

# STA347 - Probability I

## University of Toronto Summer 2015

Lectures: Tuesday, Thursday 6-9pm at SS1085  
Instructor: Gun Ho Jang  
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Web page: <http://www.utstat.toronto.edu/ghjang/teaching/sta347.php>  
Office: SS6015  
Office Hours: Tuesday, Thursday 4:30-5:30pm or by appointments.

### Course Description

This course provides a thorough overview of probability theory from a least-measure theoretic point of view which includes the convergence theorems. Topics covered are random variables and random vectors, independence, conditional probability and conditional expectation and their applications, and various types of convergence theorems. As time permits simple stochastic processes such as Markov chains, Poisson and branching processes will be introduced.

### Prerequisite

Multivariate calculus similar to STA247/STA255/STA257/MAT235/MAT237 is mandatory. Analysis equivalent to MAT257 is recommended;

### Textbook

Henk Tijms. Understanding Probability. Cambridge University Press, 3rd edition.

### Reference

M. Evans and J. Rosenthal (2010). Probability and Statistics. Freeman, 2nd ed.  
G. Grimmett and D. Stirzaker (2001). Probability and Random Processes, Oxford, 3rd edition.  
A.N. Kolmogorov (1956). Foundations of the Theory of Probability. 2nd ed.  
S. Ross (2009). Introduction to Probability Models. Academic Press, 10th ed.  
P. Whittle (2000). Probability via Expectation. Springer, 4th ed.

### Evaluation

The grading scheme is as follows:

	Proportion	date, time and location
Quiz	20%	July 30 (1.5 hours)
Mid-term test	30%	July 14 (2 hours)
Final exam	50%	TBA (2 hours)

Note: If midterm score is higher than final, proportions of midterm and final will be adjusted to 40%.

### Notes

\* No makeup test/quiz will be given for missed test/quiz. If you miss test/quiz and provide a valid medical record to the instructor within a week, your mark on the final exam will be substituted for the missed test/quiz.

\* Quiz, mid-term test and final exam will be closed book with no aids allowed except a non-programmable calculator. Formulae sheets will be provided if necessary.