

**BA 4825/5825 - FINANCIAL DERIVATIVES**  
**IAM 520 – FINANCIAL DERIVATIVES**

M, W: 10:15 - 11:30 (G 107, FEAS Building B)

**Instructor:** Dr. Seza Danişoğlu  
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**Office Hours:** M: 14:30 – 16:30, T: 10:15 – 11:30 or, strictly by appointment.  
**Course Web Page:** <http://groups.yahoo.com/group/ba4825s08/>

**OBJECTIVES OF THE COURSE:**

This course is designed to provide a solid foundation in the principles of financial derivatives and risk management. It attempts to strike a balance between institutional details, theoretical foundations, and practical applications. The course equally emphasizes pricing and investment strategies in order to motivate students to start thinking about risk management in financial markets. Parallel to the already increasing attempts to integrate derivative securities and markets into the Turkish financial system, it is believed that this course will fill a gap and students will be exposed to a rather comprehensive coverage of theory and application in the derivatives area. This course is expected to give the students a “competitive advantage” when they enter the job market since “derivatives” is a “hot topic” nowadays and BA4825/5825/IAM520 is one of the very few courses offered on this topic in Turkey!

**PREREQUISITE:**

The students who have completed any one of the following courses with a minimum semester grade of DD are allowed to register for this course:

BA 2802 or BA 5802 or IAM 521.

**TEXT BOOK:**

**Chance, Don M. An Introduction to Derivatives and Risk Management, 6<sup>th</sup> Edition, Thomson South-Western, USA, 2004.**

This book is available for sale at the METU Bookstore for the price of YTL45. The 5<sup>th</sup> Edition of the book is also available for checkout at the Reserve Desk of METU Muhan Soysal Library located at FEAS Building B, G Wing, Floor 2 (Call number: HG6024 A3 C48 2001).

**SUPPLEMENTARY BOOKS:**

You will need a lot of practice to feel comfortable with solving problems on options, futures and other derivatives. The METU Library carries a variety of books written on derivatives. It is a very good idea to check out some of these books and exercise your brain muscle by solving the end-of-chapter problems that are provided in these books.

**COURSE REQUIREMENTS:**

The students will be assigned readings from the textbook and they will be expected to come to class prepared and ready to take part in class discussions.

Attendance is mandatory in this class. Past experience repeatedly demonstrated that students who regularly attend class and read the chapter assignments perform significantly better than students who have an intermittent attendance and who do not keep current in reading the

chapters. **Every single time you cannot attend class, please inform me in advance via phone or e-mail about your absence and your excuse for this absence.**

#### **EXAMS:**

There will be two midterms and a final. The exam schedule is as follows:

<b>1<sup>st</sup> Midterm:</b>	<b>Thursday, March 27, 2008, 17:45 – 20:00</b>
<b>2<sup>nd</sup> Midterm:</b>	<b>Thursday, May 1, 2008, 17:45 – 20:00</b>
<b>Final Exam:</b>	<b>Wednesday, May 21, 2008, 17:45 – 20:15</b>

#### **GRADING:**

Your total score in the course will be determined by the following weights:

Written Assignments	10%
Quizzes	5%
Midterm 1	25%
Midterm 2	25%
Final	35%

No “extra” work above the aforementioned will be accepted or credited.

**Makeup Examinations:** There will be no make-ups for exams or homework assignments. You may be allowed to miss an exam under the most extreme circumstances and only after stringent verification and approval by the Department. If you do miss Exams 1 or 2, the weight of the exam will be added on top of your final exam weight. For example, if you miss Exams 1 or 2, the weight of 25 percent will be added on top of the weight of your final so that your Final Exam score will have the weight of 60 percent. This makeup policy is not negotiable.

#### **RECITATION HOUR:**

There is going to be a weekly recitation hour. Teaching assistants from the department are going to work on sample problems on the topics that are covered during class from the previous weeks. These sample problems are made available at the course web page one day before the recitation hour so that you can take a look at them and may be even attempt to solve them before coming to class. Attendance to the recitation hour is not mandatory but highly recommended.

