Macroeconomía Avanzada / Advanced Macroeconomics

Licenciatura en Economía

Prof. Stephen McKnight
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Course Description

- There are 2 x 1.5 hour classes scheduled for 16 weeks: Thursday 9:50am – 11:20am (Room 5518) and 16.00pm – 17.30pm (Room 2246).

- The laboratorios will be given by Mtro. Carlos Alba Fajardo (aalba@colmex.mx) on Monday: 16:00pm – 17:30pm (Room 2246).

- This course aims to provide students with an advanced knowledge of modern macroeconomics. The course will cover the most important macroeconomic models in the key areas of economic growth, business cycle theory, monetary and fiscal policy, and open economy macroeconomics. The course will develop step-by-step the analytical, methodological, and basic computational skills (using DYNARE) needed to understand dynamic macroeconomic models. In addition, emphasis will also be given on understanding contemporary macroeconomic policy issues.

- The course is divided into the following 3 sections:
  1. Theories of Economic Growth.
  2. Business Cycle Theories and Macroeconomic Policy.
  3. Open Economy Macroeconomics.

- Lecture notes will be distributed via email before each class.

Course Evaluation

- Students will be expected to complete occasional problem sets as homework. The answers to these problem sets will be given in the laboratorio.
- There will be two (in-class) examinations. A mid-term exam and a final-term exam.
- The evaluation of the course will be based on both examinations.
  - Mid-Term Exam 35%
  - Final-Term Exam 65%
- The Mid-Term Exam will take place on Thursday 26th September (week 8) between 9:50am – 11:20am.

Textbooks

The main textbook for this course is:

- Romer (2012), *Advanced Macroeconomics*, 4th Edition, McGraw Hill.

In addition to Romer (2012), students may also find the following textbooks useful for the topics on Economic Growth:

- Barro and Sala-i-Martin (2004), *Economic Growth*, 2nd Edition, MIT Press.
- Jones and Vollrath (2013), *Introduction to Economic Growth*, 2nd Edition, Norton.

In addition to Romer (2012), students may also find the following textbooks useful for the topics on Business Cycle Theory and Macroeconomic Policy:

- Gali (2015), *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and its Applications*, 2nd Edition, Princeton University Press.
- McCandless (2008), *The ABC's of RBC's*, Harvard University Press
- Walsh (2010), *Monetary Theory and Policy*, 3rd Edition, MIT Press.

For the Open-Economy Macroeconomics section of the course, we will use a combination of the following textbooks:

- Obstfeld and Rogoff (1996), *Foundations of International Economics*, MIT Press.
- Végh (2013), *Open Economy Macroeconomics in Developing Countries*, MIT Press.

Course Outline [*(*) denotes compulsory reading*]

Section 1 – Theories of Economic Growth

Topic 1: The Solow Growth Model

1. The Neoclassical Production Function
2. The Solow Growth Model
3. Existence and Stability of the Steady State
4. Comparative Statics and Properties of the Solow Model
5. Empirical Application: Growth Accounting
6. The Solow Model with Human Capital
7. The Solow Model and the Central Questions of Growth Theory

Reading List:

- (*) Romer (2012), Chapters 1 and 4.
- (*) Barro and Sala-i-Martin (2004), Chapters 1 and 10.1.
- (*) Jones and Vollrath (2013), Chapters 2 and 3.
- Mankiw, Romer and Weil (1992), "A Contribution to the Empirics of Economic Growth." *Quarterly Journal of Economics* 107: 407 – 438.
- Hall and Jones (1999), "Why do Some Countries Produce so Much More Output per Worker than Others?" *Quarterly Journal of Economics* 114: 83 – 116.

Topic 2: The Ramsey Growth Model

1. An Introduction to Dynamic Optimization
2. The Ramsey Growth Model
3. Solving the Ramsey Model using Phase Diagrams
4. The Ramsey Model vs. The Solow Model
5. Policy Experiments
6. Adding Government

Reading List:

(a) (*) Romer (2012), Chapter 2: Part A.
(b) (*) Barro and Sala-i-Martin (2004), Chapter 2.

