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465-01 Options and Futures Markets

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**Course Objectives and Student Learning Objectives**

The purpose of this course is to provide students with an understanding of the evaluation, selection, and uses of derivatives.

At the end of this course, students should be able to discuss and understand with some depth the options market, option strategies, option boundary conditions, the Binomial and Black-Scholes Option Pricing Models, the futures market, using futures for hedging and speculation, the carrying-cost model, futures options, pricing futures options, the uses of derivatives in managing equity, fixed-income, and currency positions, the markets and uses of interest rate, currency, credit default, and derivative swaps, embedded options, and the other topics indicated below.

**Text:**

**Supplemental Material**
- Excel Programs, Solutions to Select End-of-the-Chapter Problems, and Bloomberg Guides can be found in the Canvas modules.
- Assignments, Chapter PPTs, Solutions Manual, Excel Programs, External Links, and Bloomberg Information can be found in modulus.

**Assignments**
- Assigned End-of-the-Chapter Problems. Problems will be assigned after a topic has been covered and posted in Canvas modules and assignments
- Bloomberg Exercises and Projects: Bloomberg exercises and three projects will be assigned after a topic has been covered
- Discussions: Three discussion posts and responses will be assigned
TOPICS

Part I: Option Strategies and Markets
Chapter 1: Option Concepts and Fundamental Strategies
Chapter 2: The Option Market
Chapter 3: Option Strategies

Part II: Option Pricing
Chapter 4: Fundamental Option Pricing Relations
Chapter 5: The Binomial Option Pricing Model
Chapter 6: The Binomial Pricing of Options on Dividend-Paying Stocks and Stock Indices
Chapter 7: The Binomial Pricing of Options on Currencies and Bonds
Chapter 8: The Black-Scholes Option Pricing Model
Chapter 9: Applications of the Option Pricing Model, The Greeks, and Exotic Options

Part III: Futures and Futures Option Contracts
Chapter 10: Futures and Forward Contracts
Chapter 11: Pricing Futures and Forward Contracts
Chapter 12: Options on Futures Contracts

Part IV: Managing Equity, Currency, and Debt Positions with Derivatives
Chapter 13: Managing Equity Positions with Stock Index Derivatives
Chapter 14: Managing Foreign Currency Positions with Derivatives
Chapter 15: Managing Fixed-Income Positions with Interest-Rate Derivatives
Chapter 16: Managing Fixed-Income Positions with OTC Derivatives

Part V: Swaps
Chapter 17: Interest Rate Swaps
Chapter 18: Swap Derivatives: Forward Swaps and Swaptions
Chapter 19: Swap Valuation
Chapter 20: Currency and Credit Swaps

Part VI: Embedded Options and Asset-Backed Securities
Chapter 21: Embedded Options
Chapter 22: Mortgage- and Asset-Backed Securities and Their Derivatives
Tests, Assignments, and Grading

1. Tests
   1) Test 1
   2) Test 2
   3) Final

2. End-of-the-Chapter Problems: Nine problem sets

3. Bloomberg Exercises and Projects: Six exercises

4. Discussion Posts: Three posts

5. Grading
   1st Test 25%
   2nd Test 25%
   Final: 30%
   End-of-the Chapter Problems 12.5%
   Bloomberg Exercises and Projects 5%
   Discussions 2.5%

6. Grading Scale
   93-100: A
   89-92: A-
   85-88: B+
   80-84: B
   77-79: B-
   74-76: C+
   65-73: C
   50-64: C-
   0-49: F

   • **Note:** Make-up tests will be given only to students who receive permission from me in advance of the test date.

   • **Modifications:** The course outline, tests, schedule, and grading are subject to modifications during the semester.