**FIN 4533**

**CRN xxxxx**

**Financial Derivatives**

**Spring 2014**

**BU 101 Trading Room**

**Professor Information**

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**Office Hours**

# Required Text and Materials

Derivative PRINCIPLES AND PRACTICE

SUNDARAM & DAS

MC GRAW HILL

**Course Description**

Options, futures, forwards, and other derivative contracts. Investments traded in these

markets are examined. Pricing and hedging are considered.

**Course Prerequisites and Credit Hours**

3.0 Credit Hours. A grade of “C” or better in FIN 3403 or permission of the instructor.

According to Florida State Statute 6A-10.033, students must spend a minimum of 37.5 hours of **in class** time during a 3-credit course. Additionally, students enrolled in a 3-credit course are expected to spend a minimum of 75 hours of **out-of-class-time** specifically working on course-related activities (i.e., reading assigned pieces, completing homework, preparing for exams and other assessments, reviewing class notes, etc.) and fulfilling any other class activities or duties as required.

**Course Resources**

CBOE virtual trade at:

<http://www.cboe.com/tradtool/virtualtrade.aspx>

**Movie**

We will also have a video from NOVA:

“Trillion Dollar Bet “about the discovery of the Black and Scholes formula

More info at <http://www.pbs.org/wgbh/nova/stockmarket/>

**Course Format:** The course is a mix of conceptual lectures and analysis of actual derivatives trading strategies. Microsoft Excel will be used extensively throughout and students should either be proficient or willing to acquire proficiency.

**Course Evaluation Method**

There will be two (2) in-class exams and a Project

**Project**

The Project will consist in implementing and managing a derivatives portfolio through the “virtual trade” software of the CBOE.

**Grading Scale**

Only the final grade will be curved, if needed. Exams and project will not be curved. There are 300 possible points, and grades will be determined as follows:

Mid\_term: 100 points

Final : 100 points

Project: 100 points

Total: 300 points

A 90 % or above of possible points

B 80%-89.9% of possible points

C 70%-79.9% of possible points

D 60%-69.9% of possible points

F below 60% of possible points

Plus and Minus grades will be assigned with respect to the mid-point in each letter grade.

**Make-up Exam**: Make-up exams will only be given in extraordinary circumstances for a valid and documented reason. Conflicts with examinations dates or times need to be brought to the attention of the instructor at least one week before the exam so that arrangements can be made. The instructor reserves the right to give a make-up exam different from the one given at the regularly scheduled exam.

**Attendance Policy**

Class attendance is a necessary (though not sufficient) condition for success. Always bring an electronic calculator in class.

**Tentative Course Outline**

**Week 1** Introduction: What are Derivatives?

**Week 2** Pricing Forwards and Futures: The basic theory.

**Week 3** Pricing Forwards and Futures: Building on the foundations

**Week 4** Hedging with Forwards and Futures

**Week 5**Interest Rate Forwards and Futures

**Week 6** Interest Rate Swaps

**Week 7** Equity and Commodity Swaps

**Week 8**

Mid-Term Exam. Movie.

**Week 9** Options Markets Introduction

**Week 10** Options Markets, Payoffs and Trading Strategies

**Week 11** Options Pricing Primer:TheBinomial Model

**Week 12** Options Pricing: The Black and Scholes Models.

**Week 13** Options trading using the “Greek” parameters.

**Week 14** Credit Risk Derivaties

**Week 15** Value at Risk (VaR)

**Week 16** Special Topics. Project Results Discussion.

Final Exam

**Drop Policy:** The official university policy will be followed.

**Selected University and College Policies**

Code of Academic Integrity Policy Statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student

enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see <http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf>.

Disability Policy Statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities ([OSD](http://www.osd.fau.edu/)) – in Boca Raton, SU 133, (561) 297-3880; in Davie, MOD 1, (954) 236-1222; in Jupiter, SR 117, (561) 799-8585; or, at the Treasure Coast, CO 128, (772) 873-3305 – and follow all OSD procedures.

Religious Accommodation Policy Statement

In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices **and beliefs with regard to admissions, registration, class attendance and the scheduling of** examinations and work assignments.  For further information, please see [Academic Policies and Regulations](http://www.fau.edu/academic/registrar/catalog/academics.php).

University Approved Absence Policy Statement

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances and debate activities. It is the student’s responsibility to notify the course instructor at least one week prior to missing any course assignment.

College of Business Minimum Grade Policy Statement

The minimum grade for College of Business requirements is a “C”. This includes all courses that are a part of the pre-business foundation, business core, and major program. In addition, courses that are used to satisfy the university’s Writing Across the Curriculum and Gordon Rule math requirements also have a minimum grade requirement of a “C”. Course syllabi give individualized information about grading as it pertains to the individual classes.

Incomplete Grade Policy Statement

A student who is passing a course, but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete (“I”). The assignment of the “I” grade is at the discretion of the instructor, but is allowed only if the student is passing the course.

