

**COIMBRA**  
SCHOOL OF  
MANAGEMENT

UNIVERSITY OF COIMBRA

EXECUTIVE MASTER

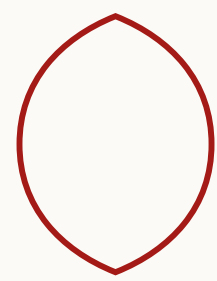
# DIGITAL MONEY AND PAYMENTS IN TRANSFORMATIVE TIMES



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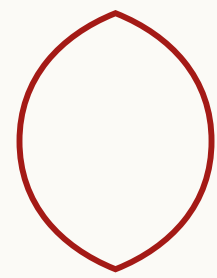


# INTRODUCTION

Payment and settlement systems and services have become vital components of the economic life of contemporary societies. Over the last decades, they have gone through several waves of reforms that have changed the landscape of the national payments system (NPS) in virtually every country in the world.

**Understanding how these systems function and how to design and govern them is becoming a core capability for central banks, financial institutions and policy makers.**

NPSs encompass all payment, settlement, and depository activities, processes, mechanisms, infrastructures, institutions, and users in a country or an integrated region (for example, common economic areas like the European Union). NPSs are also mutually interconnected in what can be referred to as the global payments system.



# OBJECTIVES

Offer to course participants (hereinafter “Students”) a comprehensive and forward-looking exploration of the modern payments ecosystem, grounded on the experience of the last forty years of payment reforms, combining academic insights with real-world expertise and senior practice from leading international institutions.

## **Comprehensive Understanding**

Students will be exposed to all the main areas of the payment, clearing and settlement systems.

## **Policy and Oversight Capability**

Students will be provided with tools that will allow them to effectively and strategically participate in national payment system oversight functions, shape the design of policies and in the operations and delivery of payment and settlement systems and services.

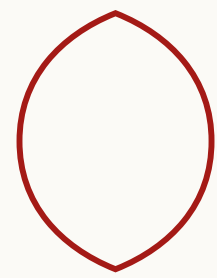
## **Bridging Theory and Practice**

Students will benefit from a unique combination of academic insights with real-world expertise and senior practice from leading international institutions.

## **Exploring the Frontier**

Students will have the opportunity to explore the payments frontier, covering the most recent developments in the payment and settlement space, including in the areas of fintech, digitization and tokenization.

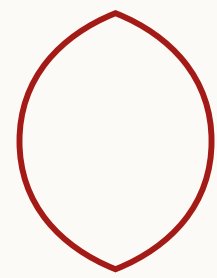




# AUDIENCE AND METHODOLOGY

Designed for young professionals and graduate students in finance, economics, law, financial infrastructures, and public policy, the program equips students with the analytical tools and strategic vision required to operate at the forefront of the global payments ecosystem and the financial sector as a whole. Students will be prepared to contribute to the work of institutions such as central banks, international financial organizations, financial market infrastructures, fintech firms, and national/global financial institutions. In a world where the control of payment infrastructures increasingly shapes economic power, understanding how money moves is becoming one of the most valuable competencies of the modern financial era.

**The program is taught by a distinguished international faculty including senior experts from institutions such as the World Bank, the Bank for International Settlements (BIS) community, the International Monetary Fund, leading central banks and other financial authorities worldwide, the European Commission, and other institutions, ensuring a unique blend of academic rigor and policy relevance.**



## HOLISTIC APPROACH

Expose Course's participants (insofar "students") to a holistic approach covering all the main areas of the payment, clearing and settlement ecosystem.

## STRATEGIC MINDSET

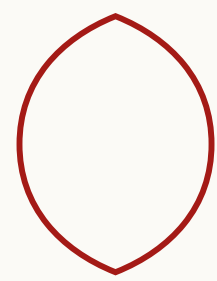
Provide participants with tools to effectively and strategically participate in national payment system oversight functions; shape the design of policies, and in the operations and delivery of payment and settlement systems and services.

## PAYMENT FRONTIER

Explore the payment frontier, covering the most recent developments in the payment and settlement space including in the area of Fintech, digitization and tokenization.



