Course Code: IE 414
Course title: Open-economy Macroeconomics
Type of course: Core for MA (Economics) II Year, III Semester
Number of credits: 4; **Number of lecture/tutorial/class presentation hours:** 55-56 (approx.)
Evaluation criteria: Midterm exam: 40%; Assignments and seminar presentation: 10%; End term exam: 50%
Course instructor: Professor Meeta Keswani Mehra and Dr Suman Das

Course overview

This course covers key themes in open-economy macroeconomics with focus on the underlying theories and approaches that have evolved until now to understand these, as well as some of the applications wherever necessary. The course comprises of topics such as global imbalances; the static, dynamic and stochastic versions of the Mundell-Fleming model; an intertemporal approach to open-economy macroeconomics, including government budgetary policy and current account with and without an overlapping-generations structure; the basic monetary model and models of real and nominal exchange rate determination. Finally, the course includes select topics on exchange rate arrangements and currency crises models.

Pre-requisites: *Microeconomics, Macroeconomics* and *Mathematical Economics*.

Learning objectives

- To provide an understanding of the macroeconomic theories and models in the context of open economies.
- The develop understanding of the theoretical underpinnings of economic policy in open economies, such as monetary and fiscal policy, dynamic and stochastic versions of the Mundell-Fleming model, nominal and real exchange rate determination and models of currency crises.
- To equip students with methods of macroeconomic analysis to inform research in and policy treatment of fluctuations and growth in open economies and integration into the global economy, including the role of the monetary model and exchange rate determination.

Learning outcomes

- To develop knowledge of the interdependent nature of key macroeconomic variables, sectors and markets, and the dynamics of responses to exogenous domestic and international economic shocks.
- To improve understanding of goods and financial market behaviour in the open-economy IS-LM model, and its extensions to the dynamic and stochastic settings.
- To impart expertise in how open economy financial and goods markets operate under fixed and flexible exchange rate regimes.
- To develop knowledge of the monetary models and exchange rate determination.
- To enable understanding of how alternative exchange rate regimes function and how these provide different adjustment mechanisms for domestic and external economic shocks.
- To enhance knowledge of the implications of international interdependence for the conduct of national stabilisation policies.
- To enable students to utilize relevant data, assess and critique public policies concerning open economy issues.
- To build knowledge of the working of foreign exchange markets in asset and commodity markets.
- To develop skills to read academic articles, write review articles and make research seminar presentations.

Course modules

Module I: Introduction

1. **Balance of Payments Accounting and Global Imbalances**
   SGU&W, Chp 1

2. **Static Mundell-Fleming Model**
   NM, Chp 8, Heijdra, Ch 10

Additional readings
- Lawrence H. Summers (2006), Reflections on Global Account Imbalances and Emerging Market Reserve Accumulation". L K Jha Memorial Lecture, Reserve Bank of India. https://www.harvard.edu/president/speeches/summers_2006/0324_rbi.php
- Obstfeld, Maurice, and Kenneth Rogoff (2005), Global Current Account Imbalances and Exchange Rate Adjustment, Brookings papers on Economic Activity, No 1, 67-123.
- Obstfeld, Maurice, Jay Shambagh, and Alan Taylor (2009), Financial Stability, the Trilemma, and International Reserves, NBER Working paper 14217. https://www.nber.org/papers/w14217.pdf

Module II: Intertemporal Open Economy Macroeconomics

1. **Intertemporal Approach to Current Account Balance**
   a. A small two-period endowment economy
   b. Role of investment: defining the current account
   c. A two-region world economy

   O&R, Chp 1; CV: Chapter 1

2. **Dynamics of a Small Open Economy**
   a. A small open economy with many periods and finite time
   b. An infinite-horizon stochastic model both for endowment economy and with investment
   c. A stochastic small-country current account model
   d. Extending the intertemporal model by incorporating shocks in interest rates and relative prices

   O&R, Chp 2

3. **The Life Cycle, Tax Policy, and the Current Account**
   a. Government budget policy in the absence of overlapping generations
   b. Government budget deficits in an overlapping generations model: government saving, private saving and current account balance; timing of taxes and implications for current account deficit
   c. Output fluctuations, demographic changes and life cycle savings
   d. Investment and growth

   O&R, Chp 3

Additional readings
- Obstfeld, M. and K. Rogoff (2000), The Six Major Puzzles in International Macroeconomics, in NBER Macroeconomics Annual 2000.
- Bergin, P. R. and S. M. Sheffrin (2001), Interest Rates, Exchange Rates and Present Value Models of the Current Account, The Economic Journal, 110 (463): 535–558.
- Glick, R. and K. Rogoff (1995), Global versus Country-specific Productivity Shocks and the Current Account, Journal of Monetary Economics, 35(1): 159–192.

- Feldstein, M. and C. Horioka (1980), Domestic Saving and International Capital Flows, Economic Journal, 90(358): 314-329.

Module III: The Monetary Model and Exchange Rate Determination

1. **The Determinants of Real Exchange Rate**
   a. Law of one price
   b. Purchasing power parity
   c. Productivity differentials and real exchange rate: The Balassa-Samuelson model

   NM, Chp 7; SGU&W, Chp 1

2. **The Basic Monetary Model**
   a. Basic monetary model in a pure endowment economy with money in the utility function;
   b. Neutrality and super-neutrality of money under fixed and flexible exchange rates;
   c. Cash-in-advance model of money demand and exchange rate.

   CV: Chapter 5

3. **The Monetary Model and Nominal Exchange Rate Determination**
   a. The monetary model of the balance of payments under flexible exchange rates
   b. Monetary approach to nominal exchange rate determination – the one money economy and the Lucas' two-money monetary economy

   NM, Chps 3 & 4; SGU&W, Chp 13; CV: Chapter 6

4. **Dynamic and Stochastic Mundell-Fleming Models**
   a. Sticky domestic prices and exchange rates
   b. Dynamic version of the Dornbusch's Mundell-Fleming model; exchange rate dynamics and overshooting
   c. Stochastic Mundell-Fleming model due to Obstfeld

   NM, Chp 8, O&R, Chp 9

   Additional readings
   - Rogoff, Kenneth (1996), The Purchasing Power Parity Puzzle, Journal of Economic Literature, 34, 647-668.
   - Goldberg, Pinelopi, and Michael Knetter (1997), Goods Prices and Exchange Rates: What Have We Learned, Journal of Economic Literature, 35(3), 1243-1272.
   - Engel, Charles, Nelson, C, Mark, and Kenneth D. West (2007), Exchange Rate Models Are Not as Bad as You Think, NBER Macroeconomics Annual 2007, 381-441
   - Evans, Martin, and Richard Lyons (2005), Meese-Rogoff Redux, Micro-Based Exchange Rate Forecasting, American Economic Review Papers and Proceedings, 95(2), 405-416.
   - Rogoff, Kenneth (2002), Dornbusch's Overshooting Model After Twenty-Five Years, The Mundell-Fleming Lecture, IMF Working Paper 02/39.
     https://www.imf.org/external/pubs/ft/wp/2002/wp0239.pdf

Module IV: Exchange Rate Regimes and Currency Crises Models

1. **Recent History of Exchange Rate Arrangements**

   Reinhart, Carmen and Rogoff, Kenneth (2004), "The Modern History of Exchange Rate Arrangements: A Reinterpretation", Quarterly Journal of Economics, 119(1), 1-48.

2. **Fixed versus Floating Exchange Rate Crises: A First-Generation Model**

NM, Chp 11; O&R, Chps 8 (pages 554-569), 9 (pages 648-653); CV: Chapter 16

3. **The Second-Generation Currency Crisis Model**

CV: Chapter 16

Obstfeld, Maurice (1996), "Models of Currency Crises with Self-Fulfilling Features", European Economic Review, 40, 1037-1047

Krugman, Paul (1996), "Are Currency Crises Self-Fulfilling?", NBER Macroeconomic Annual 1996, with comments from Maurice Obstfeld

4. **Currency Crises and Monetary Policy in an Economy with Credit Constraints**

Aghion, P, Bacchetta P, and Banerjee A. (2000), "A Simple Model of Monetary Policy and Currency Crises", European Economic Review, 44, 728-738

Aghion, P, Bacchetta P, and Banerjee A. (2000), "Currency Crises and Monetary Policy in an Economy with Credit Constraints", European Economic Review, 45, 1121-1150.

The **main texts** for the course are:

1. Obstfeld, Maurice and Rogoff, Kenneth (1996), Foundations of International Macroeconomics, MIT Press – henceforth O&R
2. Vegh, A. Carlos (2013), Open Economy Macroeconomics in Developing Countries, MIT Press – henceforth CV
3. Nelson, C. Mark (2001), International Macroeconomics and Finance: Theory and Econometric Methods, Blackwell Publishers–henceforth NM
4. Schmitt-Grohe, Stephanie, Uribe, Martin, Woodford, Michael (2016), International Macroeconomics, Columbia University - henceforth SGU&W
5. Heijdra, Ben, Foundations of Modern Macroeconomics, Second Edition

Selected journal articles/ papers as suggested under the individual modules above.