

Online Master's Degree - 2<sup>nd</sup> edition

# MASTER IN ECONOMICS & FINANCE

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**Apply by November 22, 2024 – Start date: January 20, 2025**

# Online Master's Degree

The **online Master's degree in Economics and Finance (MEF)**, offered by the Department of Economics and Statistics (DISES) at the University of Naples Federico II, is now officially in its second edition. This program provides students with a robust foundation in both economics and finance, equipping them with essential tools for data analysis and model simulation, which are highly valued in both industry and academia.

The curriculum features an extensive range of **graduate-level courses covering finance, microeconomics, macroeconomics, mathematics, and econometrics**. Students can tailor their learning experience by choosing elective courses from three distinct tracks: **Financial Markets, Economic Policy, and Macroeconomics**.

Designed to accommodate the demands of working professionals, the **fully online format** allows you to balance your studies with your work commitments. You will have the opportunity to engage and network with instructors and peers from around the world, all from the convenience of your chosen location.

With over **30 years** of experience in delivering on-campus master's programs in Economics and Finance, **DISES ensures a rich and comprehensive educational experience**. The department has a longstanding tradition of training students who aspire to careers in academia, policy institutions, and the financial industry.

Join us in the second edition of our online MEF program and take the next step in your professional journey in economics and finance.

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# Overview



**Accredited Master's degree: 60 ECTS**



**Duration: 12 Months**



**Total tuition: 4.500 €**



**Flexible learning: 100% Online**

## Learning Objectives

- Understand the theoretical foundations of microeconomics, macroeconomics and finance.
- Learn the empirical methodologies and tools needed to create, manage and analyze large databases.
- Understand the theoretical foundations on which asset valuation and the role of liquidity in financial markets are based.
- Identify a company's financial needs and strategies.
- Acquire the skills and analytical tools to invest in different asset classes and trade with derivative securities.
- Learn the main models of development economics and labor economics.
- Gain theoretical and applied knowledge of methodologies for public policy analysis.
- Learn the theoretical foundations for studying the decisions of economic agents in different market structures.
- Obtain the skills needed to analyze competition policies, the operation of auction mechanisms and the effects of information asymmetries.

# Target

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The Master is aimed at all those who work or wish to work within the field of economics and finance.

In particular, the Master's program prepares participants to consolidate their experience and, therefore, to retrain professionally to be able to cover roles such as:

- **Control specialists in public administration and private companies**
- **Specialists in financial activities**
- **Market analysts**
- **Specialists in economic systems**

# Requirements

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To access the master's program, you must have earned a bachelor's degree from an Italian University or an equivalent degree from an accredited institution in a foreign country.

## Required application materials:

- + Curriculum Vitae;
- + Reference letter by a professor from the applicant's university;
- + Official transcript of his/her undergraduate degree, displaying the overall grade (if applicable), the list of exams taken and their grades;
- + Certificate of good working knowledge of written and spoken English (TOEFL, First Cambridge Certificate, Proficiency in English, IELTS or equivalent).

*If students have not yet obtained a language certification they can attach a personal letter stating they are able to follow a master course taught exclusively in English and they would be willing to be contacted for an interview.*

# Career Opportunities

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The Master in Economics and Finance provides students with both theoretical knowledge and practical skills to pursue a professional and academic career in the financial industry, in public and international institutions, and in the academia.

## 01 Financial industry

Corporations, consulting firms, banks, investment funds, pension funds, hedge funds, insurance companies, rating companies. Many of our former students work in leading companies in the financial sector like Unicredit, Deutsche Bank, HSBC, KPMG, Deloitte, Ernst & Young, Pioneer Investments, Moody's.

## 02 Public and international bodies

Antitrust authorities, central banks, stock exchanges, supervisory bodies on banks and securities markets, international organizations.

Some of our alumni are currently working in leading public institutions in Europe like the European Central Bank, Bank of Italy, European Commission and Eurostat.

