ACT 348H1F, Advanced Life Contingencies, Summer 2021

Lecture Section	L0101	
Lecture times, location	Mon, Wed 9:00 -12:00 – online starting the 3th of May	
Instructor	Dr. Andrei Badescu, badescu@utstat.toronto.edu	
Instructor office hours	Mon, Wed 10:00 - 12:00 – online on BBcollaborate or Zoom	

Texts
Required
Exam LTAM Study Guide – 2019-2020, Vol 1A and Vol 1B, 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 348 Coursebook

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 Additional
- Actuarial Mathematics, 2nd Ed., by Bowers et al, Society of Actuaries, available on the SOA website to be ordered.
- Actuarial Mathematics for Life Contingent Risk, 2nd edition, Dickson D, Hardy M., Waters

Course Objective:

This course is designed to help prepare you for the portion of Exam LTAM of the Society of Actuaries (www.soa.org) and for future university courses. Questions and in-class discussions are encouraged.

Coverage:

- Review of Intro to Life Contingencies (S1-S17)
- Benefit Premiums (S18-S19)
    o The loss at issue random variable
    o Equivalence principle premium
- Expense Augmented Models (S20)
- Benefit Reserves (S21-S27)
    o Prospective and retrospective reserves
    o Reserves on additional policy types
    o Expense augmented reserves
    o Recursive relationships for reserves
    o Modified reserves, policy profit
- Multiple Life Functions (S28-S31)
    o The joint life status
    o The last survivor status
    o The common shock model
    o Multiple life insurance and annuities
    o Contingent probabilities and insurances

Teaching style:

Most of the lectures (if not all) will be recorded and uploaded on Quercus with (usually) at least one day ahead of the normal lecture times. However, I plan that each Saturday I will upload the next week classes, so you have the time to go over them and come up for discussions etc. There will be multiple files and recordings. During the regular class time, for one – two hours, on Mondays and Wednesday, I will be online on BBcollaborate (on Quercus please check the BBcollaborate and you will see, at those times, a session organized and I will be waiting there for you to come ask questions etc.) from 10-12 pm. If I decide to do these on Zoom, I will upload the link as well on Quercus.

Test:

       Term tests
- Test 1 - 19th of May 2020, online from 10:10 am :11 00 am – the test will be run online on Quiz from Quercus, further details will be provided – 25% of the final mark
- Test 2 – 2rd of June 2020, online from 10:10 am :11 00 am – the test will be run online on Quiz from Quercus, further details will be provided – 25% of the final mark

- **Final Exam 2 hours (TBA) – 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. All 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 Quercus.

Updates:

All the possible updates regarding to this course will be made in class and in Quercus. The student should check Quercus regularly.

UAP course syllabus:

*"Canadian Institute of Actuaries (CIA)'s University Accreditation Program
(UAP)*

ACT348 is an accredited course under the UAP program. The minimum grade needed to apply for an exemption is 70. For detailed information on UAP, please visit the following webpages:

- University Accreditation Program description
(http://www.cia-ica.ca/membership/uap)
<http://www.cia-ica.ca/membership/uap>
- List of accredited courses offered by University of Toronto:
http://www.cia-ica.ca/membership/uap/accredited/toronto
- How to apply for CIA exemptions:
http://www.cia-ica.ca/membership/uap/information-for-students

Note: The CIA will grant credits to students for SOA/CAS examinations based on the achievement of the minimum Grade towards Associateship (ACIA) and Felllowship (FCIA) in the CIA. At the time of this agreement, CIA credits are recognized by the following actuarial organizations towards their respective designations:

Casualty Actuarial Society (CAS): ACAS, FCAS

UK Institute and Faculty of Actuaries (IFoA): FIA, AIA

Institute of Actuaries of Australia (IAA): AIAA, FIAA

Actuarial Society of South Africa (ASSA): AMASSA, FASSA

American Academy of Actuaries (AAA): MAAA

The CIA does not guarantee that credits granted to students under the CIA UAP will be recognized by any other actuarial organizations towards their actuarial designations."