Topic 3: Overlapping Generation (OLG) Models

1. The Diamond Overlapping Generations (OLG) Model
2. Policy Experiments
3. Capital Over-Accumulation and Dynamic Inefficiency
4. The Macroeconomics of Pensions

Reading List:

(a) (*) Romer (2012), Chapter 2: Part B.

Topic 4: Endogenous Growth Theory

1. R&D and Economic Growth
2. A R&D Model without Capital
3. A R&D Model with Capital
4. Learning-By-Doing

Reading List:

(a) (*) Romer (2012), Chapter 3, Sections 3.1 – 3.4.
(b) (*) Jones and Vollrath (2013), Chapter 5.

Section 2 – Business Cycle Theory and Macroeconomic Policy

Topic 5: Real Business Cycle Theory

1. Business Cycle Fluctuations
2. The Real Business Cycle Model
3. Linearization Techniques
4. Inspecting the Mechanism: An Analytical Solution to the RBC Model using the Method of Undetermined Coefficients
5. The RBC Model and DYNARE
6. The Baseline RBC Model of Romer (2012) textbook

Reading List:

- (*) Romer (2012), Chapter 5.
- (*) McCandless (2008), Chapter 6.2.
- Campbell (1994), "Inspecting the Mechanism: An Analytical Approach to the Stochastic Growth Model", *Journal of Monetary Economics*: 33, 463 – 506.
- DYNARE Reference Manual link and User Guide link

Topic 6: Nominal Rigidity

1. The Goods and Labor Markets under Nominal Rigidity
2. The Natural Rate of Unemployment and the Expectations-Augmented Phillips Curve
3. Imperfect Competition and Menu Costs
4. Nominal vs. Real Rigidities
5. The Lucas Imperfect-Information Model
6. Empirical Evidence on the Output-Inflation Trade-Off

Reading List:

(a) (*) Romer (2012), Chapter 6.

Topic 7: Dynamic New Keynesian Macroeconomics

1. Empirical Evidence on Sticky Prices
2. Building Blocks of Dynamics New Keynesian Models
3. A New Keynesian Model for Monetary Analysis
4. The New Keynesian Phillips Curve
5. Solving the Basic New Keynesian Model using DYNARE

Reading List:

(b) (*) Romer (2012), Chapter 7.
(c) (*) Gali (2015), Chapter 3.
(d) (*) Walsh (2010), Chapter 8.
(e) Farmer, Khramov, and Nicoló (2015), "Solving and Estimating Indeterminate DSGE Models", *Journal of Economic Dynamics and Control*, 54, pp17 – 36.

Topic 8: Monetary Policy

1. Optimal Monetary Policy
2. Monetary Policy Rules, the Taylor Principle, and Indeterminacy
3. Dynamic Inconsistency of Monetary Policy

Reading List:

(a) (*) Romer (2012), Chapter 11.
(b) (*) Gali (2015), Chapter 4.
(c) (*) Walsh (2010), Chapter 7.
(d) Dincer and Eichengreen (2014), "Central Bank Transparency and Independence: Updates and New Measures", *International Journal of Central Banking,* 10, pp189 – 253.
(a) McKnight and Mihailov (2015), "Do Real Balance Effects Invalidate the Taylor Principle in Closed and Open Economies", *Economica*, 82, pp938 – 975.

Topic 9: Fiscal Policy

1. Ricardian Equivalence and Reasons for Ricardian Non-Equivalence
2. Ricardian Equivalence under the Representative Agent Framework
3. Government Budget Deficits in an OLG Model
4. Empirical Evidence on Ricardian Equivalence
5. Optimal Fiscal Policy

Reading List:

(a) (*) Romer (2012), Chapter 12, Sections 12.1 – 12.3.

(b) Obsfeld and Rogoff (1996), Chapter 3, Sections 3.1 and 3.2.
(c) Végh (2013), Chapter 10.

