

STAT 5709-W (UO Code: MAT 5171) Probability Theory II
School of Mathematics and Statistics
Carleton University
Winter 2013

Instructor: Dr. Yiqiang Q. Zhao; Office: 4328HP; Tel. 520-2600 ext. 2131
E-mail: zhao@math.carleton.ca
Coursepage: cuLearn

Text: Patrick Billingsley, *Probability and Measure*, 3rd Edition, John Wiley, 1995.

Lecture: Canal Building 3400 (and will be changed to 4325HP)
Tuesday & Thursday 10:05am – 11:25pm

Prerequisites: STAT 5708 (MAT 5170); or permission of the School

Office Hours: Tuesday 1:30 – 3:00pm
(4328HP) or by appointment

Marking Scheme: Assignments (3): 30% (due dates: February 7, 28 and March 28, resp.)
Term test (1): 20% (March 14)
Final exam: 50%

Important dates:

January 8 (Tuesday)	First lecture
January 18 (Friday)	Last day for registration or to make changes
January 31 (Thursday)	Last day for withdrawal with full fee adjustment
February 15 (Friday)	April examination schedule available online
February 18 – 22	Winter break, classes suspended
March 8 (Friday)	Last day to submit to PMC final exam accommodation forms
March 28 (Thursday)	Last tutorial (to be confirmed)
April 9 (Tuesday)	Last day of classes
April 13 – 27	Exam period

Email communication with instructor: According to Carleton policy under the Freedom of Information and Protection of Privacy Act (FIPPA), please use your Carleton Connect account for all course related email.

Announcements: You are responsible for keeping up with all information announced in class, from the course web page at cuLearn and through e-mail.

A total of 3 assignments worth 10% each: Students should do independent work on the assignments. **Late assignments** will not be accepted unless a written request, describing the reason why you could not complete the work on time, has been submitted to the instructor before the due date, and an arrangement made by the instructor.

Term test (20%): You should write the test. No make up, early or late test will be arranged, except for medical reasons (a doctor's note must be presented), or situations in accordance with Carleton's accommodation policies. The missing test will be counted as zero.

Final examination (50%): There is a three (3) hour closed book exam scheduled by the University during the final exam period. It is the responsibility of each student to be available at the time of the examination. In particular, no travel plans for the examination period in April should be made until the examination schedule is published.

Calculators: You may only use non-programmable, non-graphing calculators for the tests and the final examination in this course. No other electronic device is allowed, such as cell-phones, electronic dictionary, palm pilot, etc.

Paul Menton Centre: Students with disabilities requiring academic accommodations in this course must contact a coordinator at the Paul Menton Centre (PMC) for Students with Disabilities (500 University Centre, Tel: 613-520-6608) to complete the necessary Letters of Accommodation. After registering with the PMC, make an appointment to meet and discuss your needs with the instructor in order to make the necessary arrangements as early in the term as possible. Please notice the deadline for submitting completed forms to the Paul Menton Centre for formally scheduled exam accommodations.

Religious obligations: Students requiring accommodation on the basis of religious obligations should make a formal, written request for alternate dates and/or means of satisfying academic requirements. Such requests should be made within the first two weeks of the class or as soon as the need for accommodation is known to exist, but no later than two weeks before the compulsory event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor. Accommodation is made in a way that ensures fairness and avoids academic disadvantage to the student. Please refer to the website of Equity Services for a list of holy days and Carleton's Academic Accommodation policies.

Pregnancy: Pregnant students requiring academic accommodation are encouraged to contact an Equity Advisor in Equity Services to complete a letter of accommodation. You should make an appointment with the instructor to discuss your needs at least two weeks prior to the first academic event in which it is anticipated that the accommodation will be required.

Course Outline:

Week	Sections	Topics
1-2	25	Weak Convergence
3-4	26	Characteristic Functions
5-6	27	Central Limit Theorem
-	Feb 20-24	Winter break
7-8	33	Conditional Probability
9-10	34	Conditional Expectation
11-12	35	Martingales
13	review	