# MASTER IN CENTRAL BANKING

((N/0311/7/0002)(04/25)(MQA/FA13101))

Leading-edge education for high-potential central bankers

**Asia School of Business** (DU046(W))
established in collaboration with MIT Sloan Management

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In providing leading edge immersive learning in Central Banking, the Asia School of Business aims to contribute towards developing organisational capability, and thus the institutional resilience of Central Banks.

**Dr. Zeti Aziz**
Founding Chair, Asia School of Business
Co-Chair, Board of Governors
Former Governor, Bank Negara Malaysia

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ASB Academic Building

# 01.

## Welcome to the Master in Central Banking Program
### Empowering Central Banks for a Changing World

Central banks are operating in a fast-changing economic and financial environment. In maintaining monetary and financial stability, overseeing payment systems or managing reserves, central bankers must therefore be agile and ready to embrace new practices. Participants in the Master in Central Banking Program will be equipped for this challenge.


ASB Academic Building Interior
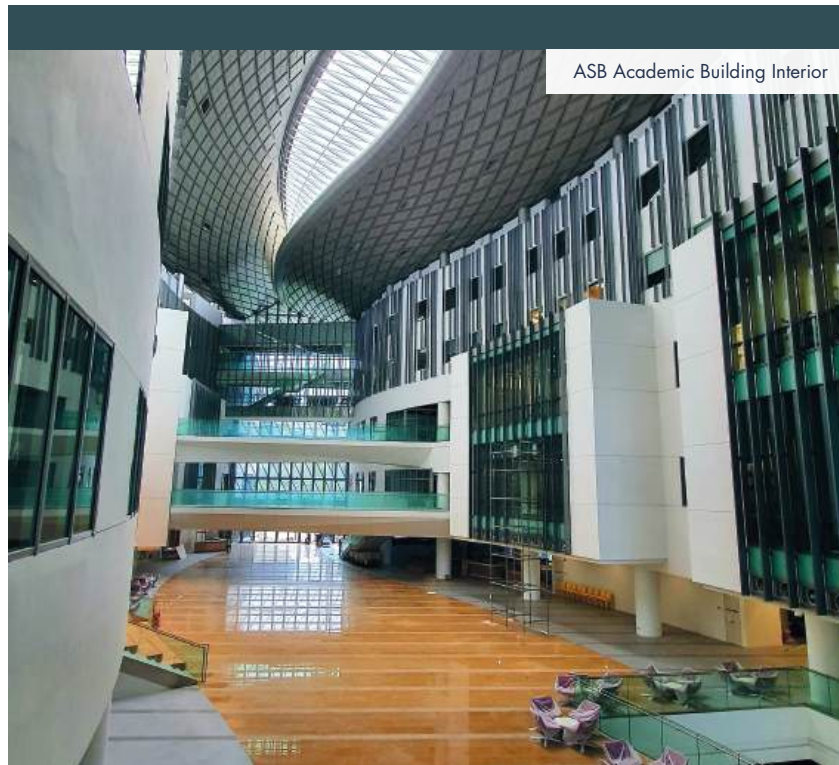
## Local Nuance, Global Outlook

The Master in Central Banking (MCB) is a year-long residential program built on the formidable intellectual resources of MIT and Bank Negara Malaysia and designed especially for central bankers. It offers a comprehensive curriculum that connects all the core functions of central banking. In addition, the transformative 12-month journey recognizes the importance of organizational management, with dedicated courses on topics such as ethics, leadership, and governance.

The MCB program is also global. It includes a six-week immersion period at MIT Sloan School of Management, where distinguished faculty will deliver courses specifically designed for the MCB, emphasizing systems thinking, best practices, innovation, and new technologies.



" Our understanding of how to extract maximal information from financial markets has increased dramatically. The Master in Central Banking program **provides the necessary tools and knowledge** so that central bank leaders can access and use this information most effectively.

**Prof. Robert Merton**
School of Management Distinguished Professor of Finance, MIT
Nobel Memorial Prize in Economic Sciences,
Co-Chair, ASB Master in Central Banking Advisory Council



" ASB believes deeply in modern pedagogy and in continuous improvement. Through its focus on the capacity development needs of central banks, the MCB program develops an integrated 'systems thinking' understanding of central bank functions and their inter-related implications. It employs the 'mind and hand' ethos of MIT, with group learning in diverse teams, and independent projects as a basis for life-long learning.