## 03 Academia

Research opportunities are also available for those who wish to pursue an academic career. Many of our former students have been admitted to prestigious PhD programs in economics or finance both in the United States (MIT, Harvard, Princeton, Yale, Northwestern, Berkeley) and in Europe (London School of Economics, Oxford, University College London, Toulouse, Mannheim, Pompeu Fabra).

# Certification

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The online Master's degree in Economics and Finance (MEF) is a **Level I University Master's degree**. Successful completion of all course exams, participation and completion of the group learning activity and discussing the final thesis, will enable participants to obtain the Diploma with recognition of the relevant 60 European Credit Transfer System (ECTS).

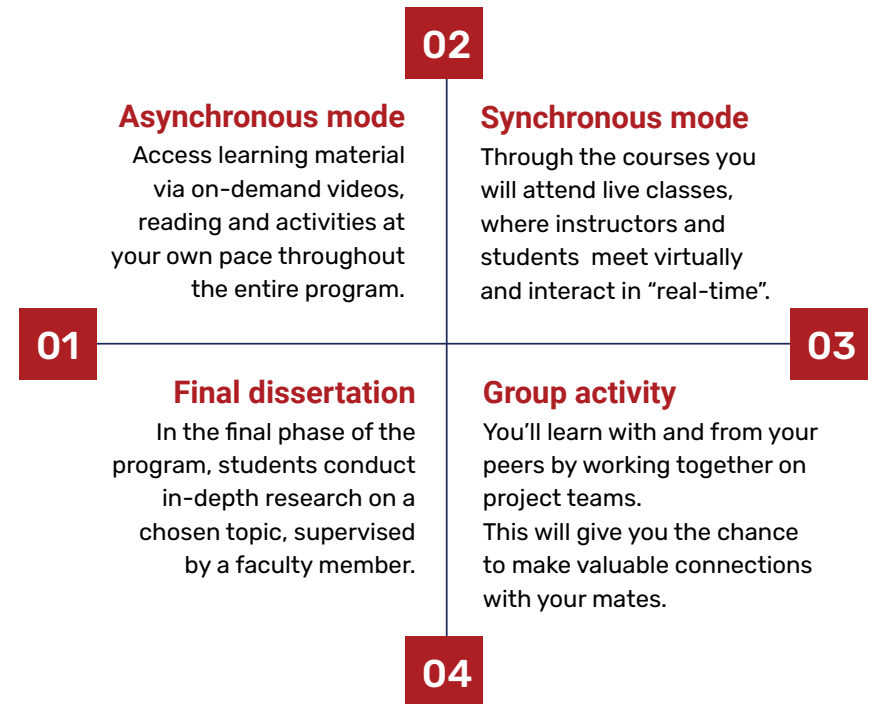
The minimum passing grade for an exam is 18/30 and the final grade is defined on a scale from 66 to 110.



# Structure

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The Master program, delivered entirely in English, has a total duration of 1500 hours and includes 12 compulsory courses, 2 elective courses, and a group learning activity. The online courses, are delivered in:



The program is organized in **three terms**, each offering 5 **courses**. At the beginning of each term, **all courses start simultaneously**. **Lessons are released weekly** over the initial two weeks, followed by a dedicated self-study period in the third week. During this week, students work on **problem sets that will be discussed with professors or teaching assistants in the live sessions scheduled for the fourth week**. This cycle repeats, totaling six weeks of lectures and three live sessions for each course.

# Program Structure

## TERM I

JANUARY - APRIL 2025

EXAMS: APRIL 2025

1. **Mathematical Methods for economics - 4 ECTS**
2. **Intermediate Econometrics - 4 ECTS**
3. **Microeconomics I - 3 ECTS**
4. **Game theory I - 3 ECTS**
5. **Asset Pricing I - 3 ECTS**

## TERM II

APRIL - JULY 2025

EXAMS: JULY 2025

1. **Microeconometrics - 4 ECTS**
2. **Market microstructure - 4 ECTS**
3. **Microeconomics II - 3 ECTS**
4. **Game theory II - 3 ECTS**
5. **Asset Pricing II - 3 ECTS**

