

ACT 240H1F, Fall 2015 Mathematics of Investment and Credit

Lecture Section	L0101 Mondays, Fridays	
Lecture times, location	M 10-12, From Sep 14 in SS2135 F 10 (tutorial), From Sep 25	
Instructor	Dr. Andrei Badescu	
	Office: SS6024 416-946-7582 badescu@utstat.utoronto.ca	
Instructor's office hours	F 1:00 pm– 3:00 pm	
TA office hours	Casgrain Philippe– TBA Huang Bill - TBA Yang Alex – TBA Huynh Wong Karen - TBA	
Tutorial sections by first letter of your family name	F 10:00 – 11:00 Starts Sep 25 A-H: SS2105 Philip Casgrain I-L: SS562 Alex Yang M-T: BF323 Bill Huang W-Z: WI523 Karen Wong	

Texts:

Required

- Exam FM Study Guide, 2014, Samuel A Broverman. The orientation is scheduled for Monday, September 21st 5-7 pm and the manual will be sold there by the ACT SCI club. More info at uoftactsci@yahoo.ca, contact person Chaunse A. Willis

Additional

- Mathematics of Investment and Credit, 5th. Ed., Samuel A Broverman, ACTEX Publications, 2010
- Kellison, S.G., The Theory of Interest (Third Edition), 2009, Irwin/McGraw-Hill

Course Objective:

This course is designed to help prepare you for exam FM of the Society of Actuaries and for future university courses. You are expected to read and understand the descriptive portions of the text yourself. Questions and in-class discussions are encouraged.

Coverage:

- Interest Rate Measurement – Sections 1-3
- Valuation of Annuities – Sections 4 - 8
- Loan Repayment – Sections 9 - 10
- Bond Valuation – Sections 11 – 12
- Measuring the Rate of Return in a Fund – Section 13
- Term Structure, Forward Rates and Duration – Section 14
- Topics in Finance – Sections 14 - 19

ACT 240 Fall 2015 (Continued)

Marking Scheme:

The final course mark will be determined via 1 in-class term test, worth 40% and a final exam worth 60%. These weights will not be changed, either for the whole class or for any individuals. The test and the final exam will be in multiple choice format to prepare you for the SOA exam.

- Term Test - 2nd of November, 1 ½ hours (during the class time). The rooms will be announced later.
- Final Exam - TBA

Missed Term test:

Please do not take this course if you plan to be sick for the obligatory term test. There will be no make-up test. Should you miss the term test, you are required by faculty regulation to submit the appropriate documentation (within one week after the missed term test) to the course instructor or the Departmental office: SS6018. Print on the documentation your name, student #, the course number and the date. We are skeptical about accepting medical certificates unless the doctor specifically indicates that in his/her opinion there was a disabling health problem on the day of the test. If your documentation is accepted, the test's weight will be shifted such that your final mark will consist of the mark obtained in the final exam. If documentation is not provided or is not accepted, your test mark for the missed test will be zero.

Extract from SoA Exam FM Syllabus

Knowledge and understanding of financial mathematics concepts are significantly enhanced through working out problems based on those concepts. Thus in preparing for the Financial Mathematics examination, whichever of the source of textbooks students choose to use, students are encouraged to work out the textbook exercises related to the listed readings.

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 ACT240 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.

Continuation in ACT

There are rules regarding the minimum mark needed in ACT240, ACT245 and ACT247. It's important to visit the act-sci webpage for details (www.utstat.toronto.edu , take the actuarial program link).

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 blackboard.

Updates:

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