The Course is a blended-learning programme organized in 10 modules. The first nine modules address specific topics related to the course's core themes, focusing on issues surrounding safe and efficient payment and settlement systems in the digital era. Each module includes its own assessment. Module X consists of the development (individual or in a team) of a project or case study, offering a practical and reflective experience in applying knowledge through the preparation, presentation, and refinement of project work.



# THE MODULES WILL BE DELIVERED IN THREE PHASES:



## PHASE 1 — KICK-OFF

(In-Person, University of Coimbra | 52h)

From 7 to 18 September 2026

Phase 1 is a kick-off introductory stage, held in-person at the premises of the University of Coimbra, lasting two weeks.



## PHASE 2 — VIRTUAL MODULES

(Online | 154.5h)

Phase 2 covers the remaining modules virtually, scheduled at times suitable for working students, with a total workload of 3–6 hours per week over 28 non-consecutive weeks. In parallel, students will prepare a project, problem, or case study addressing practical aspects of National or Cross-Border Payment Systems Development.

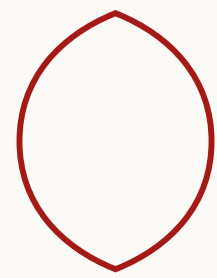


## PHASE 3 — FINAL DISCUSSION & GRADUATION

(In-Person, University of Coimbra | 18.5h)

From 17 to 28 May 2027

Phase 3 consists of a second in-person period of a maximum of two weeks at the University of Coimbra. During this final phase, students will discuss their Module X projects and participate actively in high-level workshops on selected frontier topics in National Payment Systems development. The programme will conclude with a closing ceremony and the awarding of Diplomas. Students are awarded the qualification upon successful completion of all modules comprising the programme.



# FORMAT

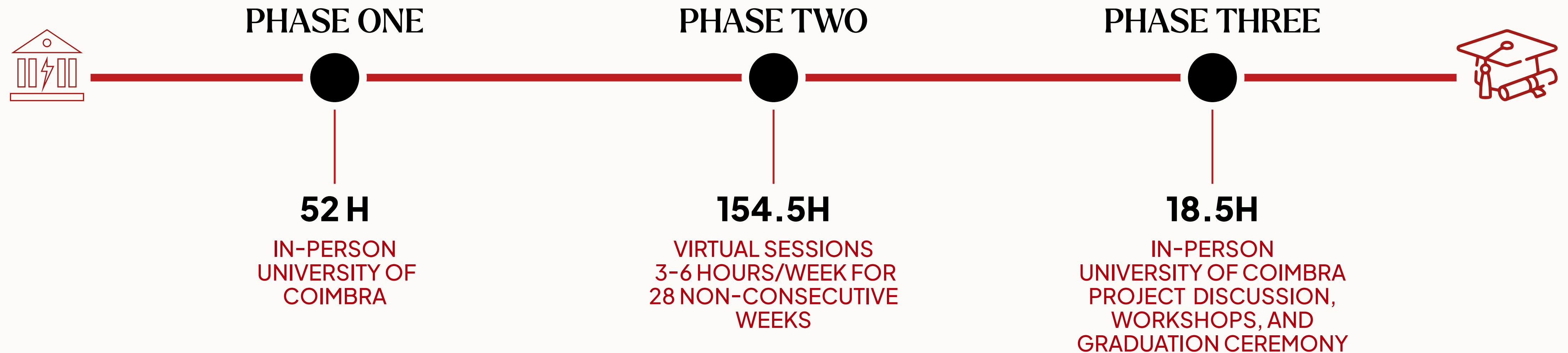
The program will include both in-person and remote sessions. It will begin with an intensive residential 2-week phase at the University of Coimbra, followed by several weeks of interactive virtual classes designed to accommodate the schedules of working professionals. The program will conclude with a final in-person 2-weeks phase dedicated to thesis presentations and discussion of Students' applied projects.

