

ACTU 257
Actuarial Mathematics I
Winter 2021

Preface: Due to exceptional circumstances, this course will be taught and all assessments will be done completely ONLINE.

Instructor: Dr. P. Gaillardetz
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Schedule: Tuesdays & Thursdays, 14:45-16:00 (online).

Office Hours: Online via Zoom.

Goal: This course introduces the student to the mathematical models for present values of claims contingent on some event, e.g. survival (Life) or sickness (Health). More specifically, the course focuses on the mathematics of life insurance and pensions. This course prepares for part of Society of Actuaries Exam LTAM. A grade of B or better is needed to apply to the Canadian Institute of Actuaries for exemption of Exam LTAM.

Reference: *Actuarial Mathematics for Life Contingent Risks*, 2nd Edition, by D.C.M. Dickson, M.R. Hardy, and H.R. Waters, Cambridge University Press, 2013.

Calculators: Calculators allowed in exams for this course are the calculators allowed by the Math Department or the battery- or solar-powered Texas Instrument calculators, models BA-II Plus*, BA-II Plus, TI-30X, TI-30Xa (the official CAS calculator) or TI-30X II*. For the list of approved calculators see: <http://www.concordia.ca/artsci/math-stats/services/advising/advisors.html>

Assignments: There will be eight to ten assignments (Moodle).

Tests and Final: First Test: Week 6 (Moodle)
Second Test: Week 10 (Moodle)
Third Test: Examination period in April (Moodle)

Grading: The final grade will be determined as follows:
Assignments: (15%)
Class Test 1: (25%)
Class Test 2: (25%)
Final Exam: (35%)

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

NOTE: THERE WILL BE NO SUPPLEMENTAL FOR THIS COURSE AND NO 100% OPTION FOR THE FINAL EXAM.

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies:

concordia.ca/students/academic-integrity." [Undergraduate Calendar, Sec 17.10.2]

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

Concordia students are subject to the [Code of Rights and Responsibilities](#) which applies both when students are physically and virtually engaged in any University activity, including classes, seminars, meetings, etc. Students engaged in University activities must respect this Code when engaging with any members of the Concordia community, including faculty, staff, and students, whether such interactions are verbal or in writing, face to face or online/virtual. Failing to comply with the Code may result in charges and sanctions, as outlined in the Code.

Intellectual Property

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Extraordinary circumstances

In the event of extraordinary circumstances and pursuant to the [Academic Regulations](#) the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the change.