

University of British Columbia
Mathematics 302—Introduction to Probability

Section: 102

Lecture: MWF 1400–1500 in Mathematics Annex Building, room 1100 (MATX 1100).

Professor: Michael Kozdron

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Course Home Page: <http://stat.math.uregina.ca/~kozdron/Teaching/UBC/302Fall110/>

Office Hours: M 1230–1345, Th 1030-1215, or by appointment

Required Text:

Sheldon Ross, *A First Course in Probability*, Eighth Edition, Pearson 2010.

Textbook Caveat:

There are no discernible differences between the 8th edition of the text and previous editions, so students need not feel compelled to purchase the 8th edition. In fact, there is a large selection of textbooks suitable for MATH 302 comparable to the 8th edition of Ross available at the library (start with QA273.R83 in the Barber Learning Centre stacks).

Course Description:

Basic notions of probability, random variables, expectation and conditional expectation, limit theorems.

Credit Equivalency:

MATH 302 and STAT 302 are equivalent for all purposes including fulfilling graduation requirements.

Faculty of Science Credit Exclusion List:

MATH 302, 318, STAT 241, 251, 302

Prerequisites:

One of MATH 200, MATH 217, MATH 226, MATH 253, MATH 263.

Further Comments on Prerequisites:

The prerequisites for MATH 302 are one of the third-term calculus courses (as listed above). Naturally, these courses have their own prerequisites which include differential and integral (single-variable) calculus. Thus, students are expected to be completely familiar with all of the material covered in these preparatory classes. In particular, you will need to use techniques from calculus such as integration-by-substitution, integration-by-parts, and multiple integration in MATH 302.

Grading Information:

Your final grade will be determined by your performance in the course, including assignments, the midterms, and the final exam.

Evaluation Type	Number	Percentage of Final Grade
Assignments	10	14%
Midterm Exams	2	36%
Final Exam	1	50%

Exam Dates:

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

- Midterm Exam #1: **Friday, October 22, 2010, 1400–1500**
- Midterm Exam #2: **Monday, November 15, 2010, 1400–1500**

Commonalities Between Sections of MATH 302:

There are two separate sections of MATH 302 this term. Both sections will cover the same material, though perhaps in slightly different orders. There will be a common final exam for both sections jointly written by the different instructors which will be worth 50% of the final grade in each section. The midterms will be worth 36% of the final grade in each section, although there will NOT be common midterms between sections. The remaining 14% of the final grade will be determined by the discretion of the different instructors. Final grades are subject to (upward) scaling if statistically significant differences are found between sections.

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

Students should familiarize themselves with the section on *Examinations* from the undergraduate calendar. If a homework assignment is missed for a documented medical or other reason, it will be ignored, with other assignments reweighted to compensate for the missed work. In the case of a missed midterm, permission to write a makeup midterm or reweighting of other course components may be granted in the following two circumstances: (a) prior notice of a valid, documented absence (e.g. out-of-town varsity athletic commitment) on the scheduled date; or (b) notification to the instructor within 72 hours of absence due to medical condition. Original written documentation, for example a doctor's note or letter from a coach, is required in all cases; otherwise, a score of 0 will be assigned for the missed assignment or midterm. No late assignments will be accepted, although the lowest assignment score will be dropped when determining grades.

Keeping Up-to-Date:

This is an introductory course in the mathematical theory of probability. The primary focus will be on the analysis of 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!

Exam Information:

There will be two midterm exams given during the term. The midterms will be closed-book and no aids will be allowed. Each midterm will be comprehensive, and cover all the material discussed before that midterm, including lectures, assigned readings, and assignments. The final exam will be closed-book and no aids will be allowed. The final exam will be comprehensive and cover all of the material from the course. Students are welcome to use a non-programmable, non-graphing calculator on exams.

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 sections *Student Declaration and Responsibility*, *Academic Honesty and Standards*, and *Academic Freedom* from the undergraduate calendar, and not assume they understand what integrity and cheating are and are not. 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!