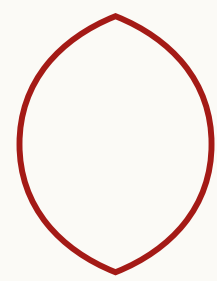


**198**  
hours



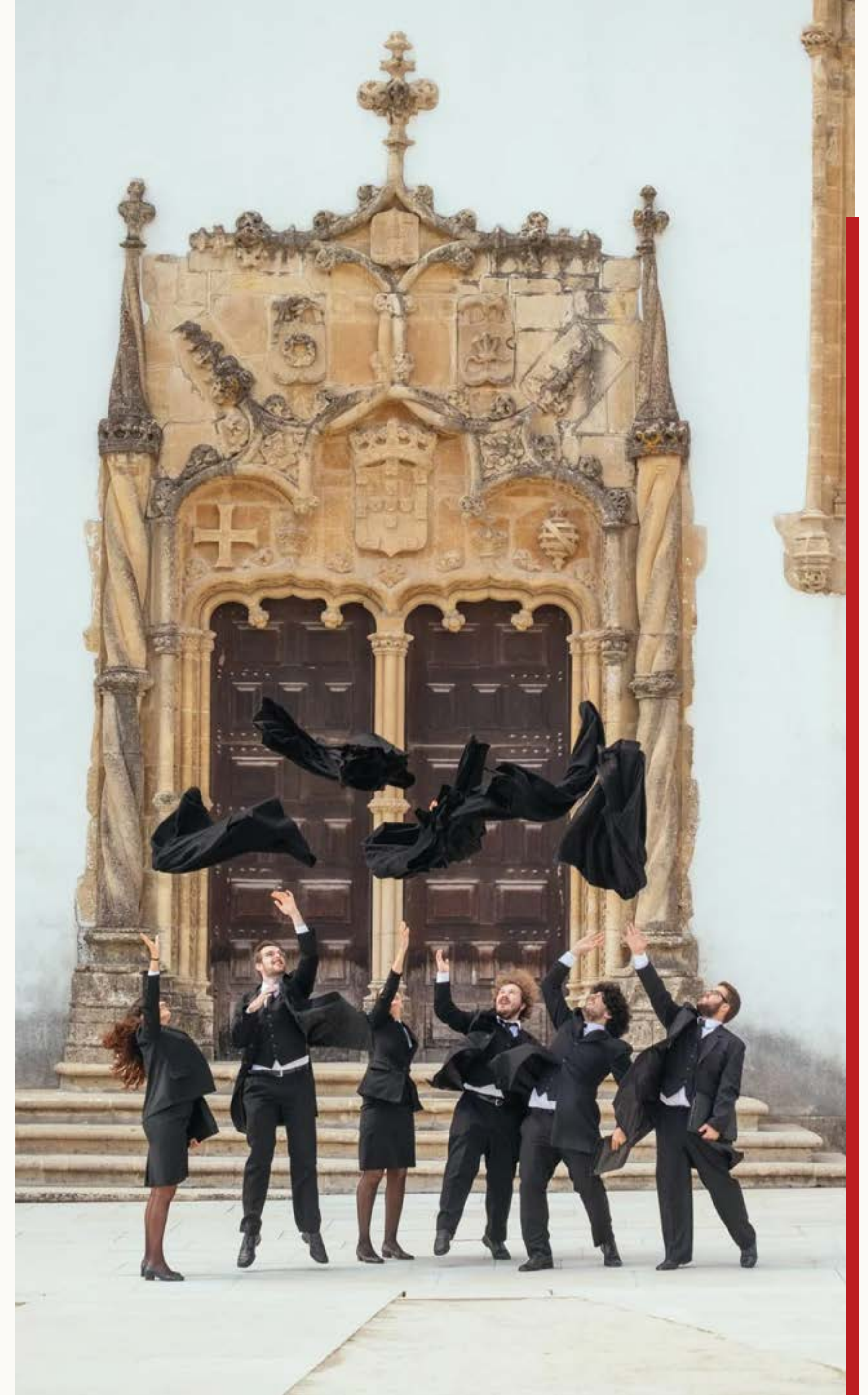
fee  
**€17,500**

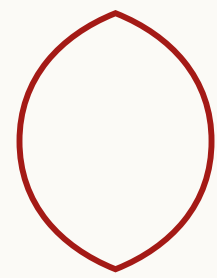




## AFTER COMPLETING THIS COURSE STUDENTS WILL:

- 1.** Develop the ability to understand the key components of national payment systems and their role in the economy;
- 2.** Gain competencies in interpreting payment regulations, international standards, and the legal challenges of CBDCs and crypto-assets;
- 3.** Acquire a solid grasp of Financial Market Infrastructures and the CPMI-IOSCO Principles, including risk management, governance, and cyber resilience;
- 4.** Learn to analyze retail payments, digital innovations, cross-border issues, and fraud risks, while also understanding monetary phenomena and policy implications;
- 5.** Develop skills in digital financial inclusion, the design of digital public infrastructures, and the assessment of global initiatives on cross-border payments;
- 6.** Strengthen applied research skills by developing projects, communicating results, integrating feedback, and working autonomously and collaboratively.