Section 3 – Open Economy Macroeconomics

Topic 10: Intertemporal Trade and the Current Account

1. A Small Two-Period Endowment Economy
2. Explaining Intertemporal Trade Patterns
3. Defining the Current Account
4. The Role of Government Spending
5. The Role of Investment Spending
6. The Feldstein -Horioka Saving-Investment Puzzle

Reading List:

(a) (*) Obstfeld and Rogoff (1996), Chapter 1, Sections 1.1.1 – 1.1.6 and 1.2.1 – 1.2.3 and p161 – p164.
(b) (*) Obstfeld and Rogoff (2001), "The Six Major Puzzles in International Macroeconomics. Is There a Common Cause?" *NBER Macroeconomics Annual 2000*, p349 – p359.
(c) Feldstein and Horioka (1980), "Domestic Savings and International Capital Flows", *Economic Journal*, 90, pp314 – 329.

Topic 11: Uncertainty and International Financial Markets

1. Arrow-Debreu Securities and Complete Asset Markets
2. A Two-Period Small Open Economy Model
3. A Global Two-Country Model
4. The International Consumption Correlations Puzzle
5. The Backus-Smith Puzzle
6. International Portfolio Diversification

Reading List:

(a) (*) Obstfeld and Rogoff (1996), Chapter 5, Sections 5.1 – 5.1.6, Sections 5.2 – 5.2.1 and Section 5.3.
(b) (*) Obstfeld and Rogoff (2001), "The Six Major Puzzles in International Macroeconomics. Is There a Common Cause?" *NBER Macroeconomics Annual 2000*, p359 – p372.
(c) (*) Végh (2013), Chapter 2, Section 2.3.

Topic 12: Nominal Exchange Rate Regimes

1. Speculative Attacks on Fixed Exchange Rate Regimes: A First Generation Model
2. Multilateral Arrangements to Fix Exchange Rates
3. Speculative Attacks on Fixed Exchange Rate Regimes: A Second Generation Model

Reading List:

(a) (*) Obstfeld and Rogoff (1996), Chapter 8, Section 8.4.
(b) (*) Végh (2013), Chapter 5.
(c) Sachs, Tornell and Velasco (1996), "The Mexican Peso Crisis: Sudden Death or Death Foretold?" *Journal of International Economics*, 41, pp265 – 283.
(d) Calvo and Mendoza (1996), "Mexico´s Balance of Payments Crisis – A Chronicle of a Death Foretold", *Journal of International Economics*, 41, pp235 – 264
(e) Saxena (2004), "The Changing Nature of Currency Crises", *Journal of Economic Surveys*, 18, pp321 – 350.

Topic 13: Money and Exchange Rates under Sticky Prices

1. The Mundell-Fleming-Dornbusch Model
2. Solving the Mundell-Fleming-Dornbusch Model using Phase Diagrams
3. Exchange Rate Overshooting
4. Analytical Solution of the Mundell-Fleming-Dornbusch Model
5. Fixed vs. Flexible Exchange Rate Regimes

Reading List:

(a) (*) Obstfeld and Rogoff (1996), Chapter 9, Sections 9.1 – 9.2 and Sections 9.3 – 9.32.
(b) Rogoff (2002), "Dornbusch's Overshooting Model after 25 Years: IMF Mundell-Fleming Lecture", *IMF Staff Papers*, 49 (Special Issue), pp1 – 34.

Laboratorios de Macroeconomía Avanzada: El Programa (2019) Mtro. Carlos Alba Fajardo Lunes, 16:00pm – 17:30pm Salón: 2246		
Week	**Date**	**Material to be covered**
1	5th August	No class
2	12th August	No class
3	19th August	Problem Set 1 (Solow Model)
4	26th August	Problem Set 2 (Ramsey Model)
5	2nd September	Problem Set 3 (OLG Model)
6	9th September	Problem Set 4 (Endogenous)
7	16th September	No class (asueto oficial)
8	23rd September	Revision Class for Mid-Term Exam
9	30th September	Answers to Mid-Term Exam
10	7th October	DYNARE 1: Basic RBC Model
11	14th October	Problem Set 5 (RBC Model)
12	21st October	DYNARE 2: Basic New Keynesian Model
13	28th October	No class
14	4th November	Problem Set 6 (Current Account)
15	11th November	Problem Set 7 (Uncertainty)
16	18th November	No class (asueto oficial)