**Sanjay Sarma**
Chief Executive Officer, President and Dean of the Asia School of Business
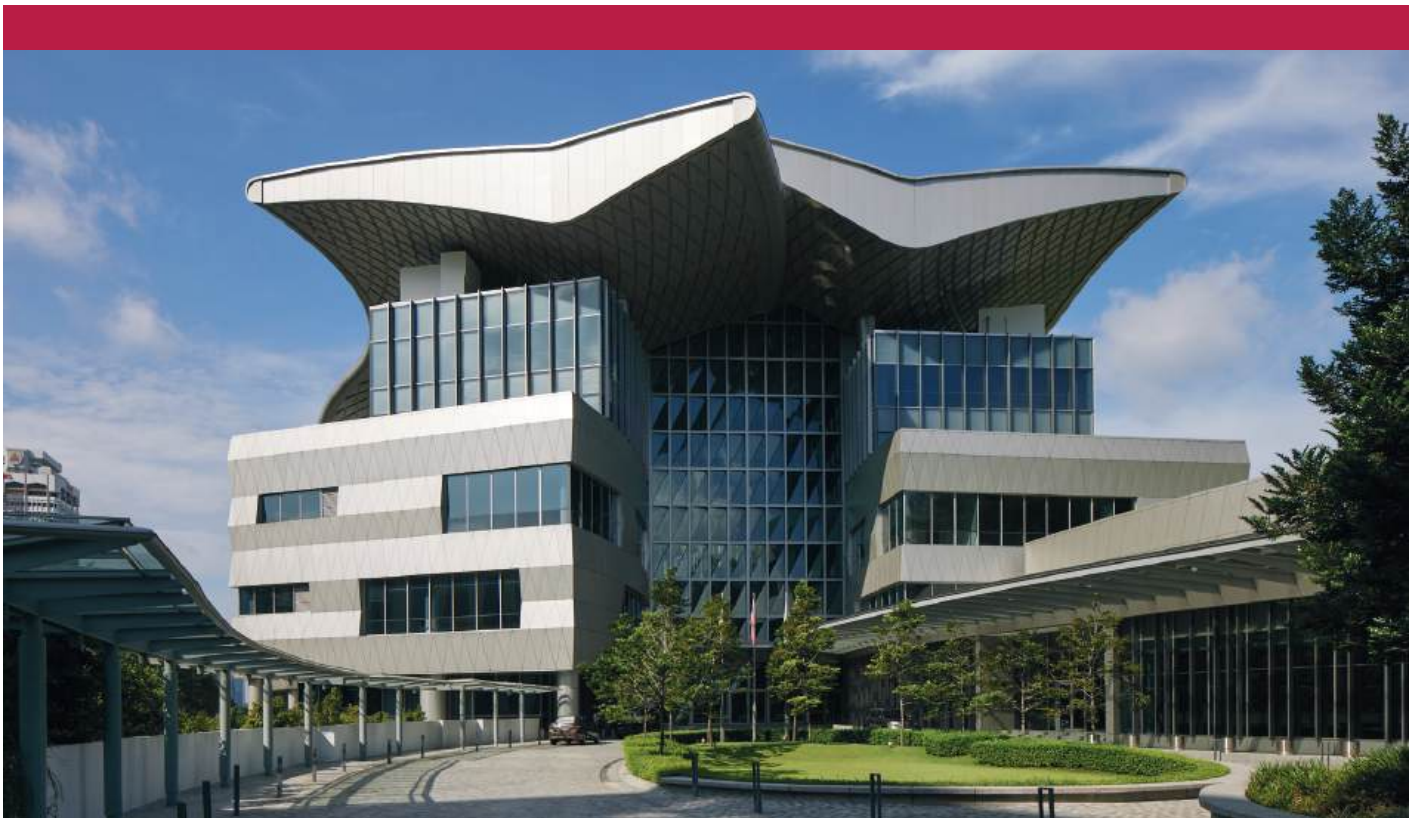
" I wish ASB's Master in Central Banking program had been available years ago so I could have seized this opportunity sooner. For those keen on pursuing a career in Central Banking, I would recommend taking this course as soon as possible so that you can contribute more widely. In order to be a more holistic central banker, I needed to learn about other aspects of central banking. This program addressed that need.

The Master in Central Banking program through its comprehensive curriculum that connects all the core functions of central banking provides you with a broad perspective and will assist you in deciding on a career path at the Central Bank.

**Rino Zerna**
Philippines, MCB Class of 2023



" The MCB program provides a broad understanding of central bank management from the perspectives of both developed and developing countries, as well as current information around latest developments on digital economy and data analytics. The MCB program also provides broad networking opportunities with an international network of central banking friends to address the challenges posed by increasing global economic and financial integration.

**Donny Hendri Pratama**
Indonesia, MCB Class of 2022

# 02.

## Who the Program is For?
## At a Glance

This program is designed for professionals working in central banks and in other public institutions that carry out related central banking functions. Typical participants on this program may include:

- High potential candidates at the early stages of developing a career in central banking or financial regulation.
- Central bankers looking to gain a broad perspective of the role, mandates, and governance of central banks.
- Those who aspire to positions of leadership within their institution and wish to broaden their skills and
- knowledge to advance.



"

I truly enjoy my work at the Central Bank. Being in the MCB program has further fostered a deeper appreciation and enthusiasm for the work that I do. It has provided me the opportunity to greatly expand my paradigm of knowledge. The exposure to new and diverse areas of learning provokes thought and helps me explore innovative solutions which will be most useful when I return to my role.

**Dalila Hanim Hairudin**
Malaysia, MCB Class of 2023

## MCB Class of 2025 profile

| Average age: | Nationalities represented: |
|---|---|
| **35** | **8** |
| Percentage women: | Average central banking work experience |
| **44%** | **10 years** |

# At a Glance

- 12-month residential program designed to build a strong global central banking network
- Six-week immersion at MIT Sloan
- Taught by central banking experts and faculty from MIT Sloan and the Asia School of Business
- Overseen by an Advisory Board including nine former central bank governors from four continents
- The global nature of ASB and MIT Sloan faculty and your classmates give you access to thinking and best practice from developed and emerging markets. You will have the ability to bring back to your organization the latest tools, ideas, and practices while building a global network of fellow central bankers.
- Showcase your professional development with an accredited qualification.