# PROGRAMME LEADERS



**CÉU  
PEREIRA**

Céu Pereira is an economist and team leader for the digital euro at the European Commission. Previously, Céu led the Commission's Retail Payments Team and the elaboration of the Commission's Retail Payments Strategy (2020), as well as the PSD2 Review, resulting in the Payment Services Directive 3 (PSD3) and the Payment Services Regulation (PSR).

Her career spans over the European Commission, the World Bank, and the European Central Bank, covering retail, wholesale, and innovative payments. At the World Bank where she was a Senior Financial Sector Expert for close to ten years, she led many payment systems modernization and development projects, and projects facilitating cross-border payments, in particular remittances, across continents. At the European Central Bank, she managed the Partnership Program of the 2002 Euro Changeover Task Force.

She also served as Portugal's financial attaché in Brussels and chief negotiator for financial services files (including PSD1) during Portugal's 2007 EU Presidency. She began her career as a teaching assistant at the University of Coimbra and holds a Master's in European Integration from the College of Europe.



**MASSIMO  
CIRASINO**

Massimo Cirasino is currently the Founder and CEO of the Payment Systems Academy and a Global Advisor on payment and settlement system matters. Prior to this, he led the Payments, Financial Infrastructures, and Financial Inclusion Global Practice at the World Bank from 1998 to 2017. In this role, he led payment system reforms in more than 80 countries and led or contributed to the development of international standards and good practices.

In particular, Massimo was part of the restricted group of experts that drafted the 2012 CPMI-IOSCO Principles for Financial Market Infrastructures (PFMI) and led the development of the PFMI assessment methodology. He has also been a driving force behind World Bank, CPMI, G7, and G20 efforts to improve the efficiency of international remittance services and to foster financial inclusion. Moreover, Massimo leads training activities on payments and financial market infrastructures for several international and national institutions worldwide.

Prior to joining the World Bank, he was a Senior Financial Specialist at Banca d'Italia and a researcher in Brazil, Italy, and the United States. He holds Master's degrees in Economics, Business Administration, Engineering, and Political Science from institutions in the US and Italy.

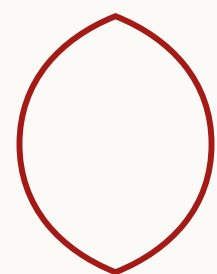


**BIAGIO  
BOSSONE**

Biagio Bossone is a senior advisor to international organizations and central banks on macro-financial policy, payment systems, and financial sector development. Currently, he is Visiting Scholar at the IMF, Scientific Advisor to the Fast Forward Foundation (EU), and Founding Core Team Member of the Special Interest Group on Fintech & Digital Banking at FAST National University of Computer & Emerging Sciences (Pakistan).

As senior advisor to the World Bank and IMF since 2007, he has led payment system modernization and financial market infrastructure assessments across more than 45 countries in Africa, Asia-Pacific, Latin America, Central and Eastern Europe, and the Middle East. He is currently leading two World Bank- and IMF-commissioned research projects on the macroeconomic impact of fast payment systems and on harnessing AI in financial market infrastructures.

A former banker and central banker, Biagio previously served as Executive Director at the World Bank, member of the IMF Executive Board, Head of the International Payments Division at Banca d'Italia, and President of the Group of Lecce on global finance governance. He is a prolific author, with recent contributions to IMF Finance & Development, LSE Business Review, VoxEU, OMFIF, and Central Banking.



