

Markets and Derivatives (20848)

Degree/study: Grau Economia

Course: third/fourth

Term: first

Number of ECTS credits: 5 credits

Hours of student's dedication: 125 hours

Language or languages of instruction: English

Professor: Roland Umlauf – Roland.Umlauf@upf.edu

1. Presentation of the subject

This course focuses on derivative instruments such as futures, swaps and options.

The primary objective is to give students a good understanding of derivative products, their valuation, their function, and their use by financial institutions and firms.

The market of derivatives has grown exponentially over the last decades, both for hedging as well as speculative purposes. The correct understanding and use of derivatives is crucial in today's financial markets.

2. Competences to be attained

Students obtain knowledge about using derivative products for hedging and speculation purposes. A large portion of the course is dedicated to valuation, in a no-arbitrage context as well as in a financial market equilibrium. Students learn to use financial market terminology in English.

3. Contents

- Chapter 1 - Intro & Derivatives Market
- Chapter 2 - Basic derivatives
- Chapter 3 - Option Pricing 1 (Arbitrage Pricing)
- Chapter 4 - Option Pricing 2 (Equilibrium Pricing)
- Chapter 5 - Option Pricing 3 (Simulation)
- Chapter 6 - Greeks & Hedging
- Chapter 7 - Trading Strategies, Exotic Options, Structured Products

4. Assessment

This course consists of 30 hours of theory class (20 lectures of 1.5hrs) and 9 hours of practice classes (1.5hrs/wk during the last 6 weeks). At the end of the course there will be a final exam (75% of the grade). Additionally, students are graded on attendance and class participation, especially during the practice sessions (10%). Students have to hand in 3 homework sets. These homework sets account for 15% of the final grade.

Practice sessions are used to solve problemsets with active student involvement.

The minimum final passing grade is 5.0 out of 10. Students need at least a grade of 5.0 in the final exam as well as 5.0 in the combined participation/homework portion in order to pass the course.

The grades for class participation and homework are preserved for the recuperation exam at the beginning of the 2nd trimester.

Students are only allowed to attend the exam or recuperation exam if they were enrolled in the course during the first term of 2014-15.

For students unable to attend the recuperation exam due to exchange study placement in the second term, an extra recuperation exam date can be set at the end of the 3rd term.

5. Bibliography and teaching resources

5.1. Basic bibliography

Options, futures and other derivatives – John C. Hull. Pearson Education, New Jersey, 5th edition.

6. Methodology

We will discuss theoretical issues and methodology during the lectures. All students are expected to come prepared for in-class discussions.

There will be a total of six seminar assignments. These problems will be either uploaded on the course website in advance of the due date. The seminar assignments are meant to help students review the concepts covered during the previous weeks and to help them prepare for the final exam. The seminar classes are applied in nature and treat the solution of practical problems related to the theory taught during lectures.

Students must submit solutions to 3 of the 6 seminars as homework.

7. Activities Planning

Students are recommended to attend lectures and classes and to prepare solutions to the seminar practice problems before attending seminar classes, even if the solutions do not have to be handed in. There are 3 homework sets to be handed in individually, at the beginning of practice class on the 22nd Oct, 5th Nov and 19th Nov.

Date	Wk	Chapter	Seminar	Homework
25-Sep	1	Intro & Ch1		
26-Sep	1	Ch1		
2-Oct	2	Ch2		
3-Oct	2	Ch2		
9-Oct	3	Ch2		
10-Oct	3	Ch2		
16-Oct	4	Ch3		
17-Oct	4	Ch3		
22-Oct	5		Sem 1	HW1
23-Oct	5	Ch3		
24-Oct	5	Ch4		
29-Oct	6		Sem2	
30-Oct	6	Ch4		
31-Oct	6	Ch4		
5-Nov	7		Sem3	HW2
6-Nov	7	Ch4		
7-Nov	7	Ch4		
12-Nov	8		Sem4	
13-Nov	8	Ch5		
14-Nov	8	Ch6		
19-Nov	9		Sem 5	HW3
20-Nov	9	Ch6		
21-Nov	9	Ch7		
26-Nov	10		Sem 6	
27-Nov	10	Ch7		
28-Nov	10	Practice Questions		