

UNIVERSITY OF TORONTO
Department of Statistical Sciences

ACT245 – Financial Principles for Actuarial Science I
(Winter 2020)

Instructor: Yu Wang

Lecture: Tuesday 3-5pm at MP 103

Office Hour: Tuesday 5-6pm (starting January 14)

Tutorial: Thursday 2-3pm at MP 103 (starting January 16)

Course Evaluation

- Term Test 1: 25% (February 6, 2-3pm)
- Term Test 2: 25% (March 12, 2-3pm)
- Final Exam: 50% (During exam period April 6-25)

Lecture Schedule

- January 7: Lecture 1 (Spot & Forward Rates, Yield Curve, Term Structure, Duration)
- January 14: Lecture 2 (Convexity, Immunization)
- January 21: Lecture 3 (Derivatives, Arbitrage, Prepaid Forward Contracts)
- January 28: Lecture 4 (Forward Contracts)
- February 4: Lecture 5 (Futures Contracts)
- February 11: Lecture 6 (Options)
- February 25: Lecture 7 (Put-Call Parity)
- March 3: Lecture 8 (Option Spreads)
- March 10: Lecture 9 (Option Strategies)
- March 17: Lecture 10 (Non-directional Option Strategies)
- March 24: Lecture 11 (General Swaps and Prepaid Swaps)
- March 31: Lecture 12 (Interest Rate Swaps)

Required Textbook

Actuarial Science Coursebook for ACT240H + ACT245H, 2019 Edition (S. Broverman)

Available at Department of Statistical Sciences

ACT245 will cover Sections 13 – 20

Calculator

A *non-programmable* calculator is required for this course. There is no restriction on models but students are strongly encouraged to use the models allowed for actuarial professional exams.

Missed Test

Should you be forced to miss a test due to illness, you are required by faculty regulations to submit, within one week, the “*University of Toronto Verification of Student Illness or Injury*” form to the instructor. The form must be completed by an Ontario-registered Physician, Surgeon, Nurse Practitioner, Registered Psychologist or Dentist with registration number and phone number, and indicate the degree of incapacitation on academic functioning and date of illness. If proper documentation is not provided, a grade of zero will be given for the missed test.

For students who miss a test due to acceptable reason, the weight of the missed test will be shifted to the final exam.

Academic Integrity

Please visit: www.academicintegrity.utoronto.ca

Minimum Grade C Rule 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 ACT240H1, ACT245H1 and ACT247H1.

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

ACT245 is an accredited course under the UAP program. The minimum ACT245 grade needed to apply for a credit is 70%. For detailed information on UAP, please visit:

- University Accreditation Program description (<http://www.cia-ica.ca/membership/university-accreditation-program-home>)
- List of accredited courses offered by University of Toronto (https://www.cia-ica.ca/membership/university-accreditation-program-home/accredited-universities/accredited-university-detail?pav_universityid=06f6b138-61e5-e511-80b9-00155d111030)
- How to apply for CIA exemptions (<http://www.cia-ica.ca/membership/university-accreditation-program---home/information-for-candidates/obtaining-uap-credits>)