

STA257 - Probability and Statistics I

University of Toronto Summer 2018

Lectures: Mondays, Wednesdays 7-10pm at LM159
Instructor: Gun Ho Jang
e-mail: gunho@utstat.toronto.edu Put 'ST257' in subjects
Course web: blackboard system
Office: TBA
Office Hours: Mondays, Wednesdays 4:30-5:30pm or by appointments.

Course Description

A mathematically rigorous introduction to probability, with applications chosen to introduce concepts of statistical inference. Topics covered are probability and expectation, discrete and continuous random variables and vectors, distribution and density functions, the law of large numbers, and the central limit theorem. Distributions covered are the binomial, geometric, Poisson, exponential, gamma, beta, Student's t and normal distributions.

Prerequisite

Prerequisite: (MAT135H1, MAT136H1(70%))/MAT137Y1/MAT157Y1
Corequisite: MAT235Y1/MAT237Y1/MAT257Y1, MAT223H1/MAT240H1
Exclusion: ECO227Y1/STA247H1

Textbook

J.A. Rice (2006). Mathematical statistics and data analysis. Duxbury, 3rd ed.

Reference

M. DeGroot and M. Schervish (2010). Probability and Statistics. Pearson. 4th ed.
M. Evans and J. Rosenthal (2010). Probability and Statistics. Freeman, 2nd ed.
W. Feller (1968). An Introduction to Probability Theory and Its Applications, V. 1, 3rd 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 (2010). A First Course in Probability. Pearson, 8th ed.
S. Ross (2014). Introduction to Probability Models. Academic Press, 11th ed. H. Tijms. Understanding Probability. Cambridge University Press, 3rd edition.
P. Whittle (2000). Probability via Expectation. Springer, 4th ed.

Evaluation

The grading scheme is as follows:

	Proportion	date, time and location
Mid-term I	30%	May 16 (3 hours)
Mid-term II	30%	June 4 (3 hours)
Final exam	40%	TBA (3 hours)

Notes

- * No makeup test will be given for missed mid-term tests. If you miss a mid-term test and provide a valid medical record to the instructor within a week, your mark on the final exam will be substituted for the missing test.
- * Mid-term tests and final exam will be closed book with no aids allowed except a non-programmable calculator. Formulae sheets will be provided if necessary.
- * There will be a make up Monday class on Monday June 18. Time and location will be announced when it is scheduled.

Tutorial Assignment

Tutorial times are Mondays and Wednesdays 6-7pm in three different locations starting from May 9.

Last name string with A-K: LM155,

Last name string with L-Sh: LM157,

Last name string with Si-Z: LM161.

Academic Integrity

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (www.governingcouncil.utoronto.ca/policies/behaveac.htm) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

On tests and exams:

1. Using or possessing unauthorized aids.
2. Looking at someone else's answers during an exam or test.
3. Misrepresenting your identity.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see www.utoronto.ca/academicintegrity/resourcesforstudents.html).

Copyright

If a student wishes to copy or reproduce lecture presentations, course notes or other similar materials provided by instructors, he or she must obtain the instructor's written consent beforehand. Otherwise all such reproduction is an infringement of copyright and is absolutely prohibited.

Accessibility Needs

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible.