DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES UNIVERSITY OF TORONTO MISSISSAUGA

STA256H5F LEC0101 Probability and Statistics I Course Outline - Fall 2019

Class Location & Time Tue, 01:00 PM - 03:00 PM KN 137

Thu, 01:00 PM - 02:00 PM DV 2074

InstructorJerry BrunnerOffice LocationDH 3028

Office Hours Tuesday 11:10-12:00 & 3:10-4:00, and Thursday 2:10-3:00

Telephone 905-828-3816

E-mail Address brunner@utstat.toronto.edu

Course Web Site http://www.utstat.toronto.edu/~brunner/256f19

Teaching AssistantKaran AgarwalOffice LocationCC 2110

Office Hours Friday 7:10 - 8:00

E-mail Address karan.agarwal@mail.utoronto.ca

Teaching Assistant Crendall Castro **Office Location** CC 2110

Office Hours Thursday 2:10 - 3:00

E-mail Address crendall.castro@mail.utoronto.ca

Teaching Assistant Marie-Louise Ferguson

Office Location CC 2110

Office Hours Wednesday 6:00 - 7:00

E-mail Address marielouise.ferguson@mail.utoronto.ca

Teaching AssistantDashvin SinghOffice LocationCC 2110

Office Hours Tuesday 4:10 - 5:00

E-mail Address dashvin.singh@mail.utoronto.ca

Teaching AssistantAli TakahashiOffice LocationCC 2110

Office Hours Monday 4:10 - 5:00

E-mail Address ali.takahashi@mail.utoronto.ca

Course Description

(Formerly STA257H5) This course covers probability including its role in statistical modeling. Topics include probability distributions, expectation, continuous and discrete random variables and vectors, distribution functions. Basic limiting results and the normal distribution presented with a view to their applications in statistics. [36L, 12T]

Prerequisite: MAT134H5/MAT136H5/MAT134Y5/MAT135Y5/MAT137Y5/MAT157Y5/75%+ in MAT133Y5

Corequisite: MAT233H5 for students with MAT133Y5. For others, MAT232H5 is strongly recommended.

Exclusion: STA257H5, STA257H1, STAB52H3; ECO227Y5 (SCI)

Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless they have received an explicit waiver from the department. The waiver form can be downloaded from here.

Textbooks and Other Materials

Probability and Statistics: The Science of Uncertainty (2nd edition) by Evans and Rosenthal.

Assessment and Deadlines

Туре	Description	Due Date	Weight
Term Test	Term Test 1	2019-10-01	15%
Term Test	Term Test 2	2019-11-05	15%
Term Test	Term Test 3	2019-12-03	15%
Final Exam	Final Exam	TBA	55%
		Tota	l 100%

More Details for Assessment and Deadlines

The final exam will be identical for all three sections, and it will be marked jointly by all the professors and TAs, working together. The term tests will not be identical. The term test you take will be made up by your professor, and marked by your professor with TA assistance. We will try to keep coverage, difficulty level and marking criteria consistent across all three lecture sections, but it's not going to be perfect. To make the process more fair, test marks in the two lowest-scoring lecture sections will be bumped so that the median test mark is equal for all three lecture sections -- equal to the highest median mark. This will be done separately for each term test. So for example, if the median mark on Test 1 for LEC0101 is 70%, the median for LEC0102 is 68% and the median for LEC0103 is 65%, then everybody in LEC0102 gets a 2-point bonus and everyone in LEC0103 gets a 5-point bonus. These bonuses will show up online, not on your test papers. *This is the only case where marks will be bumped in this course*.

In spite of the 45% for term work and 55% for the final, a good performance on the final exam can save a student from failing the course. Suppose your final average including the final exam is less than 50%. If your mark on the final exam is at least 70%, or your mark on the final is at or above the class median, then you will get a mark of 50% for the course. This rule is intended to give hope to students who have messed up on the tests, and to encourage them to study for the final exam.