"

When we evaluate economic policy frameworks in developing and emerging economies, it is crucial to take into account the particular circumsatnces and challenges these economies face. Policy frameworks that are appropriate in advanced economies need to be adapted to the realities of emerging economies. This program explains how.

**Prof. Hans Genberg**
Professor of Economics
Senior Director of Central Banking Programs

"

What I value immensely is the opportunity to meet and discuss common issues with fellow central bankers. It is rare to be exposed to the development of central banks in different parts of the world, and it distinguishes the MCB from other programs.

**Vipichbolreach Long**
Cambodia, MCB Class of 2022

# What Sets Us Apart

- **Integrative:** A connected view of all central bank functions
- **Deep MIT faculty involvement:** Six-week MIT immersion and MIT faculty teaching in KL
- **Transformative:** Modules on leadership, governance, communication, and negotiation
- **Forward-looking:** Emphasis on best practice, innovation, and new technologies
- **Global:** Diverse class, trek to the U.S. – a global network

## 03. Taught By Central Bank Experts and Distinguished MIT & ASB Faculty

**Robert C. Merton**
*School of Management Distinguished Professor of Finance*

**Athanasios Orphanides**
*Professor of Practice, Global Economics and Management*

**Adrien Verdelhan**
*Stephens Naphtal Professor of Finance*

**Simon Johnson**
*Ronald A. Kurtz (1954) Professor of Entrepreneurship*

**Deborah Lucas**
*Sloan Distinguished Professor of Finance*

**Emilio J. Castilla**
*NTU Professor of Management and a Professor of Work and Organization Studies*

**Roberto Rigobon**
*Society of Sloan Fellows Professor of Management*

**David A. Singer**
*Raphael Dorman-Helen Starbuck Professor of Political Science*

**Eric So**
*Sarofim Family Career Development Professor*

**Antoinette Schoar**
*Stewart C. Myers-Horn Family Professor of Finance*

**Eric Rosengren**
*Visiting Professor at the MIT Golub Center for Finance and Policy & Former President & CEO of the Federal Reserve Bank of Boston*

**John E. Core**
*Nanyang Technological University Professor and a Professor of Accounting*

**Bruno Verdini**
*Lecturer Urban Planning and Negotiation*

**Egor Matveyev**
*Senior Lecturer and Research Scientist in Finance*

**Hui Chen**
*Nomura Professor of Finance Professor of Finance*

**Hans Genberg**
Professor of Economics
Senior Director of
Central Banking Programs
*Ph.D. University of Chicago*

**Kevin Crow**
Assistant Professor
of International
Law and Ethics
*Ph.D. Universität
Halle-Wittenberg*

**Anella Munro**
Professor
of Economics
*D.Phil. University
of Oxford*

**Ikuo Takei**
Assistant Professor of
Finance
*Ph.D. University of
Wisconsin-Madison*

**Ozer Karagedikli**
Professor of Practice,
Director of Central
Banking Research
Centre (CBRC)
*Ph.D. The Philipp
University of Marburg*

**Ho Sui-Jade**
Professor,
*Ph.D. University of Michigan*

**Andrew Coleman**
Professor
*Ph.D. Princeton University*

**Lee Sang Seok**
Professor of Economics
*D.Phil. University of Oxford*

## MCB Visiting Faculty

**Ziyaad Mahomed**
Assistant Professor at
INCEIF & Chairman of
the Shariah Board of
HSBC Amanah Malaysia

**Alessandro Santoni**
Head of Credit Risk
and AQR FR1-Onsite
Inspection
European Central Bank

**Shasha Kartini
Ridzam**
Director, Strategic
Communications
Department, Central
Bank of Malaysia

**Patrick Honohan**
Former Governor
of Central Bank of
Ireland

**Glenn Tasky**
Former Director of
Financial Stability,
Supervision, and
Payments,
The SEACEN Centre

# 04. Advisory Board

## Stewarded by Former Central Bank Governors

The MCB program is overseen by an Advisory Board including nine former central bank governors from four continents.



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We believe that the ASB's Master in Central Banking, in collaboration with MIT Sloan School, will support the advancement of talent development for central banking around the world. In a rapidly changing and highly challenging environment, the demands on central banks are immense. Central bankers therefore need the capabilities to deliver the best possible policies and outcomes. Our program aims to contribute to building such capabilities.

**Dr. Zeti Aziz**
Founding Chair, Asia School of Business
Co-Chair, Board of Governors
Former Governor, Bank Negara Malaysia

"

Our understanding of how to extract maximal information from financial markets has increased dramatically, and having the analytical tools to make proper use of such information is critical for modern central banks. ASB's program in Central Banking will provide the necessary tools and knowledge to support this strengthening of central banking capability.

**Robert C. Merton**
School of Management Distinguished Professor of Finance, MIT
Nobel Memorial Prize in Economic Sciences
Co-Chair, ASB Master in Central Banking Advisory Council

**Jacob Frenkel**
Former Governor of Bank of Israel

**Jose de Gregorio**
Former Governor of the Central Bank of Chile

**Patrick Honohan**
Former Governor of Central Bank of Ireland

**Athanasios Orphanides**
Former Governor of Central Bank of Cyprus

**Martin Redrado**
Former Governor of Central Bank of Argentina

**Glenn Stevens**
Former Governor of Reserve Bank of Australia

**Amando Tetangco**
Former Governor of Bangko Sentral ng Pilipinas

**Stefan Ingves**
Former Governor of the Riksbank

# 05.
## Curriculum

Create Faster Impact,
Build Stronger Networks



"

The Master in Central Banking is an intense program but the people behind it – the excellent pool of professors and great MCB Program support team – make this learning journey truly worthwhile. The prime education and the unique learning experience I gain from being a part of this class will give me the edge to become a truly world-class central banker and a transformative leader.

