FE8814 Derivative Securities

Academic Year: 2011-12  Mini-Term: 2
Course Coordinator: William Leon  Other Instructor(s):
Pre-requisites: 
No. of AUs: 1 ½

Course Description and Scope

Financial derivatives have grown at a phenomenal pace over the past two decades. However, there remain disagreements about the merits of derivatives. For example, Alan Greenspan, the former Chairman of the Federal Reserve Bank, believes that derivatives increase financial stability; whereas Warren Buffet, the famed investor, asserts that derivatives are financial weapons of mass destruction.

This course introduces students to the usages and valuations of derivatives such as options, forward and futures contracts.

Course Learning Objectives

Students will learn how to use derivatives for investment and risk management purposes and how to price derivatives in the market.

Learning & Teaching Methods

3½ hours of seminar per week commencing in Week 1 and ending in Week 7.

Course Assessments

<table>
<thead>
<tr>
<th>Components</th>
<th>Marks</th>
<th>Individual/Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coursework Assignments / case studies.</td>
<td>25</td>
<td>Individual</td>
</tr>
<tr>
<td>Examination *</td>
<td>75</td>
<td>Individual</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
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* The final examination is a restricted open-book exam where students may bring one A4-size sheet of paper with information on mathematical formulas, computation steps, etc., into the exam hall.
Assessment Plan

<table>
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<tr>
<th>Course Learning Objective</th>
<th>Assessment Method</th>
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<tr>
<td>Knowledge Acquisition</td>
<td>Assignments / case studies that cover various topics in the core curriculum.</td>
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<td>Students should demonstrate knowledge and application ability of core curriculum such as being able to price derivatives in the market, to use derivatives for investment and risk management purposes, and to identify and exploit arbitrage opportunities.</td>
<td>Written examination.</td>
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<td>Problem Solving &amp; Decision Making</td>
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<td>Students should develop abilities to identify, analyze, and solve financial problems involving derivatives.</td>
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Readings & References

DC  Don M. Chance and Robert Brooks
*An Introduction to Derivatives & Risk Management*, 8th Edition
South-Western Cengage, 2010
(Call No.: HG6024.C454 & ISBN: 9780324601213)

JH  John C. Hull
*Options, Futures And Other Derivatives*, 7th Edition
Pearson / Prentice Hall, 2009
(Call No.: HG6024.H913 & ISBN: 9780136015864)

Course Instructor(s)

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<tr>
<th>Instructor</th>
<th>Office</th>
<th>Phone</th>
<th>E-mail</th>
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<tbody>
<tr>
<td>William C. H. Leon</td>
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## Proposed Weekly Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings / Activity</th>
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| 1.   | 21 Sep | 1. Introduction to Derivatives.  
2. Structure of Option, Forward and Futures Markets.  
3. Principle of Pricing Forwards & Futures. | DC Chapter (1, 2 & 8); 9.  
JH Chapter (1, 2, 8 & 14); 4 & 5. |
| 2.   | 28 Sep | 1. Futures Arbitrage Strategies.  
2. Hedging with Forward & Futures.  
JH Chapter 3 & 7. |
| 3.   | 5 Oct  | 1. Principles of Option Pricing.  
2. The Binomial Option Pricing Model. | DC Chapter 3 & 4.  
JH Chapter 9 & 11. |
JH Chapter (12, 17 & 18); 13 & 15. |
| 5.   | 18 Oct | 1. Option on Futures.  
2. Option Strategies. | DC Chapter 6 & 7.  
JH Chapter 10 & 16. |
3. Case study. | DC Chapter 14 & 15.  
JH Chapter 34. |
| 7.   | 2 Nov  | Examination |