MSc in Finance

DOUBLE DEGREE PROGRAM

TAUGHT in ENGLISH

School of Domestic and International Business, Banking and Finance

The **Master in Finance** is intended for persons who wish to develop their international competences and know-how in finance**.** The studies focus on financial investments and modeling, develop the students' understanding and knowledge of global financial environments, financial management and innovation as well as international regulations.

The primary task undertaken by the **Master in Finance** is to prepare students so that they meet the challenges posed by their employment in companies that are compelled to carry out activities in a business environment increasingly internationalized, technological and competitive, by providing training and a relevant experience in the field and which are to recognized both nationally and internationally. Therefore, the **Master in Finance** aims to address the curricula not only in theoretical terms, but also to create multiple connections between practice and research.

For the evaluation of the students, the School of Domestic and International Business, Banking and Finance applies the methodology of the Romanian-American University, included in the Regulations on the professional activity of students and it relies on two criteria: attendance and performance.

Each academic year is divided into 2 semesters. The curriculum provides minimum 60 transferable study credit points (30 credit points per semester). There are a total of four semesters in two years. A semester typically has 14 weeks. The 4th semester has 11 weeks + 3 allocated for internships and completion of the graduation paper.

The curriculum includes compulsory subjects and optional subjects (starting with the first year of study, the 2nd semester). Optional subjects are grouped together in tracks providing the students with additional training, according to the selection made in the first year.

The Master in Finance includes the following **compulsory subjects**:

- *Microeconomics for Business and Finance*
- *Information Technology for Business and Finance*
- *Financial Investments and Risk Management*
- *Corporate Valuation*
- *Financial Modeling*
- *Econometrics*
- *Portfolio Management*
- *Advanced Financial Modeling*
- *Monetary Economics*

- *International Banking*
- *Ethics and Leadership*
- *Banking and Financial Regulation*
- *Research workshop*
- *Specialized Internship*
- *Dissertation Paper Project*

The Master in Finance includes the following **optional subjects**:

- *English for Economics & Business*
- *Business negotiation*
- *Financial derivatives*
- *Fundamentals of Programming*
- *International financial accounting*
- *International and Comparative Tax Law*
- *Growth Strategies for Banks and Companies Adjusted to Emerging Markets*
- *Strategic Management*

Curriculum

1st year, 1st semester

Compulsory subjects

Microeconomics for Business and Finance
6 credit points, 2 hour course and 1 hour seminar

This subject seeks to identify patterns and knowledge for business and finance, and in particular models with asymmetric information evaluated under uncertainty.

Information Technology for Business and Finance
6 credit points, 1 hour course and 2 hours seminar

The goal of this course is to introduce students to advanced topics related to the use of databases and their extensions to middle and senior managers. Obtaining some simple data analysis skills and understanding models with data mining technology – will be studied in IT fundamentals like: storing, processing and communicating information (databases) VBA and financial application, excel Information systems, IT applications in business and finance.

Financial Investments and Risk Management
9 credit points, 2 hours course and 2 hours seminar

Designed and conceived as an integral part of the specialized training „Financial investments and risk management" offers students indispensable knowledge in order for them to learn about basic concepts related with financial investments and risk management, understanding theoretical and applied concepts of financial investments and financial instruments and understanding the concepts of global market and foreign investing. The students will gain the ability to make portfolio selection decisions based on an analysis of the wider role of risk management in finance. Methods of calculating the efficient frontier will be analyzed for the following risks:

- interest and exchange for the banking book with the asset liability management (ALM) solutions;
- market risk, valuating the estimation of the value-at-risk (VAR) and alternative solutions (e.g expected shortfall or CVAR);
- operational, and principal advanced models (AMA) implemented within financial intermediaries.

Corporate Valuation

9 credit points, 2 hours course and 2 hours seminar

The course aims to provide the conceptual framework necessary for gaining knowledge about basic concepts related with corporate valuation, understanding theoretical and applied concepts of financial markets and corporate valuation and understanding the concepts of global financial market. Student will gain knowledge in evaluating companies using DCF, value based management models and relative valuation (multiples), analyze a company's financial performance, extracting information from the financial statements and from market data; estimating a company's cost of capital; apply different valuation techniques of DCF methods – such as FCFF, FCFE, DDM – and relative valuation; analyze and describe a company's value driving factors.

1st year, 2nd semester

Compulsory subjects

Financial Modeling

9 credit points, 2 hours course and 2 hours seminar

The course aims to provide theoretical and practical comprehension of basic concepts related with financial modeling, theoretical and applied concepts of value at risk and financial modeling and concepts of global financial market. You will learn basic principles of stochastic calculus (binominal lattices, Brownian motion, Ito's Lemma, stochastic differential equations), no-arbitrage principle and risk neutral (martingale) pricing, basic option pricing (Cox-Ross-Rubinstein and Black-Scholes models), basic interest derivatives valuation: short rate models (Vasicek and Cox-Ingersoll-Ross).

