

# STAT 333 Introductory Probability Theory

## Fall 2015

**Instructor:** Derrick Lee

**Contact:** dlee at stfx dot ca (Please email with the subject: STAT333)  
902-867-5746  
Annex 9A

**Office Hours:** Monday 13:00 – 15:00  
Tuesday 14:30 – 15:30  
Wednesday 9:30 – 10:30  
Thursday 13:30 – 15:30  
or by Appointment

**Class Times:** STAT 333/Section 10: D1 (M/11:15), D2 (T/1:15), D3 (R/12:15) at AX 23A

### Course Goals:

To understand the basic laws of probability, how these laws are used in practice to make informed decision, and the direct application of their functions.

**Prerequisites:** MATH 222 or 267 and MATH 223 or 253

**Website:** <https://moodle.stfx.ca>

### Textbook:

*A First Course in Probability (9<sup>th</sup> Edition)* by Ross (required-ish).

Note: There is a copy of the 8<sup>th</sup> edition on *one-day reserve* at the Angus L. MacDonald Library.

### Grading Scheme:

- |                          |     |
|--------------------------|-----|
| • Quizzes (5)            | 10% |
| • Assignments (6)        | 10% |
| • Midterm 1 (October 5)  | 20% |
| • Midterm 2 (November 9) | 20% |
| • Final Exam             | 40% |

### Important Notes:

- There are **5 assignments in total**. If you miss this deadline, there will be a 10% deduction from the grade/day. **No assignments will be accepted once solutions are posted.**
- Collaboration on assignments is acceptable but **all work presented must be original**; please be conscious of the ramifications of plagiarism (see section 3.8 of the Academic Calendar).
- There are **5 quizzes in total**, each 10-15 minutes (one-page).
- Requests for re-grading should be done within one week of the work being handed back.
- There will be no makeups of quizzes (or midterm exams) except where a valid documented excuse is provided before or within one week of assessment date (see Section 3.9 of the Academic Calendar); the weight of missed tests will be shifted to other marked material.
- **For all examinations, graphing calculators will NOT be permitted.**

## Syllabus for STAT 333:10 and Tentative Schedule

Week	Period	Sections	Topics
1	Sept. 8	Classes begin	
	Sept. 8 – 11	Chapter 1	Combinatorial Analysis
2	Sept. 14 – 18	Chapter 2	Axioms of Probability
	Sept. 17	Quiz 1	
3	Sept. 21 – 25	Chapter 3	Conditional Probability and Independence
4	Sept. 28 – Oct. 2	Chapter 4	Random Variables
	Oct. 1	Quiz 2	
5	Oct. 5 – 9	5.1 to 5.4	Continuous Random Variables
	Oct. 8	Midterm #1	
6	Oct. 12	Thanksgiving Holiday	
	Oct. 12 – 16	5.5 to 5.7	Other Continuous Random Variables and Distributions
7	Oct. 19 – 23	6.1 to 6.2	Joint Distribution Functions, Independent Random Variables
	Oct. 22	Quiz 3	
8	Oct. 26 – 30	6.3 to 6.8	Conditional Distributions, Order Statistics, Joint PDF, Exchangeability
9	Nov. 2 – 6	7.1 to 7.6	Expectation, Conditional Expectation
10	Nov. 9	Midterm #2	
	Nov. 11	Remembrance Day	
	Nov. 12 – 13	Fall Study Days	

11	Nov. 16 – 20	7.7 to 7.9	Moment Generating Functions
	Nov. 19	Quiz 4	
12	Nov. 23 – 27	8.1 to 8.4	Chebychev's Inequality, Law of Large Numbers
13	Nov. 30 – Dec. 4	8.3 to 8.6	Central Limit Theorem, Jensen's Inequality
	Dec. 3	Quiz 5	