**Arlene Aguinaldo,**
Philippines, MCB Class of 2022

The MCB curriculum revolves around the following six pillars and a Master's thesis

*Course offerings are subject to change*

| **SYSTEMS THINKING AND INNOVATION** | • Challenges of Central Banks<br>• Proseminar<br>• Crisis Prevention and Management |
|---|---|
| **MACROECONOMIC STABILITY** | • Macroeconomic Foundations<br>• Applied Macroeconomics<br>• Monetary Policy I<br>• Monetary Policy II<br>• Monetary Policy Operations<br>• Current Topics in Macro and Monetary Policy |
| **FINANCE** | • Financial Market and Asset pricing<br>• International Finance<br>• Behavioral Finance and Inefficient Markets<br>• Islamic Finance for Regulators<br>• Financial Economics for Public Policy |
| **FINANCIAL STABILITY** | • Accounting for Banks<br>• Innovation in Financial Institutions<br>• Financial Supervision<br>• Financial Regulation<br>• Macroprudential Policies and Stress Testing |
| **DATA AND DIGITAL TECHNOLOGY** | • Research Methods 1: Data Analysis and Visualisation<br>• Research Methods 2: Applied Economic Analysis and Forecasting<br>• Research Methods 3: Causal Inference for Policy<br>• Payment Systems and Digital Currencies<br>• Digitally Transforming Finance |
| **LEADERSHIP** | • Strategies for People Analytics<br>• Ethics<br>• Central Bank Governance and Communication<br>• Negotiation<br>• Topics in Finance and Policy<br>• Political Economy |
| **MASTER'S THESIS** | • Central Banking Master's Thesis |

# 06.
## Academic Calendar

The MCB program features a core curriculum taught by MIT Sloan and ASB faculty, complemented by visits to financial institutions in the US. The curriculum includes a six-week immersion program at the MIT Sloan campus in Cambridge, Massachusetts.

**The next intake is September 2025.**
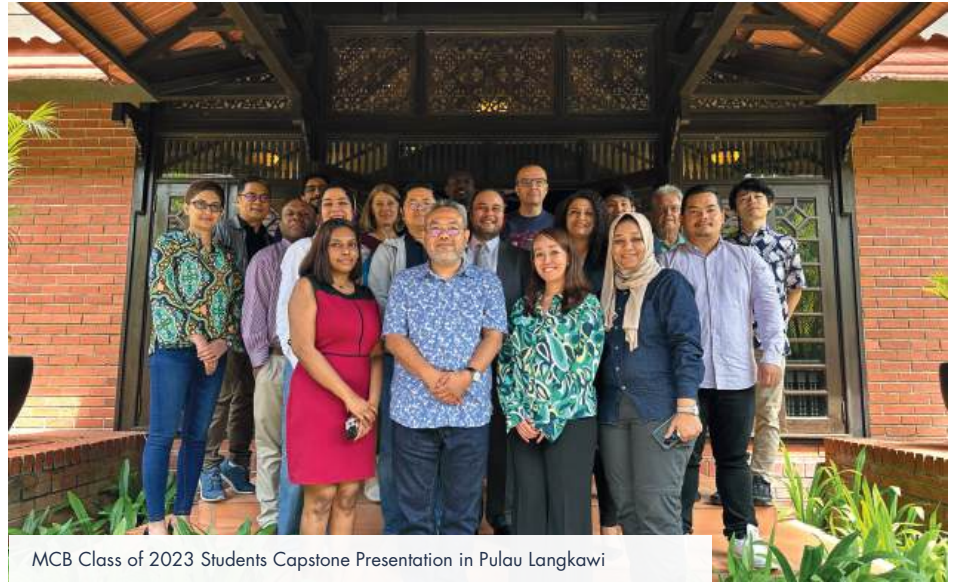

MCB Class of 2023 Students Capstone Presentation in Pulau Langkawi

### Term 01
**September - December, 2025**

MIT & ASB classes
in Kuala Lumpur

1 week break

MIT & ASB classes
in Kuala Lumpur

2 weeks break

### Term 02
**January - April, 2026**

MIT & ASB classes
in Kuala Lumpur

1 week break

MIT Immersion (6 weeks)
+ US Trek (Washington & NYC)

1 week break

### Term 03
**May - August, 2026**

MIT & ASB classes
in Kuala Lumpur

Graduation

MIT Immersion Welcome Reception – Master in Central Banking Class of 2022

## KEY DATES

| | |
|---|---|
| September 2024 | Application Opens* |
| End of August 2025 | Residences open for arrival<br><br>One week orientation begins |
| September 2025 | First term begins |
| February - April 2026** | MIT Sloan Immersion (Cambridge, MA, USA) |
| August 2026 | Final term ends. Graduation date to be confirmed |

*Note: Academic calendar is subject to change.*
*Assessment of completed applications is made on a continuous basis.

