

**Code: ING/IND 35**

**Credits: 9**

**Matter: Analysis of financial systems**

**Main language of instruction: Italian**

**Other language of instruction: English**

## **Teaching Staff**

### **Head instructor**

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### **Introduction**

The course aims to provide the students with the essential tools to understand the operating mechanisms of financial systems and the reasons for the behavior of business managers. The course provides fundamental knowledge about the analysis and understanding of the main variables of the financial systems, their methods of operation, the main financial instruments, or contracts, with elements of monetary policy. It deals with the issue of corporate decisions, the choice of where to invest enterprise funds, how to finance investments and how much to leave in the company (in terms of dividend policies or simply of capital reinvestments).

The course is structured in two thematic macro-areas, the first of which (“Value and financial evaluation”) deals with the problems of maximizing the value of the company, calculating its current value for inclusion in the stock market, and providing a link between analysis and financial planning.

The second thematic macro-area (“Risk and derivative financial instruments”) introduces the concept of risk associated with an equity portfolio, using theories to estimate what return investors expect at varying investments. The derivative securities market is also presented, approaching the models for evaluation of the options, and mentioning the main methods for managing financial risk.

The E-tivities, associated with the course, develop the skills necessary to critically analyze business cases with respect to the issues of financial analysis and to use the lessons learned to simulate potential approaches in realistic business situations.

### **Objectives**

The course has the following educational objectives:

1. knowledge of the basic principles of corporate finance aimed at maximizing corporate value;

2. an understanding of how enterprise capital is structured and what is the optimal combination of sources of financing;
3. an understanding of the mechanisms underlying investment and financing decisions and the trade-off of debt;
4. knowledge of the main rules of corporate governance and an understanding of the policies of return of dividends to shareholders;
5. basic knowledge of the primary equity market and of the methods of trading in shares;
6. an understanding of the concepts of net present value, rate of return and opportunity cost of capital, linked to those of real and nominal interest rates and to elements of monetary policy and macroeconomics;
7. knowledge of how the market value of a share is formed, the valuation methods and the concept of net present value in investment decisions;
8. an understanding of the concept of investment risk, its measurement and mitigation methods through portfolio diversification;
9. knowledge of different types of derivative financial instruments and the variables that determine the value of an option;
10. knowledge of some elements related to the management of corporate financial risk.

### **Competencies:**

#### **A. Knowledge and understanding**

At the end of the course, the student will have the basic knowledge to analyze financial systems. In particular, he will know which financial instruments are used by companies, which investments must a company make and how to get the necessary money. At the end of the course, the student will know what is meant by the primary and secondary market of equities and compare different methods in investment decisions starting, for example, by examining the cash flows. He will know the different types of derivative financial instruments and the principles and models for options valuation. He will summarize the various financial contracts aimed at managing the risk of investment.

#### **B. Applying knowledge and understanding**

The student will be able to use the knowledge of the methods proposed for the analysis of financial systems. The knowledge of the financial instruments used by companies will allow him to apply the concepts learned to company management. Overall, the course will enhance the student's organizational skills relatively the investment and financing processes ordinarily managed by companies.

The E-tivities provide for the application of theoretical knowledge for the resolution of practical exercises.

### C. Making judgements

At the end of the course, the student will have knowledge of the fundamental notions of financial analysis. He will be able to contribute to corporate investment, financing and dividend return policies, with a view to maximization of business value and minimization of financial risk. All of this will enable him to continue his studies with greater maturity and will provide him with the basis for learning what will be proposed in the subsequent courses provided by the system.

### D. Communication skills

The student will be able to describe and hold conversations regarding corporate finance, the most appropriate financial instruments available to the manager and the equity market, using appropriate terminology and having the ability to collect and transmit information regarding these topics.

### E. Learning skills

At the end of the course, the student will have the knowledge to analyze and solve organizational and management problems related to the definition and use of financial instruments in business contexts, which will allow him to continue, with adequate preparation, the study of the subsequent teaching courses provided for in the study plan of Management Engineering in the areas that require the essential knowledge of financial systems analysis.

To evaluate the achievement of the training objectives of the course, the teacher will take into account, for the evaluation final exam:

- the relevance of the answers, the logical consistency of the arguments, and the ability to identify thematic connections;
- the appropriate use of technical terminology and display skills;
- the student's ability to judge and study autonomy necessary to continue also in an in-depth study of the subject independently.

All this will allow him to continue his studies with greater maturity.

## **Syllabus**

### *1. Programme of the course:*

## **The value and financial evaluation of the company**

### **Subject 1. Marketing and Business Strategies**

#### **The fundamental principles of business and financial analysis for business**

The company, the guiding principles and choice of the right entrepreneurial goal, the corporate capital structure and the combination of funding sources, and the financial analysis of a company balance sheet.

**Subject 2. The financial objectives of the company**

Maximization of market value (investment-financing trade-off), corporate governance and politics of dividends, and financial planning elements with examples.

**Subject 3. The stock market from a macroeconomic perspective**

The primary stock market and stock valuation; nominal and real interest rates, elements of monetary politics.

**Subject 4. Investment decisions**

The evaluation methods and the net present value (NPV) method, investment decisions with the present value method.

**Risk and derivative financial instruments****Subject 5. The financial risk**

The notion of risk, the measure of the risk of an equity portfolio, portfolio theory and Capital Asset Pricing Model, how to measure risk and the cost of equity.

**Subject 6. Derivative securities**

the general types of derivative securities; the evaluation of options; hints of financial risk management.

**Evaluation system and criteria**

The examination consists of a written test and a series of non-mandatory activities (E-tivity) carried out during the course in virtual classrooms. The written exam includes open-ended questions, multiple-choice questions and numerical problems. The exam is assessed for 31 points (30 cum laude).

The examination can also be taken with two partial tests: the first concerning the subjects from 1 to 4; the second concerning the subjects from 5 to 6.

The E-tivities allow the students to add up to a maximum of 3 points to the mark of the written exam.

## **Bibliography and resources**

### *2. Materials to consult:*

The didactic material on the platform is divided into 6 subjects. They cover the entire program and each of them contains handouts, slides and video lessons in which the teacher comments on the slides. This material contains all the elements necessary to tackle the study of the subject.

### *3. Recommended bibliography:*

Suggested readings are:

Richard A. Brealey, Stewart C. Myers, Franklin Allen (2019) Principles of Corporate Finance, McGraw-Hill Education.

Aswath Damodaran (2015) Applied Corporate Finance, John Wiley & Sons Inc.