

**UNIVERSITY OF TORONTO**  
**Department of Statistical Sciences**

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

**Instructor:** Yu Wang

**Teaching Assistant:** Ling Dong

**Lecture & Tutorial Location:** HS 106 or online  
 (Meeting link will be provided in Quercus for online lecture and tutorial)

**Course Schedule**

Date	6-7pm	7-8pm	8-9pm	Lecture Coverage
July 5		Lec 1		Spot & Forward Rates, Yield Curve, Term Structure, Duration, Convexity and Immunization
July 10	Tut	Lec 2		Introduction to Derivatives, Arbitrage, Prepaid Forward Contracts
July 12	Tut	Lec 3		Forward Contracts
July 17	Test 1	Lec 4		Futures Contracts
July 19	Tut	Lec 5		Introduction to Options
July 24	Tut	Lec 6		Put-Call Parity
July 26	Tut	Lec 7		Option Spreads
July 31	Test 2	Lec 8		Option Strategies
August 2	Tut	Lec 9		Non-directional Option Strategies
August 9	Tut	Lec 10		General Swaps and Prepaid Swaps
August 14	Tut	Lec 11		Interest Rate Swaps
Test 3: During the final assessment period (August 17 - 25): Date & Time TBD				

Note:

- Date / time changes (if any), lecture notes 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](http://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 each 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?pay\\_universityid=06f6b138-61e5-e511-80b9-00155d111030](https://www.cia-ica.ca/membership/university-accreditation-program-home/accredited-universities/accredited-university-detail?pay_universityid=06f6b138-61e5-e511-80b9-00155d111030)