**Tentative date.


MIT Immersion - Master in Central Banking, Class of 2023

# 07.
## Program Fees

The program fee is **RM 335,000** approx. USD 76,000

*\* the USD equivalent may fluctuate subject to prevailing exchange rate*

Full regular fees for the 12-month MCB program starting in the 2025-2026 academic year include:

- Tuition Fees
- MIT Immersion
- Accommodation in Kuala Lumpur and during the MIT Immersion Program in the USA
- Program related travel expenses
- Visas
- Insurance
- School supplies

The program fees do not include transportation costs for arrival at Kuala Lumpur to begin the program and return to home country at the end of the program as well as food, and personal expenses.

To apply, visit: **https://apply.asb.edu.my/apply/**

Asia School of Business Residence Building

# 08.
## Admission Criteria

## Academic Requirement & English Proficiency

i.      A  Bachelor's Degree in the fields or related fields with a minimum CGPA of 2.50 or equivalent as accepted by the ASB Senate; *or*

ii.     A Bachelor's Degree in the fields or related fields or equivalent with a minimum CGPA of 2.00 and not meeting a  CGPA of 2.50 can be accepted, subject to rigorous internal assessment.

iii.    Candidates without a qualification in the related fields or working experience in the relevant fields must undergo appropriate prerequisite courses determined by ASB and meet the minimum CGPA based on (i) to (ii).  A letter from the Central Bank on applicant's working experience is required as a supporting document.

iv.     To provide proof of English proficiency by providing either of the following documents:
   - Supporting letter from your university confirming English as the medium of instruction for the undergraduate degree if your degree is not from the following countries:
     - UK
     - USA
     - Australia
     - New Zealand; **or**
   - IELTS  Academic (Overall band 6.0)*; *or*
   - TOEFL (Internet-based 60, Essentials (Online) 8.5) *; *or*
   - Cambridge English Advanced/Proficiency (169)* ; *or*
   - Pearson Test of English (PTE) Academic (59)*  ; *or*
   - Malaysian University English Test (MUET) (Band 4)

*Note: We will only accept English language proficiency test scores taken within two years of the start date of the intake you are applying for. Therefore, for applicants planning to enter the MCB program in 2025, we only accept the above English language proficiency test scores taken after August 1, 2023.*



Class at MIT with Robert C. Merton,
School of Management Distinguished Professor of
Finance, MIT
Nobel Memorial Prize in Economic Sciences
Co-Chair, ASB Master in Central Banking Advisory
Council



MCB Students with Dr. Zeti Aziz,
former Governor Bank Negara Malaysia



Ask the Governor session with D Subbarao, former Reserve Bank of India Governor

MCB Class In Action – Governance Course — Central Banks: Building Institutional Capabilities
& Resilience with Dr. Zeti Aziz,
Founding Chair, Asia School of Business,
Co-Chair, Board of Governors, Former Governor, Bank Negara Malaysia

# 09.
## Key Takeaways

- Develop an integrated understanding of central bank mandates, and specialised concepts, theories and methods related to central banking.

- Analyze complex problems, logically and critically, in the changing central banking environment

- Apply creative thinking, and problem-solving skills to the challenges faced by central banks

- Adapt social and communicative approaches to work effectively, in multi-disciplinary and multi-cultural teams.

- Explain complex ideas, problems, solutions and decisions, clearly, in written and verbal form, to internal and external stakeholders.

- Assess how data and digital technologies can both aid and challenge central banks in achieving their mandates.

- Evaluate how data, metrics and statistical approaches, can be used to inform on the challenges facing central banks.

- Promote collaborative relationships to resolve multi-faceted issues, within central banks and with government and private sector stakeholders.

- Display autonomy and independence in setting and implementing individual goals and self-development, for lifelong learning.

- Display an ability to look forward, to assess risks, and to consider alternative approaches to inform decisions on complex policy and regulatory issues.

- Identify ethical, social and cultural issues in addressing complex issues facing central banks.

# 10.
## Course Overview

| | |
|---|---|
| **SYSTEMS THINKING AND INNOVATION** | • Challenges of Central Banks<br>• Proseminar<br>• Crisis Prevention and Management |

### CHALLENGES OF CENTRAL BANKS

*Core, 1 credit*

This course exposes students to current challenges faced by central banks and introduces them to 'systems thinking', by encouraging them to approach these challenges from different perspectives. Challenges presented include the conduct of monetary policy with imperfect models, the supervision of banks in a fast-changing world of digital technology, the role of the central bank in a payments system of digital currencies, and the need to build resilience in a financial system subject to contagion risk.

### PROSEMINAR

*Core, 3 credits*

This year-long seminar series provides a framework for 'systems thinking' and applies it to a wide range of issues faced by central banks. The course relies heavily on discussions of historical experience and current newsworthy economic events, led by faculty members and lectures by guest speakers from central banks and academia. It fosters thinking across multiple disciplines, while applying the analytical tools taught in the program.

### CRISIS PREVENTION AND MANAGEMENT

*Core, 2 credits*

This course examines economic and financial crises through a 'systems-thinking' lens. It focuses on the role of the central bank in enhancing resilience to prevent crises, and the decisions and trade-offs associated with the management of crises, when they happen. We study the main sources of imbalances that may lead to a crisis—fiscal, competitiveness and banking excesses, indicators of vulnerability and early warning systems, and the central bank's toolbox for crisis management. The course draws on case studies, across different economies, regions, and periods, ranging from the Asian crisis of the late 1990s, to the global financial crisis of the late 2000s and the more recent Covid-19 pandemic.