Homework: There will be weekly homework assignments. They will be taken up in tutorial, but they will not be handed in. Homework assignments are preparation for the term tests and the final exam. Test and exam questions will be based closely on homework. The general rule is that if an idea or method is required to do the homework, then you are responsible for it. Otherwise, you are not. Sometimes, proofs and derivations from lecture or the text will appear directly as homework problems. This is a sign that you are responsible for them.

Penalties for Lateness

No late work will be accepted.

Procedures and Rules

Missed Term Work

To request special consideration, bring supporting documentation to the instructor in person during office hours at least one week in advance.

In case of illness, bring a U of T medical certificate to the instructor within one week of the missed work. The certificate must specify the exact period during which you were unable to carry out your academic work.

Policy for missed work: If you miss a term test without a valid excuse, the mark is zero. If you miss one term test or two term tests with a valid excuse, no makeup will be given. Your mark on the final exam will be substituted, with a bump for the difference between the term test median and the final exam median. In the unlikely event that you miss all three term tests with a valid excuse for each one, a three-hour make-up test combining all the material covered in the course will be held on Thursday, December 5th. These marks will not be bumped.

What is a valid excuse? This decision will be made by the professor of the lecture section in which you are officially enrolled. YOU MUST MAKE YOUR REQUEST AND SUBMIT ALL DOCUMENTATION WITHIN ONE WEEK OF THE MISSED TEST except in the case of very serious, incapacitating illness. You will be notified of the decision by email, possibly after a conversation with your professor. Here are some guidelines.

If you miss a quiz for medical reasons, you must submit a University of Toronto Medical Certificate (not just a note), to the professor of the section in which you are officially enrolled. The form is available at

http://www.illnessverification.utoronto.ca

The certificate must include the statement that you were unable to write the quiz for medical reasons. If the certificate does not clearly indicate that you were *unable to function*, the excuse will not be accepted. Documentation must show that the physician was

consulted on the day of the test, or on the next day. A statement merely confirming a report of illness made by the student is not acceptable.

As another example of an excuse that is not acceptable, automotive breakdown or other transportation problems are never valid excuses. If you miss a test because you are taking another class at the same time as this one, that is not a valid excuse. If UTM is officially open, weather is a valid excuse only if more than 50% of the class miss the test.

Again, all documentation must be submitted to your professor within one week of the missed test.

Missed Final Exam

Students who cannot write a final examination due to illness or other serious causes must file an<u>online petition</u> within 72 hours of the missed examination. Original supporting documentation must also be submitted to the Office of the Registrar within 72 hours of the missed exam. Late petitions will NOT be considered. If illness is cited as the reason for a deferred exam request, a U of T Verification of Student Illness or Injury Form must show that you were examined and diagnosed at the time of illness and on the date of the exam, or by the day after at the latest. Students must also record their absence on ACORN on the day of the missed exam or by the day after at the latest. Upon approval of a deferred exam request, a non-refundable fee of \$70 is required for each examination approved.

Academic Integrity

Honesty and fairness are fundamental to the University of Toronto's mission. Plagiarism is a form of academic fraud and is treated very seriously. The work that you submit must be your own and cannot contain anyone elses work or ideas without proper attribution. You are expected to read the handout How not to plagiarize (http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize) and to be familiar with the Code of behaviour on academic matters, which is linked from the UTM calendar under the link Codes and policies.

Final Exam Information

Duration: 3 hours

Calculator Model(s): Any calculator without wireless capability is okay

Aids Permitted: Statistical Table

Formula sheet supplied

Additional Information

Email policy: In general, we are unable to answer technical questions about the course material by email. Typing, or writing out and scanning the answers is just too time consuming. Even for administrative matters, it is usually best to contact your professor or TA in person. An exception is that if you miss a term test, please send your professor an email about it as well as bringing hard copy of any documentation to lecture (before or after class) or office hours. Your professor will notify you of his or her decision by email.

Jerry does not look at messages sent by Quercus Messenger.

Accessibility Needs: We are 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 Jerry or Accessibility Services (visit http://www.utm.utoronto.ca/accessability or email accessconfirm.utm@utoronto.ca) as soon as possible.

Last Date to drop course from Academic Record and GPA is November 7, 2019.