ACT350 H1F - Applied Probability for Actuarial Science

Lecture:	Tuesday 13:00 — 16:00
Instructor:	Prof. Silvana Pesenti, Hydro Building 9105 silvana.pesenti@utoronto.ca
Office Hours:	TBA and by appointment.
Teaching Assistants:	Hassan Abdelrahman

Course description: The course offers an introduction to probability theory and stochastic processes. This course lays the foundation for actuarial students to understand the concept of stochastic processes with particular emphasis on Markov chains which are of great importance in Life Contingencies and Property and Casualty insurance.
Specifically, the course will cover:

- conditional probabilities and expectations
- Poisson processes
- discrete-time and continuous-time Markov chains
- simulation of stochastic processes

Prerequisites: ACT240H1 (minimum grade 63%); ACT245H1 (minimum grade 63%); ACT247H1 (minimum grade 63%), STA257H1
Corequisite: MAT237Y1/ MAT257Y1

Course materials: The course is loosely based on the book *Stochastic processes* by Sheldon M. Ross, 2^{nd} ed., ISBN: 978-0-471-12062-9; available in the bookstore. The book is not required.

Academic integrity: We adhere to the Academic Integrity policy of the University of Toronto, accessible on the course homepage of Quercus and the U of T homepage.
Course materials provided during the lectures, tutorials, and on Quercus are for the use of students currently enrolled in this course only. Providing course materials to anyone outside of the course is unauthorised use.

Course outline: All lectures and tutorials will be in person. There will be no recording of lectures and tutorials.
From the second week onwards, (apart from the weeks with term tests) there will be tutorials from 15.10 to 16.00 o'clock. The tutorials feature classical exercises as well as project style questions which include programming. Attending tutorials is encouraged as they will form part of the material covered in assessments.

Grading scheme:

Assessment	Date	Length	Grade count
Term test 1	Tuesday 8. Oct.	2 h	22%
Term test 2	Tuesday 12. Nov.	2 h	22%
Final exam	TBA	TBC	56%
			100%

Practice Quizzes: There will be 4 practice quizzes which you can take as many times as you wish directly through Quercus.

Missed Assessments: There will be no make-up tests for term tests. Missed assessment due to illness require a University of Toronto Student Medical Certificate, completed by a doctor, and handed in to the course instructor within one week of the assessment's deadline date. A missed assessment, with an under U of T guidelines *accepted* reason, will have their grading weights shifted to the final exam. If 25% or more of the total course grade count is missed (e.g., two term tests) there will be a minimum of a 30 minutes oral mark-up exam.

CIA UAP progam: This course does not form part of the CIA UAP program. For more information on the UAP program, please visit here.

Communication: Announcements will be given during lectures or through Quercus; messages through the Inbox of Quercus will not be responded. For any questions about the course content including assessments, please come to my office hours. Emails to the instructor need be from a U of T address and should only be of private matters (e.g missed tests, ...).