"
"The Pro-seminar sessions weaved in throughout the 12-month curriculum were one of the MCB program's most distinctive features. Learning directly from former central bank governors and gaining first-hand insights into their real-world crisis management experiences has provided me with priceless perspectives."

**Hamsa Tarek Fadel**
Egypt, MCB Class of 2023

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**MACROECONOMICS STABILITY**

</td><td>

- Macroeconomic Foundations
- Applied Macroeconomics
- Monetary Policy I
- Monetary Policy II
- Monetary Policy Operations
- Current Topics in Macro and Monetary Policy

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## MACROECONOMICS

*Core, 1 credit*
This course introduces key frameworks used to understand macroeconomic developments, within countries and across borders. In-class sessions provide opportunities to employ such frameworks and debate media reports about macroeconomic issues and developments.

## APPLIED MACROECONOMICS

*Core, 1.5 credits*
This course explores the economic principles behind good macroeconomic management, and emphasizes the constraints that politics and social aspirations impose on macroeconomic policies. This course explores three areas of macro and development economics (i) short run macroeconomic models, (ii) growth and income distribution problems, and (iii) the role of new technologies, cryptocurrencies and artificial intelligence in the macroeconomy.

## MONETARY POLICY I

*Core, 1 credit*
This course discusses the objectives, strategies, transmission mechanisms, and effects of monetary policies, as practiced in advanced as well as emerging economies. It starts by tracing the evolution of these practices from the mid-twentieth century to today, and in doing so, develops understanding of the current 'best practice' in monetary policy. This best practice is being challenged by current high inflation and slowing economic activity, and the course examines the nature of these challenges.

## MONETARY POLICY II

*Core, 1 credit*
This course covers advanced theoretical and practical issues of monetary policy. It reviews the analytical tools employed to prepare monetary policy meetings, the decision-making process and the communication of monetary policy decisions. Drawing on case studies of central bank practice, it examines the preparation of projections and policy alternatives, risk analysis and robustness considerations. As part of the course, students monitor, discuss and evaluate current monetary policy decisions of at least two central banks

## MONETARY POLICY OPERATIONS

*Core, 1 credit*
This course explores how central banks implement monetary policy, in practice, on a day-to-day basis. The course starts by placing the operating procedures in the broader context of the monetary policy framework; it continues by reviewing key concepts relating to the central bank's balance sheet, money and reserves; then moves on to the operating procedures themselves. Covering both traditional tools and the so-called 'non-standard tools', the course wraps up with a comparative analysis of different approaches central banks are using to implement monetary policy.

## TOPICS IN MACRO AND MONETARY POLICY

*Elective, 1 credit*
This elective explores topics of current interest or debate in macroeconomics and central banking. Topics are chosen to reflect current developments and student interests. Past topics include labour markets, commodity prices, unconventional monetary policy, synthetic local currency debt, international dimensions of central banking, the zero lower bound, financial globalisation and recent advances in exchange rate economics.

| FINANCE | • Financial Market and Asset pricing<br>• International Finance<br>• Behavioral Finance and Inefficient Markets<br>• Islamic Finance for Regulators<br>• Financial Economics for Public Policy |
| --- | --- |

## FINANCIAL MARKETS AND ASSET PRICING

*Core, 3 credits*
This course studies how financial markets allocate resources across time, choose projects to finance, and price assets to reflect risk and return. In performing their role, financial markets, among other mechanisms, influence how the central bank's monetary policies affect macroeconomic decisions, growth, and welfare. We delve into how central bankers can extract information revealed by asset prices, in conducting monetary policy, and gain a better ability to evaluate market reactions to monetary policy.

## INTERNATIONAL FINANCE

*Core, 1.5 credits*
Through a series of lectures, case discussions, and exercises, this course explores the links between monetary policy, interest rates, and exchange rates. The course provides a framework for understanding and assessing the financial risks and opportunities of international trade, international financing, and international investments, with a particular attention to exchange rate risk.

## BEHAVIORAL FINANCE AND INEFFICIENT MARKETS

*Core, 1 credit*
What are the behavioral biases that may cause financial markets to fail to reflect information about fundamentals? This course explores just that. We explore behavioral concepts that are important in financial markets, such as the overconfidence bias, the overoptimism bias, representativeness bias, familiarity bias and limited attention. We also examine market anomalies and inefficiencies that arise from these biases, how these inefficiencies pose challenges for central banks, supervisors, and regulators, and how policy might counteract these inefficiencies.

## ISLAMIC FINANCE FOR REGULATORS

*Elective, 1 credit*
An increasing number of central bankers, bank examiners and finance regulators are operating in financial systems that include Islamic finance products. The course provides a strong overview of the Islamic finance market, its foundational rules based on Shari'ah (Islamic law), the variations in risk exposure and the unique component of Shari'ah governance. The course introduces the Islamic capital market and its liquidity function tp support robust Islamic finance ecosystem. We explore conceptual theory and practical issues. The course focuses on the unique characteristics of Islamic finance in regulation, led by seasoned academics and practitioners in the field.