Econometrics

6 credit points, 2 hours course and 1 hour seminar

The discipline aims to identify steps, formalities and techniques specific to initiation, preparation, organization and conduct related with econometrics, understanding theoretical and applied concepts of a regression model and understanding the concepts of heteroskedasticity. You will learn about standard regression procedure of parameter estimation and hypothesis testing in economics. The following topics will be covered: simple and multiple regression, least-square estimation, goodness-of-fit, Gauss-Markov theorem, coefficient tests and confidence intervals, multicollinearity, dummy variables, tests on structural change, model misspecification, test of linear restrictions, heteroscedasticity (test and estimation), stochastic regressors, instrumental variables, dynamic models, forecasting, stability test, autocorrelation (test and estimation), introduction to simultaneous equations.

Fundamentals of Programming

6 credit points, 1 hour course and 2 hours seminar

This course is an introductory course to the basic principles of programming. By the end of this course, the students will be able to better understand and appreciate what is involved in programming a computer, and even write a few programs of their own. The course assumes that students have no previous or very little knowledge of programming prior to starting this course.

2nd year, 1st semester

Compulsory subjects

Advanced Financial Modeling

6 credit points, 2 hours course and 1 hour seminar

The discipline emphasizes the fundamental core of knowledge that comprises the content of modern financial modeling. The course will help students to develop a systemic thinking and will facilitate the creation of knowledge about basic concepts related with financial modeling, understanding theoretical and applied concepts of financial markets and financial instruments and understanding the concepts of modeling in finance. The students will gain basic skills to price financial assets like equity derivatives, credit risk and interest rate instruments. The topics in this course cover: stylized facts on financial returns, ARCH/GARCH modeling, stochastic volatility modeling, poisson processes, structural and reduced form models for credit risk, HJM models, market models for interest rate instruments.

Monetary Economics

6 credit points, 2 hours course and 2 hours

The discipline seeks to help students to gain knowledge about basic concepts related with monetary markets, understanding theoretical and applied concepts of monetary markets and monetary instruments and understanding the concepts of global monetary market. They will learn about inter-temporal model of macroeconomic equilibrium in an open economy. Interest rates and asset prices in an inter-temporal model of optimal savings and investment, monetary policy and the yield curve, inflation, output and interest rates, capital flows and portfolio allocation.

Portfolio Management

6 credit points, 2 hours course and 1 hour seminar

Provides students with techniques for evaluating investments on an individual basis and in the context of portfolio. Techniques for analysing investments focus on maximising expected returns while minimising risk. The most powerful way to achieve this objective is by creating a portfolio of investments. Topics covered are Financial Statement Analysis, Markets & Instruments, Equity Investments, Debt Investments & Portfolio Management. Student will get to apply economics, econometrics and in general quantitative methods to solving relevant practical investment problems, such as searching alpha opportunities, measuring and controlling portfolio risks, maximazing appropiate reward/risk ratios, both in a relative return and in an absolute return context.

Ethics and Leadership

6 credit points, 2 hours course and 1 hour seminar

During the course, we will examine the ethical dilemmas of leadership, the foundations and context of moral choice, the moral implication of decision-making within public organizations and the impact upon staff, morale, personal integrity and citizens. In doing so, our purpose is to make visible the ethical challenges and decisions criteria facing leaders, to explore the leadership role in sharing the organization's ethical culture, and to examine governmental alternatives.

2nd year, 2ndsemester

Compulsory subjects

International Banking and Financial Regulation

9 credit points, 2 hours course and 2 hours

The subject helps students to gain knowledge about basic concepts related with international banking, to understand theoretical and applied concepts of banking systems and financial instruments and to understand the concepts of global banking system

The objective of this course is to help students gain knowledge about basic concepts related with banking and financial regulation**,** understanding theoretical and applied concepts of the banking system and understanding the concepts of global financial and banking market. Analysis of recent regulatory changes in financial markets, particularly in the European Union; changes directed, on the one hand, to safeguard and promote the solvency of financial intermediaries and overall economic stability, and on the other hand, to increase consumer and investor protection.

Research workshop

8 credit points, 2 hours seminar

The objective of the Research workshop is to help students gain knowledge about basic concepts related with financial markets, understanding theoretical and applied concepts of financial markets and understanding the concepts of global financial market.

Specialized Internship

*3 credit points, 6h/day * 5 days/week, 3 weeks*

Students will be assigned to certain SME, where they will learn in practice about business structure, business operations etc. At the end of the internship they will be evaluated by the company representative and by the faculty as well.

During the internship period the student is gaining knowledge about the economic entities in which the future graduates will be able to operate, also developing professional skills, deepen economic analysis, preparation of databases, development of studies and shaping the decision on choosing the theme for dissertation paper project.

MSc Thesis

5 credit points

The main goal of the Dissertation paper project is learning the necessary skills to write and sustain the graduation paper work. Students will choose the scientific paper theme and the scientific coordinator.