HOFSTRA UNIVERSITY
FRANK G. ZARB SCHOOL OF BUSINESS

"to provide students with a perspective on the integration of the functional areas of business, while maximizing the use of analytical skills and knowledge for decision making in a contemporary global business environment"

DEPARTMENT OF FINANCE
FINANCE 261 - Options Markets
(Graduate course)

Spring 2003 Semester, Sec. A, Thurs. 8:45-11:05PM, 109 CV Starr Hall, Code: 23173

INSTRUCTOR'S NAME	**Dr. Ahmet Karagozoglu**
OFFICE HOUR	**Mon, Tu & Th 5:00-6:00pm**
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GENERAL INFORMATION

Location of Department Office	**221 Weller Hall**
Telephone number of Department	**463-5698**
Department Chairperson	**Dr. Nancy Huckins**

DESCRIPTION OF COURSE

This course will provide the student with a thorough understanding of options markets. Students will be exposed to both theoretical and practical view of the institutional aspects of the markets, contracts and their use in hedging as well as speculation. The course examines the organization, regulation and theory of option markets and the relationship between option prices and underlying instruments. While the fundamental concepts like contract design, pricing, hedging, speculative as well as the arbitrage strategies will be the main focus of this course; contemporary issues such as electronic exchanges, microstructure issues will also be included in class discussions. Application of option pricing theory to corporate financing and investment decisions, and the valuation of stock, currency, stock index and futures options will be examined. Global risk management, financial engineering, as well as ethical issues will be integrated into the course.

PREREQUISITES OF COURSE

Prerequisite: FIN 202, QM 210

REQUIRED TEXT

Hull, John C., "Options, Futures, and Other Derivatives," Fifth Edition, 2003, Prentice-Hall, Inc., NJ.

READINGS: Readings will consist of the text, assigned journal articles and articles from the *Wall Street Journal*.

OUTCOME OBJECTIVES AND METHODS OF ACHIEVING THE OBJECTIVES

The course has two objectives. First is to give students a rigorous grounding in the theory and analytical techniques of options contracts as well as their markets. Second, to teach students how to apply the theoretical information they receive throughout the course in hedging and risk management. In addition, the course purports to increase student awareness of the contemporary institutional issues affecting options exchanges globally. Instruction aims at developing the students' understanding of the fundamental concepts of pricing, trading, and risk management through problem assignments, case discussions, computer-based trading simulations, and projects that enable students to handle options market data.

SCHOOL OF BUSINESS POLICY ON MAKEUP EXAMINATIONS

To be eligible for a makeup examination, a student must submit to the instructor written documentation of the reason for missing a scheduled examination due to medical problems or death of an immediate family member. The instructor ***(not the student)*** determines whether and when a makeup is to be given. If a makeup examination is to be given, the instructor will determine the type of makeup examination. If the student misses (for any reason) the scheduled makeup examination, additional makeups are ***not*** permissible.

UNIVERSITY POLICY ON INCOMPLETE GRADES

A student unable to complete a course may, with the permission of the instructor, receive a grade of incomplete (INC). The instructor will permit the student to complete and submit the missing work *no later than the third week* of the following semester. All undergraduate students may accumulate up to nine credits of INC grades without penalty. Past this nine-credit limit, all subsequent INC grades not made up convert to F's at the end of the semester following the one in which they were assigned.

UNIVERSITY POLICY ON ACADEMIC HONESTY

A University is a community of faculty and students dedicated to the acquisition and transmission of knowledge. Every individual in this community has an obligation to uphold its intellectual standards, which alone make learning and education worthwhile. It is the responsibility of the faculty to try to communicate both knowledge and respect for knowledge. It is equally the responsibility of the student to respect knowledge for its own sake. Only thus does the student prove himself/herself deserving of a university education. A student is not an empty receptacle into which the faculty pours knowledge: the student's role in education is an active one, and the student bears the responsibility for his/her work. Whoever refuses this responsibility is unworthy of a university education. A student who steals work or cheats in any way is refusing the responsibility that is his/hers and so forfeits the right to remain a member of the academic community unless he/she is willing and able to recognize the seriousness of his/her offense and demonstrates such recognition by no further violation of academic propriety. Hofstra would rather educate than cut off the offender. It recognizes that one instance of cheating may not be a sign of an incorrigibly corrupt person; but it will not tolerate dishonesty, and it will not offer the privileges of the community to the chronic cheater.

The student must avoid not only cheating, but the very appearance of cheating. He/she must be responsibly aware that certain actions in an examination leave him/her open to the accusation of cheating. The instructor is authorized to question the student on the basis of suspicious appearance. Anyone who helps another person to

cheat on an examination is considered guilty of cheating.