## FINANCIAL ECONOMICS FOR PUBLIC POLICY

*Elective, 1 credit*
Governments, through their fiscal and monetary policies, play a central role in the allocation of capital and risk in economies around the world; they are the world's largest financial institutions. Along with making real investments, governments engage in a wide range of financial activities, such as providing credit to businesses and households, and explicitly or implicitly guaranteeing financial institutions, pension benefits and other contingent liabilities. Those activities have a profound influence on social welfare. The goal of this course is to provide you with an understanding of why and how financial economics is relevant to public sector financial decisions, and with a skill set to apply to problems that you may encounter as analysts, public managers and policymakers.

## FINANCIAL STABILITY

- Accounting for Banks
- Innovation in Financial Institutions
- Financial Supervision
- Financial Regulation
- Macroprudential Policies and Stress Testing

### ACCOUNTING FOR BANKS

*Core, 1.5 credits*

This course provides an intensive introduction to the preparation and interpretation of financial information. It adopts a decision-maker perspective of accounting by emphasizing the relation between accounting data and the underlying economic events generating them.

### INNOVATION IN FINANCIAL INSTITUTIONS

*Core, 1.5 credits*

This course explores a range of different forms of financial institutions, including emerging forms of finance, that leverage new digital technologies. It is discussion-intensive, with extensive use of case studies.

### FINANCIAL SUPERVISION AND REGULATION

*Core, 1.5 credit*

This course gives students a practical grounding in the objectives and tools of financial sector supervision, focusing primarily on banking supervision. Through presentations, discussions, case studies, and group work, the course emphasizes the importance of supervisory judgment in evaluating the condition and performance of a bank and the need for supervisory action, and stresses that a bank can be in danger of failing, even if it meets all regulatory requirements. As illustrated with practical examples, banking supervision sometimes falls short of achieving its objectives or fully utilizing its tools, with important consequences for the solvency and liquidity of individual banks and/ or overall financial stability. Important elements of the Basel II/III standards are covered, with an emphasis on Pillar 2 as a culmination of supervisory review and judgment.

### FINANCIAL REGULATION

*Core, 1.5 credits*

The course explores what problems financial regulation is intended to resolve. It considers how, despite deep capital markets and substantial financial regulation in the United States, global markets nearly collapsed during the Great Financial Crisis of 2007-2008. In particular we focus on the fragility of highly regulated bank and non-bank financial intermediaries. We investigate the near collapse of credit markets during the 2020 pandemic, the failure of Silicon Valley Bank and consider the mostly unregulated or lightly regulated digital markets. Finally, we discuss potential financial regulations related to climate change, digital currencies, and stable coins.

### MACROPRUDENTIAL POLICIES AND STRESS TESTING

*Core, 1.5 credits*

This course steps beyond the individual institution, to understand the dynamics of the financial system, as a whole, the causes of systemic financial instability, and the efforts of regulators to curtail credit booms and/or to mitigate their consequences. It compares the varied experiences of different countries in the design and implementation of macroprudential policy, and discusses the effectiveness of the macroprudential measures that have been applied. Approaches to stress testing financial institutions and the financial system are compared, and linked to the underlying amplification dynamics inherent in systemic risk.

| DATA AND DIGITAL TECHNOLOGY | • Research Methods 1: Data Analysis and Visualisation<br>• Research Methods 2: Applied Economic Analysis and Forecasting<br>• Research Methods 3: Causal Inference for Policy<br>• Payment Systems and Digital Currencies<br>• Digitally Transforming Finance |
| --- | --- |

## PAYMENT SYSTEMS AND DIGITAL CURRENCIES

*Core, 1 credit*

This course is about money and how money moves. The first half provides organising frameworks and covers payments systems structure and functioning, the roles of central banks in regulating, supervising, enabling and sometimes operating these systems, and how payments systems are evolving and being disrupted. The second half explores how distributed ledger technology is changing the payments landscape, with a focus on stablecoins and central bank digital currencies, and the regulatory challenges that come with these new forms of payment systems. Themes include, risk and mitigation, inter-relationships of payments systems with monetary policy, financial inclusion, financial stability; and anti-money-laundering requirements.

## RESEARCH METHODS 1: DATA ANALYSIS AND VISUALISATION

*Core, 1 credit*

This course explores the importance of quantitative data analysis for central banks, in various functions, including economic forecasting, financial stability assessment, and international capital flow analysis. It emphasizes the need for central bankers not only to understand quantitative analysis techniques, but also to translate economic questions into testable hypotheses and to interpret econometric results. The course incorporates data visualization techniques using the open-source statistical software R/R Studio. It aims to equip participants with the skills and knowledge needed to engage in empirical research effectively. The course sets the stage for the next two Research Methods courses.

## RESEARCH METHODS 2: APPLIED ECONOMIC ANALYSIS AND FORECASTING

*Core, 1 credit*

This course extends from single equation to multivariate regression models including binary regressions, panel data models and forecasting techniques such as ARMA and VAR models. This is a hands-on course, with strong emphasis on applications. We utilize the open-source software R/R Studio. By the end of the course, you will be familiar with traditional and new sources of economic and financial data and master techniques necessary to become an author as well as sophisticated consumer of quantitative analysis.

