UNIVERSITY OF TORONTO
DEPARTMENT OF STATISTICS

STA257H1 F - Probability and Statistics I
Summer 2017
Course Outline

LECTURES:

Lecture Times: Monday, 19:00 - 22:00 SS 2135

Wednesday, 19:00 - 22:00 SS 2135

Instructor: Luai Al Labadi

Office Location: SS 5016H

E-mail Address: luai.allabadi@utoronto.ca

Office Hours: Monday, Tuesday, Wednesday and Thursday, 17:00 - 18:00

or by appointment.

(*Office hours may change before tests and final exam*)

Course Web Site: http://portal.utoronto.ca

TUTORIALS: Tutorials start on the 2nd (i.e. May 17) evening of classes. They are held at 6:00 p.m., twice a week before each class. To find out the section and location of your first tutorial, please check on Blackboard.

Tutorial		Location	Teaching Assistants
A	Monday 18:00-19:00	BF 323	Lin Zhang
	Wednesday 18:00-19:00	BF 323	
B	Monday 18:00-19:00	SS 2105	Daniel G. Cox
	Wednesday 18:00-19:00	SS 2105	
C	Monday 18:00-19:00	SS 1083	Tianle Chen
	Wednesday 18:00-19:00	SS 1083	
D	Monday 18:00-19:00	SS 2110	Kenny Guo
	Wednesday 18:00-19:00	SS 2110	

TAs Office Hours and Email Addresses: All office hours will take place in the Stats Aid Centre(SS1091).

Teaching Assistants	email	Office Hour
Lin Zhang	linzhang@utstat.toronto.edu	Monday 4-5 pm
Daniel G. Cox	cox@utstat.toronto.edu	Thursday 12-1 pm
Tianle Chen	tianle@utstat.utoronto.ca	Wednesday 1-2
Kenny Guo	kenny.guo@mail.utoronto.ca	Wednesday 4-5

COURSE DESCRIPTION

A mathematically rigorous introduction to probability, with applications chosen to introduce concepts of statistical inference. Probability and expectation, discrete and continuous random variables and vectors, distribution and density functions, the law of large numbers. The binomial, geometric, Poisson, and normal distributions. The Central Limit Theorem. (Note: STA257H1 does not count as a distribution requirement course).

Prerequisite: (MAT135H1, MAT136H1(70%))/MAT137Y1/MAT157Y1 (MAT137Y1/MAT157Y1 is strongly recommended)

Corequisite: MAT235Y1/MAT237Y1/MAT257Y1 (MAT237Y1/MAT257Y1 is strongly recommended), MAT223H1/MAT240H1

Exclusion: ECO227Y1/STA247H1

Distribution Requirement Status: None

Breadth Requirement: The Physical and Mathematical Universes (5)

TEXTBOOK

Mathematical Statistics with Applications (7th edition), by Wackerly, Mendenhall and Scheaffer.

Publisher: Cengage learning

Publication Date: 2008

ISBN- 13:978-0-495-11081-1

ADDITIONAL REFERENCES

Mathematical Statistics and Data Analysis (3rd edition) by John Rice.

ASSESSMENT AND DEADLINES

Type	Due date	Time	Location	Weight
Term Test (Midterm)	June/5/2017 To be confirmed	7:10-9:00	TBA	35%
Quizzes: best 3 of 4				15%
Quiz 1	May/24/2017	15 minutes	Tutorial	
Quiz 2	May/31/2017	15 minutes	Tutorial	
Quiz 3	June/7/2017	15 minutes	Tutorial	
Quiz 4	June/14/2017	15 minutes	Tutorial	
Final Exam	TBA	3 hours	TBA	50%

TESTS

The term test is held from 19:10 to 21:00 on the test date. There is no extra time for late entrants.

The final exam covers material from the entire course.

Non–programmable calculators are permitted on the test and exam. You must bring your student identification to the term test as well as the final exam.
Note: test solutions may be photocopied before they are returned.

MISSED TERM TEST POLICY

If you miss the term test for medical reasons, submit a U of T medical certificate indicating that you saw the doctor on the date of the missed test. If you miss a term test for any other reason, submit appropriate official documentation. Also **include your name, student number, and course number at the top of the page.** All documentation must be official and written in English. It is your responsibility to submit documentation to the professor within one week of the missed test. The professor determines if the absence is legitimate and is entitled to refuse your documentation if it does not meet these standards.

If you miss the term test and your absence is classified as legitimate, a make-up test will NOT be scheduled. Your final exam would account for 85% of your final grade. If your documentation is not received on time, your test mark will be zero.