# PROGRAMME COORDINATORS



**ANTÓNIO PORTUGAL  
DUARTE**

**António Portugal Duarte holds a PhD in Economics from the Faculty of Economics of the University of Coimbra (FEUC), where he is an Associate Professor and a researcher at the Centre for Business and Economics Research (CeBER). He has served on the Scientific and Pedagogical Boards and has coordinated the Economics bachelor's degree, the Economics Team, and the International Relations Office for over four years.**

He has participated in more than 100 national and international conferences, published around 40 peer-reviewed journal articles and nearly 50 book chapters, and co-edited several volumes, including *European Integration Process in Western Balkan Countries* (2012), *Estudos de Homenagem a João Sousa Andrade* (2020), *Economic and Financial Implications of the Covid-19 Crisis* (2022), and *The European Integration Process: Crisis and Resilience* (2023).

He has been a Visiting Professor at the University of Economics in Bratislava and the Belgrade Banking Academy (2014), and an Honorary Visiting Research Fellow at Birkbeck College, University of London (2015). He is also the author of *O Sistema Monetário Internacional: Uma Perspetiva Histórico-Económica* (2015).

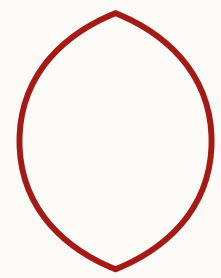
He has received five awards and scholarships, including the FEUC Teaching Award (2018–2019). His main research interests include exchange rate policy, monetary policy, the international monetary system, European integration, and the Portuguese economy.



**FÁTIMA TERESA  
SOL MURTA**

**Fátima Sol Murta is a Professor at the University of Coimbra, Faculty of Economics. She has served as Vice-Dean of FEUC and has been a member of both the School Assembly and the Pedagogical Council.**

She is co-editor of the books *Excellence in Teaching and Learning in Higher Education: Institutional policies, research and practices in Europe* and *The European Integration Process: Crisis and Resilience in the Aftermath of the Covid-19 Pandemic*. Her research has been published in journals such as *Small Business Economics*, *Journal of Economic Studies*, *Eurasian Economic Review*, *Studies in Economics and Finance*, *Scientific Annals of Economics* and the *Journal of Financial Market Infrastructures*.



# KEY CONTRIBUTORS



**AQUILES A.  
ALMANSI**

Global Leader in Financial System  
Regulation and Crisis Management



**BERNARDO CORREIA  
BARRADAS**

Executive Director,  
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**BORIS  
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Senior Policy Officer, European  
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**CLAUDIO  
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CEO,  
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**DANIEL  
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Global Advisor on Payments and  
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Director at the International Monetary  
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Head of the CPMI Secretariat



**DANIELA  
RUSSO**

Adviser to the Executive Board,  
European Central Bank, and CPMI  
Member



**FRANCISCO DE  
ASSIS MACHADO  
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Global Expert on financial crimes,  
anti-corruption, and anti-money  
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**GERARD  
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Global Leader in Finance



**HARISH  
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Global Practice Manager for  
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**HOLTI  
BANKA**

Senior Financial Sector Specialist,  
World Bank Group



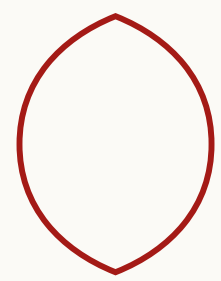
**IGNACIO  
TEROL**

Strategy Manager for the  
Digital Euro, European  
Central Bank



**JEFFREY  
MARQUARDT**

Global Advisor on Payments and  
Market Infrastructures, former  
Deputy Director at the Federal  
Reserve Board and CPMI Member



# KEY CONTRIBUTORS



**JOCHEN  
METZGER**

Global Advisor on Payments and Market Infrastructures, former Senior Official at the Deutsche Bundesbank and CPMI Member



**JOSÉ ANTONIO  
GARCÍA LUNA**

Global Advisor on Payment Systems Development



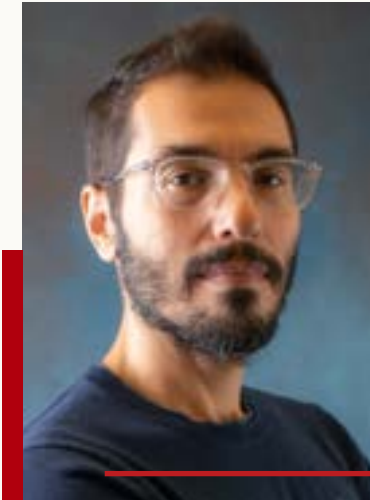
**LAWRENCE M.  
SWEET**

Founder and CEO of IZZI, Inc, former Senior Vice President at the Federal Reserve Bank of New York and CPMI member



