ACT 230H1F, Summer 2021 Mathematics of Finance for Non-Actuaries

Lecture Section	L0101 Mondays, Fridays	
Lecture times, location	Mon.Wed 1- 3pm, From May 3rd - online	
Instructor	Dr. Andrei Badescu	
TA tutorials	Steven Campbell – Mon and Wed 3-4 pm from May 5th -online on Zoom, link will be provided on QUERCUS	

Texts:
Required
 ACT230 Revised book 2019, Samuel A Broverman, Navigate to the **Digital Course Materials** section on the University of Toronto Bookstore Website at https://uoftbookstore.com/textbooks/access_codes.asp?
From here, scroll down the list and select your course, which appears as:
STG ACT 230 Coursebook
   -
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
- Measuring the Rate of Return in a Fund – Section 12

Teaching style:

All the lectures will be recorded and uploaded on Quercus with (usually) at least one day ahead of the normal lecture times (in fact I will try to upload on Saturdays both lectures for the coming week). This will give the students the chance to go over the notes and to listen to the lecture ahead of the class time. There will be multiple files and recordings, all uploaded on Quercus. Some of the recordings were done last summer, so if there is any reference to anything in the past please ignore. During the regular class time, for one hour, on Monday and Wednesday from 2-3 pm, I will be online on BBcollaborate or Zoom (links for Zoom will be uploaded on Quercus), I will be waiting there for you to come discuss questions related to the material covered in the notes and any things you want to discuss. After each of these sessions you will have the regular tutorial from 3:10-4 pm. The TA will run the tutorials online on ZOOM and will post the solved questions on Quercus as well. The first tutorial session will be on the 5th of May.

Test:
   Term tests

- Test 1 - 17th of May 2020, online from 2:10 pm - 3 00 pm – the test will run online on Quiz from Quercus, further details will be provided – 25% of the final mark
- Test 2 – 2rd of June 2020, online from 2:10 pm - 3 00 pm – the test will run online on Quiz from Quercus, further details will be provided – 25% of the final mark

- **Final Exam 2 hours TBD – 50% of the final mark.**

Marking Scheme:

The final course mark will be determined via two term tests, each worth 25% and a final exam worth 50%. These weightings will not be changed, either for the whole class or for any individuals. The test and final exam will be in a combination of multiple choice questions and written answer questions.

Missed Term Test: YOU ARE NOT ALLOWED TO MISS MORE THAN ONE TEST. If by valid reasons you missed one term test, the 25% weight of the mark associated to the test will be moved towards the final exam and the final exam will count for 75%. Students who will miss both term tests will lose automatically 25% of the final mark and the remaining 25% will be moved to the final that will only count for a maximum of 75%. **There is no deferred final exam for this class.**

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.