## RESEARCH METHODS 3: CAUSAL INFERENCE FOR POLICY

*Elective, 1 credit*

Central banks and policy institutions are interested in questions that are causal by nature: What are the effects of oil prices on the economy? What happens to credit growth when a Loan-to-Value restriction is imposed? What happens to the local currency exchange rate when the central bank increases the interest rate? These are all causal questions and the models used to forecast are typically not the models to answer these causal questions. In this course, we cover several techniques/ research designs that help us to answer causal questions, such as randomised central trials (RCTs), Instrumental Variables, Difference-in-Differences and Regression Discontinuity and time-series approaches to causal analysis by means of dynamic models such as structural vectorautoregressions and local projections, to understand the effects of macroeconomic shocks.

## DIGITALLY TRANSFORMING FINANCE

*Elective, 1 credit*

This course explores innovations based on digital technology that are giving rise to important new business models in financial intermediation. The new business models include the shift of incumbent banks to digital services, the rise of digital challenger banks, the entry of big-tech firms exploiting the data-network-activities (DNA) loop and the advent of open application programming interfaces(APIs). We discuss the benefits and risks of the new business models for customers and the financial system; how new technologies can both aid and challenge regulators in achieving their mandates; and ways to foster innovation through sandboxes and fintech hubs. This is a discussion-intensive course, in which students will be expected to discuss issues and teach a topic.

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| **LEADERSHIP** | • Strategies for People Analytics<br>• Ethics<br>• Central Bank Governance and Communication<br>• Negotiation<br>• Topics in Finance and Policy<br>• Political Economy |

## STRATEGIES FOR PEOPLE ANALYTICS

*Core, 1 credit*

People analytics is a data-driven approach to improving people-related decisions for the purpose of advancing both individual and organizational success. Many business leaders still make key decisions about their workforce based on intuition, experience, advice, and guesswork. However, these decisions can be improved through the collection and systematic analysis of data. The focus is on strategies, rather than statistics and programming, and includes strategies used to attract and retain top talent, and how these strategies are being designed and used at cutting-edge companies. Key topics include recruiting and hiring, performance evaluation, promotion and training opportunities, compensation, and organizational change. By the end of this course, students will understand how and when "big data" can be used to make key employee and talent management decisions.

## ETHICS

*Core, 1 credit*

Managers in central banks are often faced with multiple dilemmas and may have to make gray-area decisions, during their careers. This course uses the triple-lens framework – wherein you are encouraged to consider the economic, legal, and ethical ramifications of your decisions – and to think through ways in which you might live your own personal values, as central bank managers. The course addresses several dilemmas and classical approaches to thinking about ethical problems.

## CENTRAL BANK GOVERNANCE AND COMMUNICATION

*Core, 1.5 credits*

The governance framework of central banks raises a wide spectrum of issues related to internal organization and decision-making structures, accountability for delegated powers, legal structures, and the management of financial resources. This course reviews international experience related to each of these issues and considers best practice to promote accountability, transparency, and oversight.

## NEGOTIATION

*Core, 1 credit*

This course introduces and explores advanced negotiation and leadership strategies, emphasizing an introspective and experiential skill-building approach, underpinned by cutting-edge research. Applications in cross-cultural management, organizational innovation, social engineering, and international diplomacy are examined. The focus is on strengthening our decision-making and communication, by thoroughly assessing our standards, in order to tackle conflicts proactively, create thoughtful agreements, foster resilient reconciliations, and ensure lasting impacts across communities. The activities are interconnected, building upon each other, with unfolding deep-dives in corresponding sessions.

## TOPICS IN FINANCE AND POLICY

*Elective, 1 credit*

This elective combines shorter modules, by MIT faculty, to put together the best of what is on offer, each year. Past topics include financial innovation: (retirement savings bonds), SEC Securities Regulation, power and rrogress, the economics of cryptocurrencies, and international tax policy.

## POLITICAL ECONOMY

*Core, 1 credit*

This course exposes students to the analysis of central banking from a political economy perspective. We explore an "open economy politics" framework and its application to exchange rate policy, the central bank's monetary and regulatory responsibilities, and international regulatory coordination. Students develop the ability to identify the distributional consequences and trade-offs of economic policy choices, and the interactions between political institutions and economic pressures, in the forging of economic policies. There is a trip to Bretton Woods as part of this course.

# MASTER'S THESIS

## CENTRAL BANKING MASTER'S THESIS

*Core, 6 credits*

To complete the program, students write a research paper. This involves developing and working on a research topic on individually, with the supervision of one or more faculty members. The topic can be related to what was discussed over the course of the program or can draw from issues not covered during the program, but related to central banking. The research paper can be theoretical, empirical, or narrative, in nature.

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I am deeply grateful for the most up-to-date and cutting-edge knowledge that I have acquired from the Master in Central Banking program. I now possess a profound understanding of intricate financial systems, am able to expertly analyze economic data, and implement impactful central banking policies. The exceptional 12-month residential program has honed my ability to communicate financial concepts effectively to diverse audiences, including the general public, financial institutions, and government officials. With its comprehensive treatment of banking supervision, regulation, and risk management together with a thorough analysis of monetary policy and financial markets, the MCB program has prepared me to make well-informed policy decisions while taking into account global economic trends and developments. As I return to my role at the Central Bank in a few months, I am ready to leverage this rich learning and apply the valuable insights gained.

**Mustafa Ali Dinar,**
MCB Class of 2023

ASB Residence Building

ASB Academic Building

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Master in Central Banking ((N/0311/7/0002)(04/25)(MQA/FA13101))

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