**MARCELO  
ROLDAN**

Global Leader in Information Security



**MARCO  
NICOLI**

Senior Financial Sector Specialist, World Bank Group



**MARIA CHIARA  
MALAGUTI**

Full Professor of International law at Università Cattolica Sacro Cuore Italy and former President of UNIDROIT



**MARIA TERESA  
CHIMIENTI**

Senior Financial Sector Specialist, World Bank Group



**MASSIMO  
COSTA**

Full Professor of Accounting at the University of Palermo, Italy



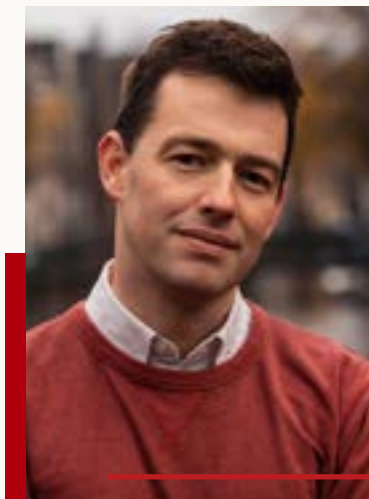
**PANAGIOTIS  
PAPASCHALIS**

Senior Lead Legal Counsel in the Financial Law Division of the European Central Bank



**RICARDO TEIXEIRA  
LEITE MOURAO**

Head of the Department of Competition and Financial Market Structure at the Central Bank of Brazil



**STEVEN  
DE VRIES**

Institutional Engagement Lead for the Digital Euro, European Central Bank



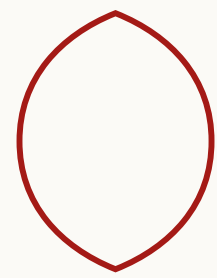
**TIM  
MASELA**

Global Advisor on Payments and Market Infrastructures, former Director at the South African Reserve Bank and CPMI Member



**ULRICH  
BINDSEIL**

Honorary Professor at Technische Universität Berlin, former Director General at the European Central Bank and CPMI Member



# PROGRAMME MODULES I-III

## MODULE I

### **Overview of the National Payments System: History, Key Concepts and Risks (10 hours)**

Every economy rests on a foundation that is often invisible yet essential: its National Payments System (NPS). What is money, and how has the act of paying evolved over centuries? What are the key components of a modern NPS, and who are the players that keep it running? What risks must be managed, and what public policy goals must be pursued? This module investigates these fundamental questions, tracing the history and concepts of the NPS from its origins to today's rapidly evolving landscape. International standards - set by the CPMI and IOSCO, along with guidance from the World Bank and other institutions - provide the framework for NPS reforms and would be presented in this module which ties all the others together.

## MODULE II

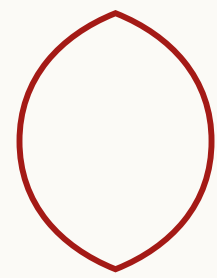
### **Legal and Regulatory framework: from reduction of legal obstacles to the building of an enabling legal environment (20 hours)**

Every payment transaction takes place within a legal and regulatory framework, yet how well does that framework keep pace with a world of instant, borderless, and increasingly digital payments? What happens when existing laws were not designed with tokens, stablecoins, or decentralized platforms in mind? And how can regulation foster innovation without compromising stability and trust? This module traces the evolution of payments law and regulation from its historical roots to the cutting edge of central bank digital currencies (CBDCs), stablecoins, crypto-assets, and open finance. From the EU's Payment Services Directive to Brazil's open banking framework, from UNIDROIT principles on digital assets to the emerging challenges of Artificial Intelligence (AI) and Distributed Ledger Technology (DLT), the module examines how countries and international bodies are, or are not, keeping up with one of the most dynamic areas of modern finance.