Plagiarism in any form, either from published works or unpublished papers of other students, is cheating. Using a ghost-writer is cheating. The student is responsible for acknowledging explicitly in his/her papers all sources consulted and used. The proper procedure for such acknowledgement is outlined in the College Style Sheet available in the Bookstore, or in style manuals approved by specific departments. Ignorance of the rules is no excuse. If a student is in doubt about the propriety of a particular academic procedure, he /she should consult one of his/her instructors or the Dean of Students for appropriate guidance. Organizations or individuals who make a practice of collecting papers for resubmission will be considered guilty of fostering plagiarism and subject to the penalties imposed on the plagiarist.

ATTENDANCE POLICY

All students are expected to attend class, and to arrive in the classroom before the class begins.

METHODS OF EVALUATING STUDENTS

Midterm Exam	35%	(March 13 tentative)
Final Exam	35%	(May 15, 8:15-10:15 pm)
Term Project	20%	(due on or before May 12, 5:00pm)
Homework and class participation	10%	
Total	100%	

Exams will not be comprehensive. However the study of finance is comprehensive, and therefore, most of the topics will build upon the previous parts of the course. Students are to use all the previously acquired skills and knowledge throughout the course.

TERM PROJECT

Each student will be required to participate in options trading simulation. The simulation is managed by an independent firm called STOCK-TRACK. Students will be required to follow the options markets, as well as other financial markets, on a daily basis. Therefore, subscription to the Wall Street Journal will be helpful.

As part of this term project, students are required to trade ONLY options contracts (Monday Feb. 10 through Friday May 2). For the whole simulation students have a maximum of 100 trades that should be allocated efficiently. Initially each student will receive $500,000 for this trading simulation.

Students are to base their trades either on fundamental information, i.e. news, etc., or technical information, i.e. charts, etc. Students are to collect news items and/or charts (hard-copy from newspapers or print-outs from web pages) before making a trade and submit these with the final report.

Students need to allocate their trades carefully so that they will have at least one-round-turn trade for each of the following strategies: bull, bear and butterfly spreads, straddle and strangle, strip and strap.

Final report for this term project is to contain the description and analysis of the trading strategy followed, description of the trades placed with references to the news items that led to each trade. Final report is to be ten pages long (besides the attachments) and it should include a separate one-page executive summary written in a memo-style.

Student's final grade will not depend on the final equity value of his/her portfolio but how well the trading strategy is formed and executed. The completeness of the final report in term of the new articles and charts will play an important role the grade.

Student participation is essential for this course. Students are strongly encouraged to participate in class discussions and ask questions.

Problems from the textbook will be assigned and certain assignments will be graded. Students will be given homework assignments that will require the use of Excel spreadsheets. These homeworks will be based on the supplement- Spreadsheet Modeling. The homework assignments are to provide students with further understanding of each topic.

COURSE OUTLINE

I. Overview of Options Markets Ch. 1, 7

Discussion of the markets and contracts available including futures options, market participants and ethical problems, basic terminology and pricing concepts.

II. Basic Option Characteristics Ch. 7

Discussion of the basic factors affecting the value of options and how options differ from other derivative securities.

III. Put-Call Arbitrage Relationships Ch. 8

Relationships between option prices and underlying securities as well as other options including boundary conditions and arbitrage relationships.

IV. Option Trading Strategies Ch. 9

Different trading positions including outright long and short positions, spreads, straddles, replicating positions and hedging uses.

V. Option Valuation

Basic pricing including the Black-Scholes and Binomial Option Pricing Models, and the stochastic processes used.

A. Binomial Option Pricing Model Ch. 10
B. Stochastic Processes of Stock Prices Ch. 11
C. Black-Scholes Option Pricing Model Ch. 12

VI. Risk Management with Options Ch. 14, 16

Discussion and analysis of the hedging of both price and quantity risk. Greek letters (Delta, Theta, Gamma, etc.) and Value At Risk (VAR) topics.

VII. Index Options and Foreign Currency Options Ch. 13

Valuation and application.

VIII. Exotic Options Ch. 19

Discussion of unusual option contracts, Asian, look-back, barrier options.

IX. Interest Rate Swaps Ch. 6

Analysis and discussion of the uses of interest rate swaps to hedge interest rate risk by swapping fixed for floating or floating for fixed interest rates.

Some topics will be covered more thoroughly than others, while issues that were also discussed in pre-requisite courses will briefly be revisited. The above sequence of topics may be revised throughout the course to ensure a coherent coverage of certain topics.