepted. The first assignment will be due Wednesday January 26. I strongly recommend that you do all the drill problems (exercises) will be given during the lectures. **The solutions** will be posted on my homepage as well as on Bulletin board # 9b, opposite CAB 529.

**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](http://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.