The specific time required to make up an incomplete grade is at the discretion of the instructor. However, the College of Business policy on the resolution of incomplete grades requires that all work required to satisfy an incomplete (“I”) grade must be completed within a period of time not exceeding one calendar year from the assignment of the incomplete grade. After one calendar year, the incomplete grade automatically becomes a failing (“F”) grade.

Withdrawals

Any student who decides to drop is responsible for completing the proper paper work required to withdraw from the course.

Grade Appeal Process

A student may request a review of the final course grade when s/he believes that one of the following conditions apply:

* There was a computational or recording error in the grading.
* Non-academic criteria were applied in the grading process.
* There was a gross violation of the instructor’s own grading system.

The procedures for a grade appeal may be found in [Chapter 4 of the University Regulations](http://business.fau.edu/undergraduate/current-students/registration-enrollment/understanding-your-grades/download.aspx?id=56).

Disruptive Behavior Policy Statement

Disruptive behavior is defined in the FAU Student Code of Conduct as *“... activities which interfere with the educational mission within classroom.”* Students who behave in the classroom such that the educational experiences of other students and/or the instructor’s course objectives are disrupted are subject to disciplinary action. Such behavior impedes students’ ability to learn or an instructor’s ability to teach. Disruptive behavior may include, but is not limited to: non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor’s expectations for classroom conduct.

**Faculty Rights and Responsibilities**   
  
Florida Atlantic University respects the right of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions which do not impede their exercise. To ensure these rights, faculty members have the prerogative:

* To establish and implement academic standards
* To establish and enforce reasonable behavior standards in each class
* To refer disciplinary action to those students whose behavior may be judged to be disruptive under the Student Code of Conduct.

**Student Effort**

According to Florida State Statute 6A-10.033, students must spend a minimum of 37.5 hours of in class time during a 3-credit course. Additionally, students enrolled in a 3-credit course are expected to spend a minimum of 75 hours of out-of-class-time specifically working on course-related activities (i.e., reading assigned pieces, completing homework, preparing for exams and other assessments, reviewing class notes, etc.) and fulfilling any other class activities or duties as required.

**Reading List**

**Derivatives Textbooks**

Cox, John C. and Mark Rubinstein, 1985, “*Options Markets*”, Englewood Cliffs: Prentice-Hall

Duffie, Darrell, 1989, “*Futures Markets*”, Englewood Cliffs, Prentice-Hall

Hull, John C., 2011, “*Options, Futures and Other Derivatives*”, Prentice Hall

Jarrow, Robert, A. and Stuart, M., Turnbull, 2000, “*Derivative Securities*”, South-Western College Publishing

McDonald, Robert, L. 2013,”*Derivatives Markets*”, Pearson

**Probability and Statistics Textbooks**

DeGroot, Morris, 1989,”*Probability and Statistics*”, Addison Wesley

Durrett, Rick, 1993, “*The Essentials of Probability*”, Duxbury Press

Ross, Sheldon, 1993, “*Introduction to Probability Models*”, Academic Press

**Journals**

The Journal of Alternative Investments, Institutional Investor Journals (academic/practitioner)

The Journal of Derivatives, Institutional Investor Journals (academic/practitioner)

The Journal of Futures Markets, Wiley (academic)

Review of Derivatives Research, Springer (academic)

Risk (practitioner)

**Light Reading**

Fay, Stephen, 1996, “*The Collapse of Barings*”, New York:  W. W. Norton

Leeson, Nick, 1996, “*Rogue Trader:  How I Brought Down Barings Bank and Shook the Financial World*”, Boston: Little, Brown

Lowenstein, Roger, 2000, “*When Genius Failed: The Rise and Fall of Long-Term Capital Management*,New York: Random House

Roubini, Nouriel and Steven Mihm, 2010, “*Crisis Economics: A Crash Course in the Future of Finance*”, Penguin Press HC

Taleb, Nassim Nicholas, 2007, “*The Black Swan:  The Impact of the Highly Improbable*”, New York:  Random House

**Selected Academic Articles**

Benet, B., A. Giannetti and S. Pissaris, 2006, “*Gains from structured product markets: The case of reverse-exchangeable securities (RES)*”, Journal of Banking and Finance, 111-132

Black, F. and M., Scholes, 1973,”*The Pricing of Options and Corporate Liabilities”, Journal of Political Economy*”, 637-654

Chance, D., 2003, “*Equity Swaps and Equity Investing*”, Louisiana State University, Working Paper

Chance, D. and D. Rich, 1995, “*The Pricing of Equity Swaps and Swaptions*”, Journal of Derivatives, 5, 19-31

Cox, J. and M. Rubinstein, 1979, “*Option Pricing: A Simplified Approach”,* Journal of Financial Economics, 7, 229-265

Heath, D., A. Jarrow and A. Morton, 1990, “*Contingent Claim Valuation with a Random Evolution of Interest Rates*”, Review of Futures Markets, 9, 54-82