## TERM III

AUGUST - NOVEMBER 2025

EXAMS: NOVEMBER 2025

1. **Macroeconomics - 3 ECTS**
2. **Heterogenous Agents Models in Macroeconomics - 3 ECTS**
3. **Elective courses - 6 ECTS**

*Students must select one of the following:*

- **Financial Markets:** *Derivatives, Financial Intermediation*
- **Economic Policy:** *Labor Economics, Development economics*

# Curriculum

## Compulsory courses

In the following section you will find detailed descriptions of each course in our comprehensive curriculum:

### Mathematical Methods for economics

*Prof. Matteo Bizzarri*

This course equips students with essential mathematical tools that are crucial for a comprehensive understanding of the foundations and methodologies in modern economic analysis, with a specific emphasis on Microeconomics.

It begins with a review of calculus and linear algebra, introducing fixed points. The course then covers optimization, modeling decision-making among economic agents, followed by an exploration of difference and differential equations, which are crucial for analyzing economic dynamics. The study of probability calculus provides the foundation for risk assessment, particularly in finance. The course concludes with dynamic optimization, a key concept in macroeconomics, giving students a robust mathematical foundation for economic theories and practices.

### Intermediate Econometrics

*Prof. Pietro Coretto*

The course covers the pillars of data analysis and statistical modeling, focusing on applications in social sciences, particularly economics and finance, and exploring the main ingredients of econometrics at an intermediate level. Emphasis is put on conceptual issues as well as technical and practical issues. All methods are shown from both the methodological and the computational perspectives. Computing is performed using the R computing language. Practical strategies are constantly introduced and motivated based on rigorous methodological and mathematical treatment.

Estimation and inference are based on the least square method. In addition, the finite sample inference is covered based on the Gaussian error assumption. Both classical and modern model validation techniques are explored with a particular emphasis on the predictive viewpoint, which is central to modern data science.

## Compulsory courses

### Microeconomics I

*Prof. Luca Anderlini*

The objective of the course is to equip the students with the analytical tools to understand Microeconomics: the study of economic activity including individuals and firms from the point of view of individual decision-making units.

This course will begin with the analysis of individual preferences, and then proceed to models of consumer behavior, including labor supply decisions. Multiple individual consumers will then be considered to form a “pure exchange economy.” The existence of equilibrium in these economies will then be discussed, together with their welfare and distributional properties. The course is foundational for a broad range of other subjects in Economics and is the first of a sequence of two courses in Microeconomics.

### Game theory I

*Prof. Marco Pagnozzi*

This course introduces Game Theory and equips you with tools to analyze both static and dynamic strategic interactions among economic agents, with applications to real-world economic problems. Focusing on games of complete information, you'll learn to represent simultaneous moves games in strategic form, analyze them using dominant, dominated, and mixed strategies, and apply the Nash equilibrium concept.

You'll also study dynamic games in extensive form, using backward induction and subgame perfection, and explore finitely and infinitely repeated games to investigate collusion. By course end, you'll be able to construct and analyze models of conflict and cooperation among rational decision makers.

### Asset Pricing I

*Prof. Lorenzo Pandolfi*

The Asset Pricing I course equips students with essential theoretical and analytical tools to understand the economics of financial markets and portfolio choices. Starting with the structure and functions of financial markets, the course explores their impact on saving and investment decisions in a no-uncertainty environment. Students will then delve into expected utility theory to analyze choices under uncertainty, applying these tools to portfolio decisions, including the canonical portfolio problem and multiple risky assets.

The course culminates with the Capital Asset Pricing Model (CAPM), teaching students how to characterize equilibrium returns and asset prices in financial markets.

## Compulsory courses

### Microeconometrics

*Prof. Annalisa Scognamiglio*

This course provides a comprehensive understanding of the most commonly used methods for identifying and estimating causal effects in economics. Since most economic questions are causal by nature (e.g., the impact of minimum wage on the labor market), and economists typically work with non-experimental data, identifying causal effects poses specific challenges.

