

# ACT230H1 F

## Mathematics of Finance for Non-Actuaries

### Summer 2024 Syllabus

#### Course Meetings

##### ACT230H1 F

| Section | Day & Time                   | Delivery Mode & Location |
|---------|------------------------------|--------------------------|
| LEC0101 | Monday, 1:00 PM - 3:00 PM    | Online Synchronous       |
|         | Wednesday, 1:00 PM - 3:00 PM | Online Synchronous       |

Refer to ACORN for the most up-to-date information about the location of the course meetings.

#### Course Contacts

**Instructor:** Andrei Badescu

**Email:** [andrei.badescu@utoronto.ca](mailto:andrei.badescu@utoronto.ca)

**Phone:** 4163998762

**Office Hours and Location:** Online, see quercus for details

#### Course Overview

Introduction to financial mathematics, interest measurement, present value calculation, annuity valuation, loan amortization, consumer financing arrangements, bond valuation. The course is aimed at a general audience who will not be continuing in the actuarial science program. Course manuals fee: \$30.

Introduction to financial mathematics, interest measurement, present value calculation, annuity valuation, loan amortization, consumer financing arrangements, bond valuation. The course is aimed at a general audience who will not be continuing in the actuarial science program. Course manuals fee: \$30.

#### Course Learning Outcomes

**Prerequisites:** First-year Calculus

**Corequisites:** None

**Exclusions:** ACT240H1

**Recommended Preparation:** None

**Credit Value:** 0.5

## Course Materials

### Texts:

#### Required

ACT230 Revised book 2019, Samuel A Broverman. The textbook may be found also in a printed form at the U of T bookstore.

#### Additional

- Mathematics of Investment and Credit, 6<sup>th</sup>. Ed., Samuel A Broverman, ACTEX Publications, 2016
- Kellison, S.G., The Theory of Interest (Third Edition), 2009, Irwin/McGraw-Hill

### Course Objective:

The purpose of the course is to prepare students to do financial valuations and to create the necessary background that is useful for future university courses. You are expected to read and understand the descriptive portions of the text yourself. Questions and discussions are encouraged during the online tutorials and office hours.

### Approximate Coverage:

- Interest Rate Measurement – Sections 1-3
- Valuation of Annuities – Sections 4 - 8
- Loan Repayment – Section 9
- Bond Valuation – Sections 10-11

## Marking Scheme

| Assessment | Percent | Details                            | Due Date   |
|------------|---------|------------------------------------|------------|
| Test 1     | 40%     | Online, open book, on Quiz Quercus | 2024-05-29 |

| Assessment           | Percent | Details | Due Date          |
|----------------------|---------|---------|-------------------|
| In-Person Final Exam | 60%     |         | Final Exam Period |

### **Late Assessment Submissions Policy**

If the student misses the test there is an oral exam within a week