

ACT 455H1S, Advanced Topics in Actuarial Science, Winter 2018

Lecture Section	L0101
<i>Lecture times, location</i>	Tu 2:00 p.m. - 4:00 p.m. – SS 2105 Thur 2:00 p.m. - 3:00 p.m. – SS 2105
<i>Instructor</i>	Dr. Andrei Badescu, Sidney Smith 6011 badescu@utstat.toronto.edu
<i>Instructor office hours</i>	Wed: 1:00 p.m.- 2:30 p.m. – SS6011 or by appointment.
<i>Teaching assistants:</i>	Office Hours: TBA

Texts:

Required

- *Exam MLC Study Guide* - 2016, Vol 1B, Samuel A Broverman , available at ALICOs, St George and College.

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 Risks*, Dickson D, Hardy M., Waters H.

Approximate Coverage:

- Contingent Probabilities and Insurances Section 31 from MLC Study Guide, Volume 1B, 2016
- Multiple Decrement Models – Sections 32-34 from MLC Study Guide, Volume 1B, 2016
- Discrete Time Markov Chains - Sections 36, 37 MLC Study Guide, Volume 1B, 2016
- Continuous Time Markov Chains - Sections 38, 39 MLC Study Guide, Volume 1B, 2016
- Variable Interest Rates – Section 40 MLC Study Guide, Volume 1B, 2016.
- Profit Testing and Universal Life Insurance – Sections 27, 41, 42 MLC Study Guide, Volume 1B, 2016.
- Pension Mathematics – Section 35

Course Objective:

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

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 NOT be in multiple choice format.

- Term Test - Tuesday 27th, 1 ½ hours (during the class time) 2:10 – 3:40 pm
- Final Exam - TBA

Missed Term test:

There will be no written make-up test. If you miss the term test, you are required by faculty regulation to submit, **within one week**, appropriate documentation to the course instructor. Print on the documentation your name, student #, the course number and the date. I shall be 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, there will be an oral examination of 1 ½ hours at a time decided by the instructor.

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. Please go to the SOA website and check the list of calculators allowed by SOA and those will be ok for this course.

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.

Prereq: The only mandatory prereq for this class is ACT348. I will be willing to waive the STA347 if the student completes the waiver form that can be found at: <http://utstat.toronto.edu/wp-content/uploads/2011/09/Prereq-Coreq-Waiver-Request-Form-Winter-2018.pdf>
The deadline to do so is the 18th of January, those students who will not do this will be taken out from the class on the 19th of Jan. 2018.

Updates:

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

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

ACT455 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>>
- List of accredited courses offered by University of Toronto:
<http://www.cia-ica.ca/membership/uap/accredited/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 Fellowship (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 CIAUAP will be recognized by any other actuarial organizations towards their actuarial designations."