Rutgers University – New Brunswick, Fall 2007
Risk & Insurance Management (29:390:601:60)
Professor Kim W. Ng (Francis)

Time: Tuesday 6:40-9:40 PM
Place: BE-121, Livingston campus
Contact: joy2fran@comcast.net
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Office Hours: Tuesday: 5:00 – 6:30 pm,
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Course Overview and Objectives

This course deals with the fundamentals of risk management. It traces back to the historical roots of risk and the invention of risk transfer techniques. Starting from the basic insurance, forward, futures and option products, the students will experience how to create complex financial instruments to meet the growing demand for better risk management. Insurance plays an important role in mitigating hazards and catastrophic risks for corporations. How do firms manage enterprise risk, both domestically and internationally? Managing credit risk is a growing challenge.

This course is fundamental to students who are serious in pursuing a career in risk management.

Course Materials

Lecture notes and case materials will be distributed either in class or via Blackboard.

Main textbook is ***Options, Futures and Other Derivatives,*** 6th Edition, by John C. Hull

Wall Street Journal, Economist and Business Week are other reading materials.
Students should be familiar with basic algebra and Excel.

Grading

Midterm: 35%
Final: 35%
Cases: 30% (work in groups of 3)

Course Outline

Week 1 (Sep. 4) — **Hull chapter 1**
Spot, forward, futures and options
History of Risk – part 1

Week 2 (Sep. 11) — **Hull, chapters 2 & 3**
Futures and hedging strategies
History of Risk – part 2

Week 3 (Sep. 18) **Hull, chapters 5, 9, 13 & 15**
Drivers of forward, futures and option prices, Put-Call Parity.
Black-Scholes model and risk measures.

Week 4 (Sep. 25)
Case 1: CME Credit Index Event Contract
Enterprise Risk Management – the Big Picture.

Week 5 (Oct. 2) **Lecture Notes**
Insurable risk, adverse selection and moral hazard
Insurance contracts

Week 6 (Oct. 9) **Lecture Notes**
Insurance derivatives, reinsurance, catastrophic
Insurance contract and

Week 7 (Oct. 16) **Hull, chapters 6, 7**
Managing interest-rate risk and currency risk

Week 8 (Oct. 23) **Lecture Notes, chapter 31**
Managing project, political & reputation risks

Week 9 (Oct. 30)
Midterm

Week 10 (Nov. 6) **Hull, chapters 18 & 19**
Managing Value at Risk (V@R)

Week 11 (Nov. 13) **Hull, chapter 20**
Credit risk, credit scores & Credit V@R

Week 12 (Nov. 20)
Case 2: Create a new Swap

Week 13 (Nov. 27) **Hull, chapter 21**
Credit derivatives

Week 14 (Dec. 4) **Hull, chapter 22, 23, 30**
Energy and weather derivatives
Other derivatives

Week 15 (Dec. 11) **Lecture Notes, chapter 32**
Structured products – CMO, CDO and Senior-Subordinate
Learn from others' mistakes.

Week 16 (Dec. 18)
Final Exam