

University of Regina
Statistics 351–Intermediate Probability

Section: 001

Lecture: MWF 1330–1420 in Classroom Building, room 417 (CL 417).

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Office Hours: MWF 1130-1320

Required Text:

Allan Gut, *An Intermediate Course in Probability*, Second Edition, Springer 2009.

Course Description:

3 credits. Multivariate random variables; conditioning; order statistics; the multivariate normal distribution; the Poisson process. ***Prerequisites: MATH 213 and STAT 251 with grades of at least 60%.

Student Responsibilities:

Students should familiarize themselves with both the *Responsibilities of Students* in Section 5.1 and the *Responsibilities of Instructors* in Section 5.2 of the *Undergraduate Calendar*. Especially note item 8 which states that: Instructors are expected to conduct their courses in such a way as to obtain evidence of student writing skills, in term papers, essays, reports, or other written work, and to demand competence in writing for a passing grade

Keeping Up-to-Date:

This is an intermediate course in probability theory. The primary focus will be on the analysis of multivariate random variables. Most assigned problems will be computational in nature, however that does not mean they will be numerical. Instead, they will require symbolic manipulation and rigorous, careful use of theoretical constructs. There will be some focus on proving major theorems, and students will be expected to understand the proofs which are presented in class. Consequently, it is vital that students read the appropriate textbook sections before and after each lecture, and attempt the relevant homework problems. Keeping up-to-date with the material is essential!

Grading Information:

Your final grade will be determined by your performance in the course, including assignments, the midterms, and the final exam. Students should consult *Grading Descriptions* in Section 5.9.1 of the *Undergraduate Calendar* for an outline of the expectations associated with various percentage grades.

Evaluation Type	Number	Percentage of Final Grade
Assignments	10	0%
Midterm Exam	2	40%
Final Exam	1	60%

Caveat: In order to receive a final grade of at least 60% for the course, it is necessary (but not sufficient) to receive a grade of at least 60% on the final exam.

Policy for Missed Classes, Missed Midterms, and Missed Final Exam:

Students should familiarize themselves with the sections *Attendance* (Section 5.3) and *Deferral of Final Examinations and/or Term Work* (Section 5.8) of the *Undergraduate Calendar*.

Assignments:

As is the norm in a university-level course, it is not possible to cover all of the required material in lecture. As a result, each student must take an active rôle in his or her own education. Mathematics and Statistics are not spectator sports. They cannot be learned passively only by watching the instructor lecture. Instead they must be learned by doing. Consequently, most of what you learn in this course will be the result of working exercises that are designed to reinforce key concepts, develop skills, and test your understanding of the material. Before you try working the exercises, however, do the reading assignment. Reading the text will help you review the important concepts before you start on the exercises. After each class meeting, you should work all problems assigned from the section discussed that class. Assignments will take on the average 10–12 hours. You are encouraged to talk with your classmates about the homework; you might even want to form a study group to work together on the most difficult homework problems. However, all problems you submit must be your own work. *It is dishonest, and a serious University of Regina violation, to submit someone else's work as your own.*

Midterm Exam:

There will be two major midterm exams that will be given during the semester. The midterms will be closed-book, although one page of handwritten notes will be allowed. The exams will be comprehensive, and cover all the material listed on the syllabus before that midterm, including lectures, assigned readings, and assignments.

Final Exam:

As with the midterm exams, the final exam will be closed-book, although two pages of handwritten notes will be allowed. The final exam will be comprehensive and cover all of the material listed on the syllabus, including both lecture work and assigned readings.

Exam Dates:

The midterms will be held in class during the usual class time, and the location of the final exam will be determined by the Registrar near the end of the term.

- Midterm Exam #1: **Wednesday, October 21, 2015, 1330–1420**
- Midterm Exam #2: **Friday, November 20, 2015, 1330–1420**
- Final Exam: **Friday, December 18, 2015, 1400–1700**

Academic Integrity:

For a university community of scholars, academic integrity is the heart of intellectual life—both in learning and in research.

Students should read carefully the University of Regina guidelines on *Student Behaviour* in Section 5.13 of the *Undergraduate Calendar*, and not assume they understand what integrity and cheating are and are not. Academic integrity most certainly implies more at the university than it did in high school. The standards of integrity are those that prevail in professional life. Students must acknowledge and cite ideas they adopt from others (not just direct quotations), and understand the general standards and policies of academic integrity, as well as specific expectations in individual courses. When in doubt, ask!

Important information about the textbook “An Intermediate Course in Probability” by Allan Gut

The entire textbook is available electronically free of charge to valid users from the University of Regina since Springer provides one of the e-book collections for which the library has purchased access.

In fact, I received the following message from Barbara Nelke, Head of Technical Services (Library), when I inquired specifically about downloading textbooks from Springer.

Any valid user from University of Regina may download and save the entire book chapter-by-chapter on to their reader if they so choose. There are no restrictions on the number of users, downloads, chapters, pages etc. However, the key is that it is not for distribution. Authorized Users may browse, search, retrieve, display, download, print, and store single copies of individual articles or book chapters for scholarly research, educational and personal use as long as such use is not made for further distribution, publication, transfer or access by others and is otherwise consistent with §107 of the United States Copyright Act regarding fair use (17 USC §108).

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