

ACT 370H1S W2015, Financial Principles for Actuarial Science II
(Jan 11, 2016 version)

<i>Lecture Section</i>	L0101/A&S and L2001/ASE	
<i>Lecture times</i>	M11 W 11-1	TZ 6 TZ 6
<i>Instructor</i>	Xuancheng (Bill) Hung xuancheng.huang@mail.utoronto.ca	
<i>Office hours Jan -Mar 2016</i>	W 2:00-4:00	SS6027D
<i>TA</i> Ally Fraquelli Xiucai Ding	M 12-1pm F 2-3pm	SS 1091
<i>TA office hours (for all students) in SS1091 Stat Aid Centre</i>	Will be arranged before tests and final.	
<i>Approximate Coverage ACT370H1S</i>	<i>Lecture week</i>	
Arbitrage and Forward Contracts	Week 1	McDonald Ch. 02/Ch. 05
Forwards/Options	Week 2	McDonald Ch. 09
Put-Call Parity/Binomial Model	Week 3	McDonald Ch. 10
Replicating Portfolio/Risk-Neutral Probability	Week 4	McDonald Ch. 10
Multi-Period Binomial Model/Futures	Week 5	McDonald Ch. 11
Risk-Neutral Return	Week 6	McDonald Ch. 11
TERM TEST 1	February 22, 11:10 pm-12:00 pm	TZ6
Binomial Trees with Dividends/Continuous Model for Stocks	Week 7	McDonald Ch. 12
Black-Scholes Model/Brownian Motion	Week 8	McDonald Ch. 12
Black-Scholes and Delta Hedging	Week 9	McDonald Ch. 13
Black-Scholes Greeks	Week 10	McDonald Ch. 14
TERM TEST II	March 23 11:10pm – 1pm	TZ6
Exotic Options	Week 11	McDonald Ch. 24
Interest Rate Derivatives	Week 12	McDonald Ch. 25
FINAL EXAM	A&S Exam period April 12-29	

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 HPI2C is acceptable for this course and for CFA exams, is the traditional favourite of CFAs, but is not allowed on SoA exams.

ACT 370H1S (Continued)

Texts

Derivatives Markets 3rd edition by McDonald R.L. Chapters 9-14, 24, 25

Course Objective:

This course is designed to help prepare you for the Society of Actuaries MFE exam (same texts, www.soa.org, follow "education" and "ASA requirements") and the exams will copy the SoA format. It is also valuable for the CFA exams. 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*. This course relates closely to "real world" situations.

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.

Marking Scheme:

Quizzes		5%
Test 1		20%
Test 2		30%
Final		45%

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