Course ACT 2020 – Economic and Financial Applications

Time: 2:30 PM- 3:45 PM, Monday and Wednesday – Winter Term, 2008

Classroom: 122 Drake

Professor: Christopher McCulloch, B.Comm. (Hons.)

Office/hours: 434 Drake, By Appointment

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Textbook: *Derivative Markets* (Second Edition), 2006, by McDonald, Robert, L.

This course deals with financial economics and the need for financial risk management. The student will learn how derivative securities can be used as tools to manage financial risk.

This material will assist the actuarial student to prepare for Society of Actuaries Course FM and Casualty Actuarial Society Exam 2.

Key topics to be covered include:

- Introduction To Derivatives
- Introduction To Forwards and Options
- Insurance, Collars and Other Strategies
- Introduction To Risk Management
- Financial Forwards and Futures
- Swaps

Grading System: The student's grade will be based on their performance on four exams that will take place during the term. The exam schedule and weighting are as follows:

Exam	Date	Topic	Grade Weight
1	**21 January 2008**	Chapter 1	15%
2	**11 February 2008**	Chapter 2	30%
3	**17 March 2008**	Chapter 3 and 4	35%
4	**09 April 2008**	Chapter 5 and 8	20%

Class Schedule – ACT 2020

Date	Topic Sections
07 January 2008	Chapter 1.1 – What Is A Derivative?
	Chapter 1.2 – The Role of Financial Markets
09 January 2008	Chapter 1.3 – Derivatives In Practice
14 January 2008	Chapter 1.4 – Buying and Short-Selling Financial Assets
16 January 2008	Chapter 2.1 – Forward Contracts
21 January 2008	**TEST 1: 15% (Chapter 1)**
23 January 2008	Chapter 2.2 – Call Options
28 January 2008	Chapter 2.3 – Put Options
30 January 2008	Chapter 2.4 – Summary of Forward and Option Positions
	Chapter 2.5 – Options Are Insurance
04 February 2008	Chapter 2.6 – Example: Equity-Linked CD's
	Appendix 2.A – More On Buying A Stock Option
06 February 2008	Chapter 3.1 – Basic Insurance Strategies
11 February 2008	**TEST 2: 30% (Chapter 2)**
13 February 2008	Chapter 3.2 – Synthetic Forwards
18 February 2008	**NO CLASS: MID-TERM BREAK**
20 February 2008	**NO CLASS: MID-TERM BREAK**
25 February 2008	Chapter 3.3 – Spreads and Collars
27 February 2008	Chapter 3.4 – Speculating On Volatility
	Chapter 3.5 – Example: Another Equity-Linked Note
03 March 2008	Chapter 4.1 – Basic Risk Management: The Producer's Perspective
05 March 2008	Chapter 4.2 – Basic Risk Management: The Buyer's Perspective
	Chapter 4.3 – Why Do Firms Manage Risk?
10 March 2008	Chapter 4.4 – Golddiggers Revisited
12 March 2008	Chapter 5.1 – Alternative Ways To Buy Stock
	Chapter 5.2 – Prepaid Forward Contracts On Stock
17 March 2008	**TEST 3: 35% (Chapter 3 and 4)**
19 March 2008	Chapter 5.3 – Forward Contracts On Stock
24 March 2008	Chapter 5.4 – Forward Contracts
26 March 2008	Appendix 5.B – Equating Forwards and Futures
31 March 2008	Chapter 8.1 – An Example of A Commodity Swap
02 April 2008	Chapter 8.2 – Interest Rate Swaps
07 April 2008	Course Evaluation
09 April 2008	**TEST 4: 20% (Chapter 5 and 8)**