

ACT 247H1S 2011, Financial Principles for Actuarial Science:
(July 4, 2011 version: please monitor updates at www.utstat.utoronto.ca/sharp)

Lecture Section	L5101	
<i>Lecture times, location</i>	TR 7:10-9:00 (First is July 5)	UT St George-SS2127
<i>Instructor</i>	Dr Keith Sharp FSA FCIA CFA sharp@utstat.utoronto.ca	UT St George-SS6007
<i>Instructor's office hours</i>	4:30-5:30 Tuesdays and Wednesdays	UT St George-SS6007 UT St George-SS6007
<i>Tute times, location</i>	TR 6:10–7:00 (First is July 7)	UT St George-SS2127
<i>TA</i>	Li, Jie janejie.li@utoronto.ca	
<i>TA office hours</i>	Will be arranged for tests and final.	SS1091 Stat Aid Centre
Approximate Coverage	Lecture	Brov M-LC Guide
Survival probabilities, life table, force	July 5 (No tutorial, lecture starts at 7:10pm)	2, 3, 4
Life expectancy	July 7	3, 5
Analytical laws of mortality	July 12	5, 6
Select and ultimate tables	July 14,	7, 8
TERM TEST 1 (NOTE TIME)	July 19, 6:10 pm – 7:00 pm SS2127 Expected to cover all lectures plus Sec 1, 2, 3, 4, 5, 6, 7, 8	
One-year term paid at end of year of death	July 19, 7:10pm-9:00pm	9
Insurance paid at end of year of death	July 21	10
<i>(Exam P CBT July 20-31, beanactuary.org)</i>		
Other insurances	July 26	11, 12
Payable at moment of death	July 28	12, 13
TERM TEST 2(primarily material after TT1)	Aug 2, 6:10 pm – 7:00 pm SS2177	
Discrete life annuities	Aug 2, 7:00pm-9:00pm	14
Discrete life annuities	Aug 4	15
Continuous life annuities	Aug 9	16, 17
Wrap-up	Aug 11	
FINAL EXAM	In exam week August	

Course Objective:

This course is designed to help prepare you for the portion of Exam M of the Society of Actuaries (same text, www.soa.org) and for future university courses. You are expected to read and understand the descriptive portions of the text yourself, and to read the text ahead of the lectures. Questions and in-class discussions are encouraged.

Calculator:

A non-programmable financial calculator is needed at each lecture, tutorial, test and exam. “Financial” can be defined here as “Can solve $3.803=(1-(1+i)^{-4})/i$ to get interest rate i ”. The Texas Instruments BA II PLUS calculator is one of the calculators allowed on the Society of Actuaries exams and on the CFA Chartered Financial Analyst exams: see www.cfainstitute.org; it has the financial functions that would be needed for this course and is recommended. U of T Bookstore is worth trying – sometimes it’s at the northeast cash. If you have trouble finding it, you can buy it on the web or phone ‘bank core’ *Grand and Toy* or *Staples* stores.

Participation lasers:

Please leave your participation laser in one of the piles at the end of every lecture. I pay for them personally in the hope that you will find the easy participation helpful-but it does mean that if you take them home then it seems a lot like theft to me. Use them as indicated in class to e.g. point to suggested answers, to unclear points, to give your opinion etc. Pointing at my eyes (or at the clock) is discouraged, thank you. Also, please don’t slice up your neighbours, unless of course they whisper in lecture!

ACT 247H1S 2011S (Continued)

Required Text

Exam M-LC manual Volume 1 by Sam Broverman. Will be made available at about \$61 at ALICOs copy shop at College and St George. (Owner says 'please ask for MLC Volume 1 specifically', please email me at sharp@utstat.utoronto.ca if there are availability problems). One of the official Society of Actuaries texts, 'Actuarial Mathematics' by Bowers et al is useful and is a necessary UT bookstore purchase for anyone taking life contingencies courses beyond ACT247, but is not essential for ACT247. Bowers et al is less focused on multiple-choice SoA (and hence ACT247) exam questions, but is helpful for those wanting more background and more coverage of the underlying mathematics.

Marking Scheme:

Lecture: surprise quizzes	Obligatory attendance. Lectures will be only partially posted on the web. There will be at least five pop-quiz micro-tests in lecture during the term, not announced in advance. Material is usually new that day. For lecture quizzes (only) discussion with other students is OK, but not copying. Up to two can be missed without penalty. Graded 7-10.	5%
Tutorials: assignment verifications	Obligatory attendance. Assignment must be done but is not graded. In each tutorial for which an assignment is due, a verification quiz on at least one assignment question, perhaps slightly modified, will be given. This is intended as verification that you did the assignment so no help from other students allowed. Up to two can be missed without penalty. Graded 7-10.	5%
Test 1	Multiple choice; 40% of questions are modified from assignments	20%
Test 2	Multiple choice, 40% of questions are modified from assignments, concentrates on material since test 2	20%
Final	Multiple choice, on entire term, no 40% guarantee	50%

If you miss more than two in-lecture surprise quizzes and/or two tutorial assignment verifications, and claim medical reasons, you will need to show medical certificates for all missed sessions, including the 'giftie' first two. Weightings will not be changed, either for the whole class or (for fairness to the whole class) for any individuals.

Medical certificates are carefully and skeptically investigated in accordance with University regulations:

A few years ago, 20 out of 100 students produced doctors' certificates. Now University policy is very strictly interpreted and very strictly enforced. Medical certificates must be signed by an Ontario-registered MD, with registration number and phone number, and the date of certificate relative to claimed sickness must be within the limit imposed by University rules. 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. Certificates saying "Needs rest" or "injured foot" or similar will be rejected, as will certificates from chiropractors or acupuncturists. The doctor should be contactable by us for verification. It is expected that each student with accepted documentation will be required to take a rigorous make-up test at a chalkboard. If documentation is not provided or is not accepted, your test mark for the missed test will be zero.

Web Site:

The timing of lecture coverage will likely deviate from the day-to-day schedule above. This outline and updates are at <http://www.utstat.utoronto.ca/sharp>. Assignments and other info are posted on the course Blackboard password-accessed portal – you will wish to monitor the portal every few days. Also please ensure that the portal 'knows' an email address for you which you monitor frequently, otherwise you'll miss course-related emails.

Continuation in ACT

The rules regarding the minimum mark needed in ACT240, ACT245 and ACT247 are important. Please visit the act-sci webpage for details (www.utstat.utoronto.ca), take the actuarial program link).

Actuarial Job Market:

Enrolment in actuarial science programmes Canada-wide has multiplied by perhaps five in the last 25 years and entry level actuarial jobs have become much more difficult to find in Canada and most other countries. Employers tend to give a lot of weight to professional exam passes and to office work experience. Graduates with little work experience and mediocre communication skills have been having trouble finding an entry level job in an actuarial environment. However, non-actuarial employers are likely to see value in introductory courses on math-of-finance, interest, mortgages etc. Any students considering the Chartered Financial Analyst (CFA) exams will find such courses useful. Students enthusiastic about actuarial science and/or CFA are advised to safeguard their career prospects by developing a broader business background too, to ensure that their Excel skills are competitive, to get office work experience and perhaps to enhance communication skills e.g. by attending a Toastmaster club (www.toastmasters60.org/findClub.asp) and gaining the 'Competent Toastmaster' certificate for giving ten 7-minute speeches to about 15 people and using the feedback provided.

GOOD LUCK

Suspected errors or omissions? Please tell Keith Sharp, sharp@utstat.utoronto.ca