Year 2011-12

Financial Economics (20843)

Degree/study: Bachelor's degree in Business Management and Administration, Economics
Year: Second
Term: Third
Number of ECTS credits: 5
Hours of student commitment: 125
Language or languages of instruction: English

1. Introduction to the subject

The course introduces the study of capital markets and the process of price formation for financial assets. For this reason, techniques based on the lack of arbitrage opportunities and equilibrium arguments based on the problem of selecting investment portfolios are used.

2. Competences to be obtained

- Familiarity with the financial system and its key role in economics, with special focus on financial markets.
- Knowledge of the main financial instruments.
- The ability to use techniques based on the lack of arbitrage opportunities in the valuation of financial assets under conditions of certainty and uncertainty
- The ability to use equilibrium techniques when valuing financial assets under conditions of uncertainty.
- The ability to use Expected Utility theory methods in order to build optimal portfolios.
- Familiarity with the mean–variance analysis, and its applications for the measurements of financial risk, risk diversification and the construction of efficient portfolios.

3. Contents

- Financial Economics. Instruments and Markets: Definitions, Bonds/Stocks/Derivatives
- Arbitrage and Fixed Income Assets; Definition, application to bonds, BB and EFV
- The Term Structure of Interest Rates: Interest Rates, Forward Rates, TSIR theories.
- The Fundamental Asset Pricing Equation under conditions of Uncertainty: basic ideas.
- Derivatives Valuation: Definition of contracts and uses, forward prices and put-call parity, options with a binomial model and Black-Scholes model, risk-neutral probabilities.
- Portfolio Selection and Valuation Equilibrium.
- Portfolio Selection in a Mean-Variance (MV) Environment: MV preferences, portfolio risk, diversification, MV boundaries
- Model Assessment of Financial Assets with a Market Portfolio (CAPM): market portfolio, Capital Market Line, Betas, Market Line bonds

4. Assessment

1. The weighting of the examination and the seminars and practical classes in the final grade is 70% and 30% respectively. At least 4 points must be obtained in order to pass the course.
2. The seminars include both solving examination exercises and computer exercises.
3. For the exercises, class participation, and in particular the solving of exercises by students will be assessed. This assessment will represent 20% of the seminar grade.
4. Approximately 6 groups of students will be created for the computer practical classes. The problems solved will be assessed provided they are submitted on paper. Students' participation in solving exercises in the classroom will also be assessed. Each group must therefore bring their solutions to the class in digital format and be prepared to present them. This evaluation will account for 80% of the seminars.
5. The seminar grades will be carried over to the September grade.

5. Bibliography and teaching resources

5.1. Basic bibliography

"Economía Financiera", José Marín & Gonzalo Rubio, Editor: Antoni Bosch, Barcelona 2001

5.2. Further reading

Brealey, R.A. y S.C. Myers "Principles of Corporate Finance". Madrid. Latest edition.

6. Methodology

Theory Lectures: where the theoretical concepts of the subject are presented.

Seminars: during the class, students must present the solution of a practical problem using theoretical contents.

7. Schedule of Activities

WEEK	SESSION Date	THEORY	SEMINAR
1 **10/4 13/04**	1	T1: Financial Economics. Instruments and Markets: Definitions, Bonds/Stocks/Derivatives	
	2	T2: Arbitrage and Fixed Income Assets; Definition, application to bonds, BB and EFV	
2 **16/4 20/4**	3	T3: The Term Structure of Interest Rates: Interest Rates, Forward Rates, TSIR theories	
	4	T2-3: Conclude topics and summary	

3 **23/4** **27/4**	5	T4: The Fundamental Asset Pricing Equation under conditions of Uncertainty: basic ideas.	
	6	T5: Derivatives Valuation (I)	
4 **30/4** **4/5**	7	T5: Derivatives Valuation (II)	
	8	T5: Derivatives Valuation (III)	
5 **7/5** **11/5**	9	T4-5 Conclude topics and summary	1 EXERCISES TOPICS 1-3
6 **14/5** **18/5**	10	T6 (I): Portfolio Selection and Valuation Equilibrium	2 Statistics of returns on bonds and stocks
	11	T6 (II): Portfolio Selection and Valuation Equilibrium	
7 **21/5** **25/5**	12	T7 (I): Portfolio Selection in a Mean-Variance Environment	3 EXERCISES TOPICS 4-5
8 **28/5** **1/6**	13	T7 (II): Portfolio Selection in a Mean-Variance Environment	4 Duration and TSIR: IRR, duration, immunization
	14	T8 (I): The Capital Asset Pricing Model (CAPM)	
9 **4/6** **8/6**	15	T8 (I): The Capital Asset Pricing Model (CAPM)	5 EXERCISES TOPICS 6-8

10 **11/6** **15/6**	16	T6-8: Conclude topics and summary	6 Mean Variance boundaries and Portfolio Performance