

## **Financial Engineering MBA 683 Course Syllabus**

### **Course Description**

Students gain a thorough understanding of options, futures, and other financial instruments. Skills are developed in basic pricing analysis, use of pricing models, and trading and hedging strategies.

The primary method for teaching these points follows a two step approach. First, the student will be introduced to standard techniques for pricing, hedging, and other analysis. Next, these techniques will be applied through a variety of real world strategies. The end goal is to develop skills which the students can apply in derivative markets.

Assignments: Each student will be required to complete a series of assignments dealing with derivative pricing and strategies. These assignments will require students to use theoretical models, monitor market prices, and track strategy positions.

### **Course Objectives**

At completion of the course, students will be able to:

- ⇒ Explain the operation of option/futures markets
- ⇒ Price various derivative securities
- ⇒ Develop strategies which meet specified goals (i.e. risk reduction)
- ⇒ Adjust these strategies in light of changing economic conditions

### **Instructor**

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[www.mattwill.com](http://www.mattwill.com) ..... Link to textbook web site

### **Required Materials**

Fundamentals of Futures and Options Markets by John C. Hull, Fifth Edition, Prentice Hall, 2005.

<http://mgmt.utoronto.ca/~hull/>

Options as a Strategic Investment by Lawrence McMillan, 4<sup>th</sup> Edition, New York Institute of Finance, 2002.

Email Account - (Send Email to instructor BEFORE 2nd class)

Financial Calculator - (recommend HP12C)

Access to Personal Computer and Spreadsheet program

### **Recommended Material**

Innovative Investor by Shimko, Foster, and Will; Irwin-McGraw Hill Publishers, 1997.

## Course Requirements

35% Mid Term  
35% Final  
20% Assignments  
10% Participation

## Grading

A 90-100%  
B 80-89%  
C 70-79%  
F 0-69%

Pluses and minuses are assigned at the instructor's discretion.

<b>Class</b>	<b>Topics</b>	<b>Chapters</b>
Jan 17	Class Introduction Derivative Basics Risk Management	Hull - 1 McMillan -Preface, 1
Jan 24	Option markets, Research and Valuation	Hull – 8, 9, 11, 12 McMillan - 28
Jan 31	Option Strategies	Hull - 10 McMillan - 2 thru 24
Feb 7	Option Strategies	McMillan Appendix A,B
Feb 14	Greeks	Hull - 15 McMillan - 40
Feb 23	Review	
<b>Feb 28</b>	<b>Mid Term Exam</b>	
Mar 7	Review exam Futures & Forward Basics	Hull - 2, 4, 5
Mar 14	Forward & Futures Futures Pricing	Hull - 2, 4, 5
Mar 21	Futures Strategies	Hull – 3, 6
<b>Mar 28</b>	<b>NO CLASS</b>	
Apr 4	Futures Strategies	Hull – 3, 6
Apr 11	Futures Options	Hull - 14 McMillan - 34, 35
Apr 18	Swaps Mort. Backed Securities Hybrids & Other Issues	Hull – 7, 18, 20
Apr 25	Review	
<b>May 2</b>	<b>Final Exam</b>	