

**ACT 245H1S L0101, Financial Principles for Actuarial Science:
Summer 2013**

<i>Lecture</i>	TR 4:00-6:00, first July 2, 2013	SS1084
<i>Instructor</i>	Joe Callaghan PhD	
<i>Office Hours</i>	TR 2:00-3:00	SS6025
<i>Tutorial</i>	TR 3:00-4:00	SS1084
Approximate Coverage ACT245H1S	Lecture	
Spot and forward rates	July 2	FM Mnl Sec 14
Duration, asset-liability matching	July 4	FM Mnl Sec 14
Stock valuation, weird instruments	July 9	
TERM TEST 1	July 11, 4:10 pm – 5:00 pm	
Derivatives, Shorts, Lease rates	July 11, 5:10 pm – 6:00 pm	McD 1, FM Mnl Sec 15
Forwards and Options	July 16	McD 2, FM Mnl Sec 16
Insurance and collars	July 18	McD 3, 5.1-5.3 FM Mnl Sec 17
Risk Management	July 23	McD 4, FM Mnl Sec 18
Risk Management	July 25	McD 4 (miss out 4.5)
TERM TEST 2	July 30 4:10pm - 5:00pm	
Risk Management	July 30, 5:10pm- 6:00 pm	McD 4 (miss out 4.5)
Financial Forwards and futures	August 1	McD 5 (miss 5.5, 5.6)
Financial forwards and futures	August 6	McD 5 (miss out 5.5, 5.6)
Interest rate swaps	August 8	McD 8.2, FM Mnl Sec 19
Review before exam	Extra Office Hours TBA	
FINAL EXAM SCHEDULED BY REGISTRAR	Exam period August 15- August 31	

Calculator:

A non-programmable financial calculator is needed at each lecture, tutorial, test and exam. “Financial” can be defined here as “Can solve $3.803 = (1+i)^{-4}/i$ 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

- *Derivatives Markets*, third edition, Robert L. McDonald
- Prof Broverman’s *FM Study Guide*, Fall 2008 edition or more recent.

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.

CT 245H1S Career Advice

- *'Only about 40% of students who 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 but it appears that the 40% number needs to be reduced to 20%-30% for more recent graduating classes).
- 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.
- Ensure that your Excel skills are competitive
- Pass some SoA exams
- Most of all, get office work experience.
- 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.

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). 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. You are expected to read the text ahead of the lectures. Questions and in-class discussions are encouraged. 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).

Marking Scheme:

Assessment Tool	Description	Weight
Lecture Quiz Questions	There will be a quiz at the start of each lecture based on the content of the previous lecture. There will be no quiz if there is a test, and on the first day of class.	10%
Test 1	Multiple choice	20%
Test 2	Multiple choice, concentrates on material since test 2	20%
Final	Multiple choice, on entire term	50%

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.