#### **PRESENTATION SLIDES:**

A copy of the presentation slides is available at the course web page. These slides can be used as chapter summaries and utilized while taking down notes during class.

#### **OTHER NOTES:**

- Cellular phones are not allowed during the class.
- Please arrive on time and do not enter the classroom after I already have entered. If you have to leave early, please inform me in advance.
- The homework assignments are due at the beginning of the class period. Please note that no late assignments (no matter how late) will be accepted once the class starts.
- You are encouraged to drop by my office during office hours for questions, concerns, or suggestions. Outside the office hours, please make an appointment with me in advance, before or after the class, via phone or e-mail. For quick questions that you may have, note that e-mailing is a very efficient means of communicating with me.

Good luck to all of you!! SD

The following table gives the schedule for the semester. The lectures will stress the most important and/or most difficult material. Appendices are required only if they are assigned. The students are required to read the chapters and appendices before they are covered in class.

Date	Topic	Reading Assignment	Homework Assignment
<b>February</b>	18 Introduction	Chapter 1	
	<b>Part I: Options</b>		
	20 The Structure of the Options Market	Chapter 2	
	25 The Structure of the Options Market (Cont'd) Principles of Option Pricing	Chapter 2 Chapter 3	
	27 Principles of Option Pricing (Cont'd)	Chapter 3	
<b>March</b>	<b>Saturday Extra Session: 13:45 – 16:30 (Room G 107)</b> 1 Principles of Option Pricing (Cont'd) Option Pricing Models: The Binomial Model	Chapter 3 Chapter 4	
	3 Option Pricing Models: The Black-Scholes Model	Chapter 5	
	5 Option Pricing Models: The Black-Scholes Model (Cont'd)	Chapter 5	Start working on HW #1 (12/03)
	<b>Saturday Extra Session: 13:45 – 15:00 (Room G 107)</b> 8 Basic Option Strategies	Chapter 6	
	10 Basic Option Strategies (Cont'd)	Chapter 6	
	12 Basic Option Strategies (Cont'd) Advanced Option Strategies HW #1 Due	Chapter 6 Chapter 7	Start working on HW #2 (19/03)
	17 Advanced Option Strategies (Cont'd)	Chapter 7	
	19 Advanced Option Strategies (Cont'd) HW #2 Due	Chapter 7	
	<b>Part II: Forwards, Futures, and Swaps</b>		
	24 The Structure of Forward and Futures Markets	Chapter 8	
	26 Principles of Pricing Forwards, Futures, and Options on Futures	Chapter 9	
	<b>Midterm Examination 1</b> 27 17:45 – 20:00 Chapters 1, 2, 3, 4, 5, 6		
	31 Principles of Pricing Forwards, Futures, and Options on Futures (Cont'd)	Chapter 9	Start working on HW #3 (09/04)
<b>April</b>	2 Forward and Futures Hedging Strategies	Chapter 10	
	7 Forward and Futures Hedging Strategies (Cont'd)	Chapter 10	
	9 Forward and Futures Hedging Strategies (Cont'd) HW #3 Due	Chapter 10	
	14 Advanced Futures Strategies	Chapter 11	
	16 Advanced Futures Strategies (Cont'd)	Chapter 11	
	21 Advanced Futures Strategies (Cont'd)	Chapter 11	Start working on HW #4 (30/04)
	<b>23 Day of No Classes</b>		
	28 Swaps	Chapter 12	
	30 Swaps (Cont'd) HW #4 Due	Chapter 12	
<b>May</b>	<b>Midterm Examination 2</b> 1 17:45 – 20:00 Chapters: 7, 8, 9, 10		
	5 Swaps (Cont'd)	Chapter 12	
	<b>Part III: Advanced Topics</b>		
	7 Interest Rate Forwards and Options	Chapter 13	
	12 Interest Rate Forwards and Options (Cont'd)	Chapter 13	
	14 Interest Rate Forwards and Options (Cont'd)	Chapter 13	Start working on HW #5 (20/05)
	20 HW #5 Due by 17:30		
	<b>Final Examination</b> 21 17:45 – 20:15 Chapters: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11} 40% {11, 12, 13} 60%		