The course begins by defining causality and then explores various research designs and econometric methods to identify causal effects, including matching, regression, difference-in-differences, instrumental variables, and regression discontinuity design.

### Market microstructure

*Prof. Marco Pagano*

The course focuses on price formation and liquidity in securities markets. The main issues covered are how to measure trading costs; how security prices, their liquidity and speed of price discovery are jointly determined, and how order flow affects prices; what are the determinants of market depth; how security trading is organized and regulated and how it has been reshaped by algorithmic and high frequency trading; how the organization of security trading affects trading costs and informational efficiency.

### Microeconomics II

*Prof. Luca Anderlini*

This course equips students with the analytical tools to understand Microeconomics, focusing on individual decision-making by individuals and firms. It begins with the analysis of production decisions, covering standard cost functions, multi-product firms, and technological production sets. The course then explores profit functions and integrates production models with exchange models. The existence of equilibrium in economies with production, along with their welfare and distributional properties, is analyzed. Finally, the course concludes with models of decision-making under uncertainty.



## Compulsory courses

### Game theory II

*Prof. Marco Pagnozzi*

This course covers advanced topics in asset pricing, focusing on risk-return trade-offs and portfolio optimization. Students will explore extensions of the Capital Asset Pricing Model (CAPM) and learn to determine market equilibrium. They will also empirically estimate the CAPM's risk-return relationship and analyze alternative pricing models. The Arbitrage Pricing Theory teaches expected returns based on multiple risk factors and the absence of arbitrage. The Consumption CAPM addresses investors' joint consumption/investment decisions and equilibrium asset prices in a dynamic economy. The course concludes with the pricing of fixed income instruments.

### Asset Pricing II

*Prof. Giovanni Walter Puopolo*

Game Theory II provides advanced tools for analyzing strategic interactions with incomplete information, where players lack knowledge about all relevant characteristics of others. The course covers static games in strategic form using Bayesian Nash equilibrium and applies these concepts to auction analysis, including auction mechanisms, bidders' strategies, the Revenue Equivalence Theorem, and auction design elements. It also explores dynamic Bayesian games with consistent beliefs, sequential rationality, and Perfect Bayesian Nash equilibrium.

Additionally, the course covers signaling models, including pooling and separating equilibria, with applications to the job market.

### Macroeconomics

*Prof. Saverio Simonelli,  
Prof. Francisco Queiró*

Within this course, you will learn the main models economists use to understand how different shocks, such as unexpected policy or technology changes, may cause expansions, recessions, fluctuations in unemployment, or inflation. We will discuss how these models replicate key economic facts, such as investment or unemployment dynamics.

You will understand how varying assumptions about competition or price flexibility lead to different shock transmission mechanisms. We will also explore how to use these models to design and evaluate stabilization policies, including how monetary policy can stabilize prices and affect unemployment.

## Compulsory courses

### Heterogeneous Agents Models in Macroeconomics

*Prof. Riccardo Cioffi*

The aim of the course is to introduce you to the role of households' heterogeneity in macroeconomics. The course will be divided in two main halves: in the first half it will focus on households individual consumption-saving problem and on how and why heterogeneity matters; in the second half it will implement the concepts presented in the first half in the context of general equilibrium macroeconomic models. By the end of the course, you will have an understanding of the role of heterogeneity for macroeconomic modeling, as well as a broad knowledge of the current macroeconomic literature. Learners will also be able to write and solve macroeconomic models with heterogeneity using state-of-the-art numerical methods.



## Elective courses

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### Financial Markets

#### Derivatives

*Prof. Giuliano Curatola*

This course covers standard derivative pricing models. Both discrete time and continuous time techniques are considered. The course also include an introduction to numerical option pricing, in particular the Monte Carlo Method. After this course, students should have a good knowledge of financial markets, security pricing, arbitrage, interest rates, risk and return. Contents: 1) definition and classification of financial assets 2) discrete-time pricing models 3) continuous-time pricing models 4) Fixed income products 5) Monte Carlo methods for derivative pricing.