TEST RE-MARK POLICY

Requests for test remarking must be made in writing. Submit a note to the instructor (not the TA) explaining why you believe your solutions deserve more marks. **Late remark requests will not be accepted.**

QUIZZES

Quizzes are closed book. There will be 4 quizzes. The lowest of the four quiz will be dropped. Quizzes must be written in tutorial, in which student is registered. **Missed quizzes earn a mark of zero, no exceptions.** Medical certificates and/or other valid documentation are not accepted. **All quizzes issues need to be discusses with your TA.**

TUTORIALS

Tutorials begin May 17. Tutorials meet every Monday and Wednesday 18:00–19:00. Tutorial sections will be posted at the course web site prior to May 17. Practice problems will be assigned weekly and will be posted on the web-site. They are not to be handed in. They will be appropriate preparation for the tutorial discussion and quizzes. Bring your solutions to tutorial, along with your questions about these exercises or the related theory and concepts. Tutorials will be held on the test day.

EMAIL POLICY

Email is most appropriate for personal questions. In general, we are unable to answer technical questions about the course material by e-mail. Before you send an e-mail, make sure that you are not asking for information that is already on the course outline/ website/announcements, or questions about the course material that are more appropriately discussed during office hours. If you do not get a response, this may be why. If your question is conceptual and does not require calculations or an elaborate answer, you can ask by email. Any questions regarding the tutorials should be addressed to your TA. For all other matters, contact the instructor. Please email the instructor and TAs using your *@utoronto.ca address. The **subject line should contain the course number, lecture section number, and a relevant subject** (indicating what the email is about). Be sure to **include your full name and student number in the body of the message.** You will not get a response if you email from other email addresses or do not follow the email policy.

OFFICE HOURS

There are plenty of office hours at various days/times offered by the TAs and instructor. You may also book an appointment with the instructor if you are unable to attend the regular office hours or need extra help. The TAs and instructor are here to help you! Ask questions and let the instructor know if there are any concerns.

ACCESSABILITY 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 at accessibility.services@utoronto.ca or http://www.accessibility.utoronto.ca.

ACADEMIC INTEGRITY

You are responsible for knowing the content of the University of Toronto's Code of Behaviour on Academic Matters at http://www.artsci.utoronto.ca/osai/students. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me.

STUDENT RESPONSIBILITIES

- It's up to you to know all course policies and important dates - read the course outline. It's up to you to know about any important announcements - these will come to your inbox. Check the portal regularly! Check your *@utoronto.ca inbox

regularly!

- You're responsible for your own learning. We're happy to help you learn, but in the end it's up to you! Use office hours early, and use them often. Make an appointment with the professor. Keep asking questions until you're satisfied. Ask about big concepts or small details there is no such thing as a stupid question! Always take advantage of extra help don't wait until it's too late!

- You must follow the U of T code of Behaviour - this means that cheaters will be prosecuted. The Academic Regulations of the University are outlined in the Code of Behaviour on Academic Matters. You are expected to be familiar with, and to abide by, all components of the Code of Behaviour on Academic Matters. Full details can be found online at http://www.governingcouncil.utoronto.ca/policies

What you get out of the course depends on what you put into the course!

INSTRUCTOR RESPONSIBILITIES

- Lectures will be clearly presented, organized, and have plenty of examples.

- Extra help, remedial and acceleration, is always available - in office hours, by appointment, and by email.

- Your emails will be answered in a timely fashion.

- Every student in the class will be treated with fairness and respect. Students who wish to excel are encouraged to consult regularly with the instructor. Students who abuse the U of T code of behavior will be dealt with appropriately.

- The lecturer works closely with your TAs. TAs are trained to offer quality tutorials, create valid quizzes, and mark all work consistently and fairly.

Tentative Lecture Schedule

Day	Topics	Text Section (s)
May 15	Probability	2.1-2.8
May 17	Probability	2.9-2.11
	Discrete Random Variables and	3.1-3.5
	Their Probability Distributions	
May 22	University Closure: Victoria Day	--
	Note: a make-up lecture will be scheduled	
May 24	Discrete Random Variables and	3.6-3.9, 3.11
	Their Probability Distributions	
May 29	Continuous Variables and	4.1-4.5
	Their Probability Distributions	
May 31	Continuous Variables and	4.6-4.10
	Their Probability Distributions	
June 5	**Term test**	--
June 7	Multivariate Probability Distributions	5.1-5.8
June 12	Multivariate Probability Distributions	5.9
	Functions of Random Variables	6.1-6.4
June 14	Functions of Random Variables	6.5-6.7
June 19	Sampling Distributions and the Central Limit Theorem	7.1-7.2
	Convergence in distribution	Additional Notes
June 21	Sampling Distributions and the Central Limit Theorem	7.3-7.5