

UNIVERSITY OF TORONTO

Department of Statistical Sciences

ACT245 – Financial Principles for Actuarial Science I ***(Winter 2023)***

Instructor: Yu Wang

Lecture Location: LM 159

Tutorial Location: MP 103

Course Schedule

Date	Time	Activity	Coverage
January 10	3-5pm	Lec 1	Spot & Forward Rates, Yield Curve, Term Structure, Duration
January 17	3-5pm	Lec 2	Convexity, Immunization
January 19	2-3pm	Tut	
January 24	3-5pm	Lec 3	Introduction to Derivatives, Arbitrage, Prepaid Forward Contracts
January 26	2-3pm	Tut	
January 31	3-5pm	Lec 4	Forward Contracts
February 2	2-3pm	Tut	
February 7	3-5pm	Lec 5	Futures Contracts
February 9	2-3pm	Test 1	Lectures 1-4
February 14	3-5pm	Lec 6	Introduction to Options
February 16	2-3pm	Tut	
February 28	3-5pm	Lec 7	Put-Call Parity
March 2	2-3pm	Tut	
March 7	3-5pm	Lec 8	Option Spreads
March 9	2-3pm	Tut	
March 14	3-5pm	Lec 9	Option Strategies
March 16	2-3pm	Test 2	Lectures 1-8, with emphasis on Lectures 5-8
March 21	3-5pm	Lec 10	Non-directional Option Strategies
March 23	2-3pm	Tut	
March 28	3-5pm	Lec 11	General Swaps and Prepaid Swaps
March 30	2-3pm	Tut	
April 4	3-5pm	Lec 12	Interest Rate Swaps
April 6	2-3pm	Tut	
April 11-28 (During the Final Assessment Period)		Test 3	Lectures 1-12, with emphasis on Lectures 9-12

Note:

- Changes (if any) to the above dates / times will be announced in Quercus.
- Lectures and tutorials typically start 10 minutes after the hour e.g. 3:10pm and 2:10pm.
- Lecture materials and test instructions will be announced in Quercus.
- Should you be forced to miss a test due to legitimate reasons such as illness or emergency, you are required to inform the instructor within 2 days of the test date. A cumulative make-up test will be arranged during the final assessment period, covering materials from the entire course.

Course Evaluation: Course Grade = $0.4 \times \text{Max}(\text{Tests}) + 0.3 \times \text{Median}(\text{Tests}) + 0.3 \times \text{Min}(\text{Tests})$

Required Textbook

Actuarial Science Coursebook for ACT240H + ACT245H (S. Broverman)

ACT245 will cover Sections 13 – 20

Academic Integrity

Please visit: www.academicintegrity.utoronto.ca

Academic integrity is a fundamental value of learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that your university degree is valued and respected as a true signifier of your individual academic achievement.

The University of Toronto's *Code of Behaviour on Academic Matters* outlines the behaviours that constitute academic misconduct, the processes for addressing academic offences, and the penalties that may be imposed. Potential offences include, but are not limited to:

- Obtaining or providing unauthorized assistance on a test/exam – this includes working in groups on an online test/exam that is supposed to be individual work.
- Using or possessing any unauthorized aid, including a cell phone, or searching for answers online.
- Looking at someone else's answers, or working together to answer questions.
- Letting someone else look at your answers.
- Misrepresenting your identity or having someone else complete your test/exam.

All suspected cases of academic dishonesty will be reported and investigated following the procedures outlined in the *Code of Behaviour on Academic Matters*.

Minimum Grade C Requirement for Actuarial Science Courses

In order to enroll in any 300 or 400-level ACT course, the minimum grade of 63% must be obtained in all of ACT240, ACT245 and ACT247.

Canadian Institute of Actuaries (CIA)'s University Accreditation Program (UAP)

ACT245 is accredited under the Canadian Institute of Actuaries (CIA) University Accreditation Program:

<https://www.cia-ica.ca/membership/university-accreditation-program-home>

Achievement of the minimum required grades in accredited courses may provide credit for preliminary exams. Please note that a combination of courses may be required to achieve exam credit. Details on the required courses and grades for the University of Toronto can be found in this link:

https://www.cia-ica.ca/membership/university-accreditation-program-home/accredited-universities/accredited-university-detail?pav_universityid=06f6b138-61e5-e511-80b9-00155d111030