#### Financial Intermediation

*Prof. Ettore Panetti,  
Prof. Tommaso Oliviero*

By taking this course, students will explore the role of financial intermediaries in modern economies, their importance for financing investments, and the associated risks. The course combines theoretical models from literature with empirical applications using real data. Topics include the impact of financial development and banking on economic growth, banks' role in financial crises, regulatory measures to curb risk, and how macroeconomic shocks propagate through financial intermediaries. Students will also study the microeconomics of banking, market competition, bank-firm relationships, and the disruptive effects of the "Fintech revolution."

## Elective courses

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### Economic Policy

#### Labor Economics

*Prof. Monica Langella,  
Prof. Roberto Nisticò*

This course provides an overview of labor market topics and empirical methods used in the literature. It combines theoretical models with case studies of individual research papers. Students will learn how labor markets function, focusing on wage and employment determination in competitive and non-competitive frameworks. The course covers labor market institutions and their impact on unemployment and wages, optimal investment in education, the effects of migration on wages and employment, and the influence of gender and ethnic discrimination on labor markets.

#### Development economics

*Prof. Michele Giannola,  
Prof. Mattea Stein*

This course covers essential topics in development economics, including poverty, social protection, human capital, financial services access, and income-generating activities like labor, entrepreneurship, and agriculture. It uses microeconomic theoretical tools and empirical methods, analyzing real-world case studies from developing countries. The course evaluates effective policies for improving the well-being of vulnerable populations and reviews current research using micro-econometric techniques to assess policy interventions in education, social assistance, agricultural technology, credit access, and micro-enterprise growth.



# Learning experience



## Virtual Learning Environment

Enjoy engaging video lectures, access course materials on demand and study at your own pace



## Live Sessions

Actively participate in real-time classes with professors and peers.



## Hands-on

Engage in individual and group work that challenges you to apply what you've learned in real-world scenarios.



## Case studies

Stay intellectually stimulated with a variety of learning materials, including articles and case study reviews.



## Assessments

MCQs, online quizzes and problem sets that ensure you have mastered the material.



## Final Dissertation

Culminate your learning experience with a Final Dissertation on one of the topics covered by the program.



## Networking

Foster your relationships that can support your career growth and development.



## Attend Virtual Office Hours

Connect with professors during scheduled weekly sessions or by appointment.



## Placement

Benefit from professional career management services

# Method of Enrollment

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Enrolling in our online Master's degree program is a straightforward two-step process designed to ensure that you are well-prepared and fully informed.

## Step 1: Application

Begin your journey by completing the application form available on our website. Submit your application to the Master's program by attaching all required documentation through the online form.

Please note the **application deadline** is due to **22-11-2024**.

## Step 2: Final Enrollment

**After your application is successfully reviewed, you will be invited to complete the final enrollment process through the University's online portal.** During this step, you will be required to confirm your place in the program and submit the first installment of tuition fees. Completing these steps ensures your spot in the program and prepares you for the exciting journey ahead. Our admissions team will be available to assist you throughout this process, ensuring a smooth and seamless transition into your studies.

Please note that for the Master's program to commence, **a minimum participation of five students is required.** Our admissions team will be available to assist you throughout this process, ensuring a smooth and seamless transition into your studies.

Please note the deadline for the **final enrolment** is due to **02-12-2024**.

# Tuition fees

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**The registration fee for the Master amounts to €4.500** (plus € 140 for regional taxes and € 14,62 for stamp duty) payable in 2 installments.

- **1<sup>st</sup> installment of €2,266.00**, upon submission of the application for registration;
- **2<sup>nd</sup> installment of €2,250.00** to be paid by June 30, 2025.

Please note that the University reserves the right to update these dates as necessary.

# Contact Us

## MASTER IN ECONOMICS & FINANCE

If you have questions about the application process or eligibility, please contact our admissions team, we're here to assist you every step of the way.

Contact us at: [mef@unina.it](mailto:mef@unina.it)

[www.federica.eu/master-economics-finance](http://www.federica.eu/master-economics-finance)