## MODULE III

### **Financial Market Infrastructures: the backbone of the National Payments System (30 hours)**

The 2008 global financial crisis exposed how dangerous the failure of a single financial institution could be for the entire global system. What role do Financial Market Infrastructures (FMIs) play in preventing or amplifying such crises? What does it take to ensure that payment systems, central counterparties, and securities settlement systems remain safe, efficient, and resilient under stress? This module takes a rigorous journey through the CPMI-IOSCO Principles for Financial Market Infrastructures (PFMIs), the global standards born out of that crisis, examining each principle in depth, from governance and risk management to settlement, access, and transparency. It then pushes further into the frontier challenges of today: cyber resilience, recovery and resolution, wholesale payments fraud, the rise of CBDCs, and the application of FMI standards to stablecoins. What does the next generation of financial market infrastructure look like and is the global framework ready for it?



# PROGRAMME MODULES IV-VI

## MODULE IV

### **Money and Payments: The Nature, Creation, and Use of Money in All Its Forms (15 hours)**

This module explores the fundamental nature of money and its pivotal role in the functioning and evolution of payment systems. It examines money in all its forms and investigates how money is created and by whom, and how it is circulated and used in modern economies. The module delves into the institutional and accounting nature of money, drawing on both traditional economic theory and contemporary perspectives, and analyzes how different forms of money support or challenge legal settlement, monetary sovereignty, and financial stability. Special emphasis is placed on the transformation of money in the digital age and the implications of programmable and synthetic forms of money. The module builds the conceptual foundation for understanding payment systems not merely as technical infrastructures, but as mechanisms embedded in broader monetary architectures.

## MODULE V

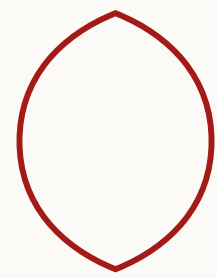
### **Retail Payment Systems and Services – the plumbing of a healthy economy, traditional instruments and innovative and Fintech solutions (25 hours)**

Every day, millions of transactions quietly power the global economy from a street market purchase to a cross-border remittance. But who designs the systems behind these payments, and are they truly serving the people and businesses who rely on them? Are we witnessing a fintech revolution, or simply an incremental evolution of familiar infrastructure dressed in new technology? This module takes a sweeping look at the retail payments ecosystem, from paper cheques and card networks to fast payments, open banking, crypto-assets, stablecoins, and CBDCs, tracing the journey from traditional instruments to the most disruptive innovations reshaping the space today. Through country case studies spanning Brazil, India, the EU and beyond, it examines what works, what risks must be managed, and what the future of retail payments might actually look like.

## MODULE VI

### **Digitization, Payment Systems aspects of Financial Inclusion and Government Payments (10 hours)**

Two billion people remain outside the regulated financial system, yet a mobile phone, a digital wallet, or a government cash transfer can change that. How can payment systems be deliberately designed to reach the unreached? And what role should governments, central banks, and the private sector play in making that happen? This module explores the powerful intersection of digitization and financial inclusion, from the CPMI-World Bank principles on the payment aspects of financial inclusion to the transformative potential of Digital Financial Services spanning mobile payments, e-money, digital wallets, and beyond. It examines how government payments, when modernized and digitized, can serve as a powerful gateway to broader financial access, and how well-designed digital public infrastructures (from payment systems to national identity platforms) form the essential foundation on which inclusive economies are built.



# PROGRAMME MODULES VII-IX

## MODULE VII

**Multiplying efforts to improve the efficiency of the Global Payments System – International Remittances and Cross Border Payments: supporting people on the move and international trade while minimizing risks (15 hours)**

Over 220 million migrants send regularly remittances back home, involving over 700 million people. The cost and efficiency of these services are still not optimal. This module starts by presenting the efforts of the international community to address this matter and shows how these efforts are now aimed at improving the efficiency of the entire space of cross-border payments. It then continues by taking a broad view at the wholesale cross border payment architecture and presenting in depth the set of measures designed to address foreign exchange settlement risk. This module also investigates the successes and failures of the deployment of regional financial infrastructures taking as a framework the World Bank guidelines in this space.

