

**UNIVERSITY OF PUERTO RICO  
RIO PIEDRAS CAMPUS  
BUSINESS ADMINISTRATION FACULTY  
GRADUATE BUSINESS SCHOOL**

**PRONTUARIO**

- I. COURSE TITLE:** Options, Futures, and Derivatives
- II. COURSE CODIFICATION:** FING 6710
- III. HOUR CREDITS:** 3 Credits/Hours
- IV. PRERREQUISITES:** FING 6501, CONT 5201
- V. COURSE DESCRIPTION:**

The practical role of options and futures markets for investors is examined. Topics: Futures pricing, hedging and synthetic asset strategies with futures, uses of options in investment strategies, parity relation between puts and calls, option valuation, and money management and account funding algorithms. It examines the economic role of the inter-bank currency markets. Topics: determinants of forward prices, synthetic asset creation with currency futures and currency options, fundamental analysis through application of international monetary theory and corresponding empirical evidence. Technical analysis of the currency markets, money management, and account funding algorithms.

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**VI. COURSE OBJECTIVES & LEARNING OUTCOMES:**

The cognitive objective of the course is learning mastery in understanding the structural details of the global derivative system. The affective objectives are to impart in the student a sense of stewardship through the financial managers' fiduciary commitment to the betterment of all who are intertwined in the global derivative system. The behavioral objectives are that students will

be able to clearly explain the details of the global derivative system as part of their career responsibilities.

**VII. COURSE CONTENT:**

<b>Lecture</b>	<b>Topics</b>	<b>Hours</b>
I and II	Introduction to Derivatives Insurance Collars	6
III and IV	Risk Management Financial forwards Commodity forwards	6
V and VI	Interest rate forwards Swaps Parity	6
VII	Binomial option pricing Topics Review	3
VIII	MIDTERM	3
IX and X	Binomial option pricing II The Black Scholes Formula Delta hedging	6
XI and XII	Exotic options Financial engineering Corporate applications	6
XIII, XIV and XV	Real options The Lognormal distribution Monte Carlo Valuation Ito's Lemma Topics Review	9
	FINAL EXAM	
	TOTAL LECTURE HOURS	45

**VIII. INSTRUCTIONAL STRATEGY: (Teaching Methodology):**

- Power Points assisted sessions
- Class Conferences
- Chapter Analysis & Discussions.

**IX. REQUIRED LEARNING RESOURCES:**

Internet Access & PC.

**X. EVALUATION STRATEGY:**

- Case: 30%
- Midterm: 30%
- Final: 30%
- Participation: 10%

*Special evaluations will be extended to students with special accommodation necessities.*

**XI. ASSESSMENT STRATEGY:**

Homework and book summaries in PPT

**XII. GRADING SYSTEM:**

100-90%=A, 89-80%=B, 79-70%=C, 69-60%=D and 59-0%=F

**XIII. LAW 51 - VOCATIONAL REHABILITATION:**

*According to the Law of Integral Educational Services for Individuals with Disabilities, students who require reasonable accommodation should notify the instructor the first day of class. Students receiving VR services should contact the teacher at the beginning of the semester to plan reasonable accommodation and assistive equipment necessary as recommended Affairs Office for Persons with Disabilities (OAPI) of Dean of Students. Even those students who need special assistance or accommodation should contact the teacher.*

*Certification # 99 (01-02) of the Academic Senate, Act 51 of 1996 (Act Integral Educational Services for people with disabilities) and Certification 130 (1999-2000) of the Board of Trustees.*

**XIV. CONDUCT SUBJECT TO DISCIPLINE:**

*The General Student Regulations of the University of Puerto Rico, Certificate 13, 2009-2010, and approved by the Department of State of Puerto Rico on September 9, 2009, Part VI, Section 6.2, provides students behavior subject to disciplinary sanctions. Among them is academic dishonesty, which involves disciplinary sanctions as provided in this regulation.*

**XV. BIBLIOGRAPHY:**

**Suggested Textbooks:**

McDonald, Robert, “*Derivative Markets*” Pearson Addison Wesley, (2002)

John C. Hull, *Options, Futures and Other Derivatives*, Prentice Hall, (2011)

### Articles and Other References:

Why Newton Was Wrong, The Economist, Jan 6<sup>th</sup> 2011.  
Making the Right Connection, Barron's Online, Mar 12<sup>th</sup> 2011.  
Death By Low Yields, The Economist, Oct 8<sup>th</sup> 2011.  
Is The Euro High-yield Bond Market A Bubble? The Economist, Jun 16<sup>th</sup> 2011.  
Stock Market Concentration, The Economist, Apr 15<sup>th</sup> 2010.  
The Sound of Silence, The Economist, Apr 27<sup>th</sup> 2011.  
Efficient Market Theory and the Crisis, The Wall Street Journal, Oct 27<sup>th</sup>, 2009.  
Careful Now, The Economist, Apr 7<sup>th</sup> 2011.

### Electronic References:

<https://usequities.nyx.com/markets/nyse-mkt-equities>  
<http://www.chx.com/index.asp>  
<http://www.nasdaq.com/>  
<https://nyse.nyx.com/>

\*Revised on January 25, 2013.