ACT 245H1S L0101 W2012, Financial Principles for Actuarial Science:
(Feb 14, 2012 : please monitor updates at www.utstat.utoronto.ca/sharp)

Lecture times (Obligatory, manuscript not posted on web)	T 1:00-3:00, first Jan 10, 2012,	LM159
Instructor	Dr Keith Sharp FSA FCIA CFA sharp@utstat.utoronto.ca	SS6007
Keith Sharp's office hours Jan -Mar 2012	T 11:00-12:00 R 3:00-4:00	SS6007 SS6007
TA Tutorials (Obligatory) Nikita Reymer (nikita.buhryeyev@utoronto.ca) Francisco Rodriquez Arana (frodriguezarana@terra.com.mx) Panpan Wu (panpan@utstat.utoronto.ca)	(no class Jan 12, 2012, first Jan 19, last April 5) R2:00-3:00 R2:00-3:00 R2:00-3:00	*By family name* LM159 A-Khi RW142 Kim-Shen SS1070 Sing-Z
New College Stats Aid Center	*WE68A(Wetmore bmnt)*	TBA
TA office hours (for all students) in SS1091 Stat Aid Centre	Will be arranged before tests and final.	
Approximate Coverage ACT245H1S	***Lecture***	
Spot and forward rates	January 10, 2012	FM Mnl Sec 14
Duration, asset-liability matching	January 17	FM Mnl Sec 14
Stock valuation, weird instruments	January 24	
TERM TEST 1	January 31, 1:10 pm – 2:00 pm	
Derivatives, Shorts, Lease rates	January 31, 2:10 pm – 3:00 pm	McD 1, FM Mnl Sec 15
Forwards and Options Term test 1 grades announced	February 7	McD 2, FM Mnl Sec 16
Insurance and collars	February 14	McD 3, **5.1-5.3** FM Mnl Sec 17
Reading Week	February 20-24	
Risk Management	February 28	McD 4, FM Mnl Sec 18
TERM TEST 2 (Concentrates on covereage since Test 1)	March 6, 1:10 pm – 2:00 pm	**IN SF 3201 and 3202**
Risk Management (cont)	March 6, 2:10 pm- 3:00 pm	McD 4 (miss out 4.5)
Risk Management (cont)	March 13	McD 4 (miss out 4.5)
Financial forwards and futures	March 20	McD 5 (miss out 5.5, 5.6)
Financial forwards and futures (cont)	March 27	McD 5, 8.1 (miss 5.5, 5.6),
Interest rate swaps	April 3	McD 8.2, FM Mnl Sec 19
FINAL EXAM	Exam period April 11-30	

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. About $Cdn 170; overseas prices appear similar – please tell me if you find low price non-pirate version, eg Pearson International Edition.

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)

'Only about 40% of students graduated in the U of T actuarial science program eventually get a job in the actuarial field'
(U of T Act Sci Club statement, 2007: formal instructor attempts at data collection are handicapped by university privacy rules). Enrolment in actuarial science programs 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. Graduates with little work experience have often been unable to find an entry level actuarial job. 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. At least 40% of the marks on the term tests (but not final) will be from the known-in-advance pool of assignment questions with small changes such as to the interest rate.

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