

ACT 245H1S L0101 SUM2012, Financial Principles for Actuarial Science:
(Version Jun 30, 2012: please monitor updates at www.utstat.utoronto.ca/sharp)

Lecture Section	L5101	
<i>Lecture times, location</i>	TR 4:10pm-6:00pm (First is July 3)	SS1084
<i>Instructor</i>	Dr Keith Sharp FSA FCIA CFA sharp@utstat.utoronto.ca	SS6007
<i>Instructor's office hours</i>		SS6007 SS6007
<i>Tute times, location</i>	TR 3:10pm –4:00 (First is July 5)	SS1084
<i>TA</i>		
<i>TA office hours</i>	Will be arranged for tests and final.	SS1091 Stat Aid Centre
Approximate Coverage	Lecture	FM Study Guide
Spot and forward rates	July 3 (No tute, lecture starts 4:10pm)	FM SG Sec 14
Duration, asset-liability matching	July 5 (First tute, 6:10pm)	FM SG Sec 14
Stock valuation, short sale, weird instruments	July 10	McD 1, FM SG Sec 15
TERM TEST 1	July 12, 3:10 pm – 4:00 pm SS1084	
Short sale, derivatives, forwards	July 12	McD 2, 5.1-5.4, FM SG Sec 15
Mark-to-market, futures	July 17	McD 2, FM SG Sec 15
Options	July 19	McD 2, FM SG Sec 16
Option strategies, insurance and collars, risk mgmnt	July 24	McD 3, 4 (miss 4.5) SG Sec17, 18
TERM TEST 2 (primarily material after TT1)	July 26, 3:10 pm – 4:00 pm SS1084	
<i>(Exam P CBT July 19-30, 2012, beanactuary.org)</i>		
Financial forwards and futures	July 26, 4:10 pm – 6:00pm	McD 5.7, App 2A &5
Commodity swaps	July 31	McD 8.1-8.2, FM SG 19
Interest rate swaps	Aug 2	McD 8.2, FM SG Sec 19
<i>Civic holiday</i>	Aug 6	
Eurodollar interest rates, swap curve	Aug 7	McD 8.2, FM SG Sec 19
Wrap-up	Aug 9	
FINAL EXAM	Scheduled by registrar: August 13-17	

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. The HP12C is acceptable for this course and for CFA exams, is the traditional favourite of CFAs, but is not allowed on SoA exams.

Required Texts

Prof Broverman’s FM manual, Fall 2008 edition or more recent, plus, from UT Bookstore : *Derivatives Markets* (Second Edition) by McDonald R.L. Chapters 1-5, 8.1-8.2, App 2A and 5B. Result of my test purchase Jan 2012: “McDonald 'Derivative Markets' second edition, ISBN 0-321-28030-X with CD, Pearson International Edition arrived today Jan 18 via DHL from a Taipei address, after I ordered it January 13 via abebooks.com. I used 'Global Bookstore, Lawrence KS USA', \$US 69.92 plus \$US9.00 accelerated delivery to Canada, though other sellers listed by abebooks.com are OK, as far as I know. The book is soft-cover but otherwise the same as the \$C 220.00 North American edition, and is indeed a product of Pearson. Purchase is legal in the opinion of US courts (Quality King Distributors Inc., v. L'anza Research International Inc., [523 U.S. 135](#) (1998)).” No guarantees about you receiving the book with the same efficiency. But this is encouraging. Please make sure you have a copy of McDonald by July 10 and preferably earlier.

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 laser-slice your neighbours, unless of course they whisper in lecture!

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.

ACT 245H1S (Continued)

Jobs

Students enthusiastic about actuarial science and/or CFA are advised to improve their career prospects by developing a broader business background too, to ensure that their Excel skills are competitive, to pass SoA exams and, most of all, to get office work experience. Also enhance your communication skills e.g. by attending a Toastmaster club (www.toastmasters60.org) and gaining the 'Competent Toastmaster' certificate for giving ten 7-minute speeches to about 15 people and using the feedback provided. The Chartered Financial Analyst (CFA) exams are an easier (but not easy) option, make use the material from this course and have a fairly similar examination format: see www.utstat.utoronto.ca/sharp and www.cfainstitute.org . A CFA doesn't guarantee a job either, but it is widely recognized by many types of employer as distinguishing your resume from a thousand others. However, non-actuarial employers are likely to see value in courses on math-of-finance, interest, mortgages etc.

Intended Audience:

Students who expect to take the professional actuarial exams of the (Chicago-based) Society of Actuaries (www.soa.org) or Casualty Actuarial Society (www.casact.org). No disgrace if you fail-in fact you can keep it secret if you wish (I took some SoA exams in Buffalo NY just in case I failed one!). To qualify as FSA and/or FCIA takes years of tough self-study. The professional exams, co-sponsored by the Canadian Institute of Actuaries (www.actuaries.ca), are rigorous and ACT240 and ACT245 are intended to help students prepare for the exam FM. Hence the course is structured around the syllabus and the examination philosophy of the SoA and CAS: numerical multiple choice questions which must be quickly and accurately done. Please see www.beanactuary.org for details, for sample exams and to submit exam applications. You are expected to read the text ahead of the lectures. Questions and in-class discussions are encouraged. You will find it useful to sometimes read the *Wall Street Journal* (print or www.wsj.com) or *Globe and Mail Report on Business* (<http://www.theglobeandmail.com>). This course relates closely to 'real world' situations. There are strict rules regarding the **minimum 63 needed in ACT240, ACT245 and ACT247** for those wishing to continue in actuarial science and it's important to visit the act-sci webpage for details (www.utstat.utoronto.ca/sam/homep.html).

Exams and Professional Conduct:

As for many professional exams, care will be taken to ensure the privacy of your answers by use of assigned seating and by the provision of several versions of tests and final, with different question orders and with dummy questions to make Scantrons more private. Anyone considering cheating should be aware that the Canadian Institute of Actuaries, under pressure from the provincial and federal governments, monitors the honesty and possible corruptibility of those it admits as actuaries. As a FCIA 'fellow' I am required by the Canadian Institute to enforce its strict rules.

Marking Scheme:

Lecture: pop quizzes	Pop quizzes in many random lectures. Material is usually new that day, so discussion with other students is OK, but not copying. Worst two disregarded, so can miss two without penalty. Graded 7-10.	5%
Tutorials: assignment	Assignment must be done but is not graded. Assignment random check test in each tutorial on one question from assignment due that day. No help from other students allowed. Worst two disregarded, so can miss two without penalty. Graded 7-10.	5%
Test 1	Multiple choice	20%
Test 2	Multiple choice, concentrates on material since test 2	20%
Final	Multiple choice, on entire term	50%

If you miss more than two pop quizzes, and claim medical reasons, you will need to show medical certificates for all missed pop quizzes, 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 every 100 students would produce 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. It is essential that 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 "respiratory tract infection" or "injured foot" or similar will be rejected, as will certificates from chiropractors and 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. Note that no excuses, medical or otherwise, are accepted by the Society of Actuaries or CFA Institute if a professional exam is missed.

GOOD LUCK

Suspected errors or omissions?

Please tell Keith Sharp, sharp@utstat.utoronto.ca