

ACT 230H1F, Summer 2024 Mathematics of Finance for Non-Actuaries

Lecture Section	L0101 Mondays, Wednesdays	
Lecture times, location	Mon.Wed 1- 3pm, From May 5 – online on zoom	
Instructor	Dr. Andrei Badescu, Andrei.badescu@utoronto.ca	
TA tutorials	Sebastian Calcetero – Mon and Wed 3-4 pm STARTING May 8, online on zoom	
Office Hours	Thursday 11-12 on zoom, link on Quercus	

Texts:

Required

ACT230 Revised book 2019, Samuel A Broverman. The textbook may be found at <https://www.uoftbookstore.com/adoption-search-results?ccid=7561463&itemid=450712>

Additional

- Mathematics of Investment and Credit, 6th. 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

Teaching style:

All the lectures will be online and I will post the zoom link on Quercus. I will post the pdf files for the lectures on Quercus. This will give the students the chance to go over the notes and be able to pay attention to the class explanations.

Test:

Term test

- Test - 28th of May 2025, on zoom, more details to be announced later – 40% of the final mark
- **Final Exam 2 hours TBD – 60% of the final mark.**

Marking Scheme:

The final course mark will be determined via one term test 40% and a final exam worth 60%. These weightings will not be changed, either for the whole class or for any individuals. **The final exam is in person.**

Missed Term Test: The test is mandatory!!! If by valid reasons you miss the test, there will be an oral examination decided within a week from the missed test. The oral exam will replace the test and will count for 40% of the final mark.

Calculator

A calculator is essential for working exercises, tests and final exam. The Texas Instruments BA II PLUS calculator is one of the calculators allowed on the Society of Actuaries examinations; it has the financial functions that would be needed for this course, and is recommended. It is necessary for ACT230 that your calculator be able to solve for the interest rate i in calculations such as $10(1+i)^4 + 20(1+i)^3 + 30(1+i) = 160$. ONLY the non-programmable calculators are allowed.

E-mail policy:

E-mails will only be answered if they are from a U of T address. When there are many e-mail requests, not all can be answered, but an answer to a common question will be posted on the Quercus.

Updates:

All the possible updates regarding to this course will be made in class and on Quercus.