## MODULE VIII

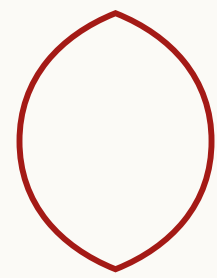
**Addressing the cyber threat in payment and settlement systems and services and Preparing for crises (15 hours)**

Cybersecurity in finance is critical to protect sensitive assets, prevent massive financial fraud, and maintain customer trust, as financial institutions are targeted by cyberattacks 300 times more often than other industries. In particular, as new cyber threats are affecting the payment and settlement ecosystem, authorities are mobilizing - at both the international and national levels - to address this threat. This module presents some of the recent initiatives to protect the FMIs and payment services from cyber risk. Also, key concepts of crisis preparedness for NPS overseers and supervisors will be covered including with interactive exercises to show the role of all relevant stakeholders in an event of a crisis. EU legislation in this field will be presented.

## MODULE IX

**The Oversight of the National Payments System: an art more than a science (20 hours)**

The pillars of the National Payments System rely on the presence of an effective oversight function by country authorities. What are the key objectives, instruments, and modalities of payment system oversight? What is the most effective cooperative framework at the national, regional, and international levels? These questions will be addressed in this module which also covers practical aspects of NPS Oversight. Special focuses of this module will also include 1) the Oversight and Supervision of payment service providers covering the key aspects of their licensing, off-site, on-site, reporting and data collection; 2) the oversight of payment schemes and arrangements; and 3) cooperation efforts and techniques amongst national and international authorities and with market stakeholders.



# MODULE X

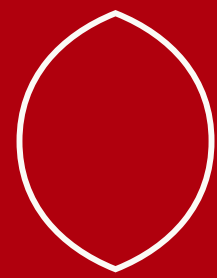
## MODULE X

### Project

This module aims to provide students with a practical and reflective experience in applying knowledge, through the development, presentation, and refinement of projects or case studies. At the end of this course unit, students should be able to:

- Design and develop an applied project or case study in the field of payment systems; Integrate theoretical and methodological knowledge in the critical analysis of real-world situations, through the implementation of applied projects or case studies, with or without explicit problem-solving.
- Communicate the results of their work through oral and written presentations.
- Reflect critically on the research and project development process; Incorporate feedback received from peers and instructors to improve the work.
- Demonstrate skills in autonomous and/or collaborative work and time management.





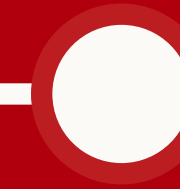
# APPLICATIONS

**Valid until Application deadline:**  
The deadline is until the class is full or, at the latest,  
*July 26, 2026.*

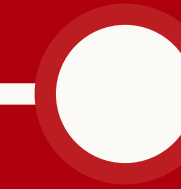


Send the following documents to  
**csm@uc.pt** (main contact)  
and CC: **fasol@fe.uc.pt**

- Curriculum Vitae (CV)
- Proof of payment of the registration fee ;
- Fee included and deductible from final amount;
- Payment by bank transfer (IBAN):  
PT50 0035 0817 0000 3804 7308 7



After completing the application, candidates will receive feedback from the School regarding the next steps.



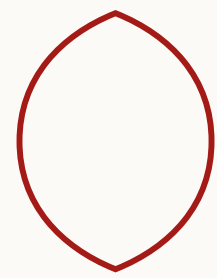
Join our cohort of advanced network.

## CONTACTS

**Website:**  
csm.fe.uc.pt

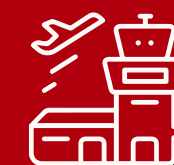
**E-mail:**  
csm@uc.pt

**Phone:**  
+351(961 400 523)



# LOCATION

Located at the Faculty of Economics of the University of Coimbra, the Coimbra School of Management benefits from a context of academic excellence and a rich historical heritage that distinguish it. This is reflected in the quality, rigor, and relevance of the education it provides.



**1h from Porto  
Airport (OPO)**

**2h from Lisbon  
Airport (LIS)**



**A historic  
university city**

Home to one of the  
oldest universities in  
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in 1290.



**Academic  
excellence**

A vibrant  
environment for  
learning, research  
and intellectual  
exchange.



**Inspiring  
surroundings**

A unique blend of  
heritage, culture and  
natural beauty along  
the Mondego River.



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