



**STAT-4401(3)**  
**Probability Theory**  
**Winter 2015**

**Instructor:** Dr. Melody Ghahramani

Office: 6L25

Office Hours: Monday 1:30-2:20 p.m., Wednesday: 1:30-2:20 p.m., or by appointment.

Phone: 786-1414

Email: [m.ghahramani@uwinnipeg.ca](mailto:m.ghahramani@uwinnipeg.ca) or [melody.ghahramani@gmail.com](mailto:melody.ghahramani@gmail.com) (preferred)

Website: [ghahramani.ca](http://ghahramani.ca)

**Lecture:** MW 2:30 – 3:45 p.m.

Room: 2C11

**Text:**

Title: An Intermediate Course in Probability, Second Edition, 2009.

Author: Allan Gut

Publisher: Springer, New York.

**Grading scheme:**

Assignments (5): 20%

Midterm: 30% (in class, TBD)

Final Exam: 50% (check current postings to confirm)

<http://www.uwinnipeg.ca/index/current-exam-schedule>

**Assignments:** The assignments are to represent your own work. It is permissible to work with other students but the write-up of the answers must be done in your own words. Assignments should be handed in by the end of the class, on the due date. Late assignments will not be accepted. Make sure that you show your work. Solutions for assignments will be made available if necessary. It is not necessary to typeset the assignment.

**Prerequisites:** MATH/STAT-3611(3) or permission of the instructor.

**Course Outline (Time Permitting):**

Transforms: probability generating functions, moment generating functions (review), characteristic functions; laws of large numbers, modes of convergence, martingales, random walk.



**Deferred Tests/Exams:** Department deferral policy: A student may ask the instructor for a deferred final exam on documented medical or compassionate grounds. It is department policy that the instructor not grant any such request based on the student's vacation plans. Notwithstanding this departmental policy, the student has the right to formally petition the Senate Student Appeals Committee for a deferred exam. The student must consult an Academic Advisor before filing a formal appeal.

**More on Evaluation:** The **midterm exam** will consist of a selection of questions, closely based on the lectures, and chosen from a list that will be provided in advance. The **final exam** will consist of questions, closely based on the lectures, and chosen from a list that will be provided in advance.

**In-Class policy:** All cell phones or other electronic devices should be turned off before the student enters the classroom. In order to create an environment conducive to learning, students are invited to respectfully give their opinions and contributions to class discussions, bearing in mind the usual courtesies.

**Calculators:** Permitted on tests and exams.

**Student Id:** Required for writing tests and exams.

**Voluntary withdrawal:** You must formally withdraw from a course. If you simply stop going to classes, you may receive an "F" on your transcript and loss of tuition credit. Please note that the deadline for *voluntary withdrawal from this course is March 3, 2015*. Students are encouraged to speak to me prior to withdrawing. By this date you should have received results from some evaluative feedback.

**Reading Week:** February 15-21, 2015. There will be no classes during Reading Week.

Students are reminded to refer to Section VII of the University Course Calendar for policies on grading, appeals and academic misconduct. <http://www.uwinnipeg.ca/index/calendar-calendar>

**Services for Students with Disabilities:** Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services (AS) at 786-9771 or [accessibilityservices@uwinnipeg.ca](mailto:accessibilityservices@uwinnipeg.ca) to discuss appropriate options. All information about a student's disability or medical condition remains confidential. <http://www.uwinnipeg.ca/accessibility>.



Department of Mathematics and Statistics

**Miscellaneous:** Students who plan to conduct research interviews, focus groups, surveys, or any other method of collecting data from any person, even a family member, must obtain the approval of the UHREB before commencing data collection. Exceptions are research activities in class as a learning exercise. See <http://www.uwinnipeg.ca/index/research-human-ethics> for submission requirements and deadlines.

All students, faculty and staff have the right to participate, learn and work in an environment that is free of harassment and discrimination. The UW Respectful Working and Learning Environment Policy may be found online at [www.uwinnipeg.ca/respect](http://www.uwinnipeg.ca/respect).

University of Winnipeg promotes a scent-free environment. Please be respectful of the needs of classmates and the instructor by avoiding the use of scented products while attending lectures. Exposure to perfumes and other scented products (such as lotion) can trigger serious health reactions in persons with asthma, allergies, migraines or chemical sensitivities.