

ECO511: Macroeconomics 1

Université Mohammed VI Polytechnique

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Professor

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Electronic copy

An electronic copy of this course outline is available in the Files subdirectory for the course on CANVAS (eco511_2024.pdf). A copy is also available at https://www.steveambler.uqam.ca/511/eco511_2024.pdf

Course Description

The overall objective is to present an introduction (at an advanced level) to dynamic macroeconomic theory. We will study several models and theories, including the basic neoclassical model with infinite horizons, overlapping generations models, the basic Real Business Cycle model, the basic New Keynesian model, the welfare cost of fluctuations, optimal stabilization policy, and endogenous growth theory.

By the end of the course students will be familiar with the basic models in dynamic macroeconomics. They will be able to understand, analyze, and solve them, and use them for policy analysis.

Evaluation

Project:	25%
In-class participation	15%
Mid-term exam:	30%
Final exam:	30%

The exact dates of the exams and the deadline for submitting the project will be determined at the beginning of the semester.

Course calendar

I will be in Rabat during the weeks of September 23 to September 27 and September 30 to October 4 (**still to be confirmed**). There will likely be four lectures and two labs scheduled for this time period. The rest of the course will be taught online. The full calendar is available and will be updated on CANVAS.

Documents

There is no compulsory textbook. The course will be based on journal articles and lecture notes. However, quite a bit of the material will come from Romer (2018): see the references at the end of this syllabus. A copy of this book is available in your university library.

I prepared detailed lecture notes when I taught the course last year. I will be updating them over the course of the semester. They are available online on my UQAM website in the following directory: <https://steveambler.uqam.ca/511/>, and on CANVAS. I have also uploaded some old lecture notes (in French) to the following subdirectory (see also below for clickable links): <https://stevambler.uqam.ca/511/oldnotes/>.

Course outline

Compulsory readings are indicated with an asterisk. The other references are included for students who wish to deepen their knowledge of particular topics.

0. Introduction

References: (introducs.pdf)*

1. General introduction, stylized facts of the business cycle and the evaluation of macroeconomic models

References: Lecture notes (introducs.pdf)*; Romer (2018, chapter 5, section 1); Ambler (2023d); Backus, Kehoe and Kydland (1992); Gamber and Joutz (1997)

2. Growth models 1: Basic Solow model

References: Lecture notes (solows.pdf)*; Romer (2018) chapter 1; Farmer (1999) chapters 5 and 9

3. Growth models 2: Optimal growth with infinite horizons — Ramsey-Cass-Koopmans model

References: Lecter notes (croissans.pdf)*; Romer (2018) chapter 2 Part A; Farmer (1999) chapter 5

4. Growth models 3: overlapping generations — Diamond model

References: Lecture notes (croissans.pdf)*; Romer (2018) chapter 2 Part B; Farmer (1999) chapter 9; Auerbach and Kotlikoff (1987)

5. Basic Real Business Cycle model and solution under rational expectations

References: Lecture notes (cycleres.pdf)*; Notes on the Sims model (simsmode.pdf)*; Sims (2017); Sims (2017b); Romer (2018, chapter 5); Ambler (2023d); Ambler (2023e); Ambler (2023f); Blanchard and Kahn (1980); King, Plosser and Rebelo (1988a); King, Plosser and Rebelo (1988b); King and Rebelo (2000); King and Watson (1998)

6. Microfoundations of nominal rigidities

References: Lecture notes (priefixes.pdf)*; Romer (2018, chapter 6); Ambler (2023g); Ambler (2010)

7. The New Keynesian model: basic model and real rigidities

References: Lecture notes (newkeyness.pdf)*; Blanchard and Galí (2007); Romer (2018, chapter 7); Ambler (2023h); Galí (2015); Galí and Gertler (2007); Dotsey, King and Wolman (1999); Kiley (2002); King and Kurmann (2003); Mankiw (1990); Chari, Kehoe and McGrattan (2000); Dotsey and King (2001); Danthine and Kurmann (2004); Romer (1993)

8. The welfare cost of fluctuations

References: Lecture notes (welfarecosts.pdf)*; Galí, Gertler, and López-Salido (2007)*; Huggett (1997); Krusell and Smith (1999); Lucas (1987); Lucas (2003)

9. Stabilization policy and monetary policy

References: Lecture notes (monetary.pdf)*; Romer (2018, chapter 12); Clarida, Galí and Gertler (1999); Benhabib, Schmitt-Grohé and Uribe (2001); Aoki (2001); Erceg, Henderson and Levin (2000); Goodfriend and King (1998); King (2000); King and Wolman (2003); Cochrane (2023)

10. Endogenous growth: basic models

References: Lecture notes (endgrowth)*; Romer (1994)*; Aghion and Howitt (2008), chapters 2*, 5*; Sala-i-Martin (2002); Romer (2018, chapter 3); Barro and Sala-i-Martin (1995), section 1.3, chapters 4, 6, 7; Ljungqvist and Sargent (2000), chapter 11

11. Endogenous growth 2: Schumpeterian growth

References: see previous section

References

See also

<http://stevambler.uqam.ca/511/references.pdf>

Books and online lecture notes

Aghion, Philippe et Peter Howitt (1998), *Endogenous Growth Theory*. Cambridge MA, MIT Press

Alogoskoufis, George (2019), *Dynamic Macroeconomics*. Cambridge MA, MIT Press

Auerbach, Alan and Laurence Kotlikoff (1987), *Dynamic Fiscal Policy*. Cambridge, Cambridge University Press

Barro, Robert et Xavier Sala-i-Martin (1995), *Economic Growth*. New York NY, McGraw Hill

Campbell, John, Andrew Lo et A. C. MacKinlay (1997), *The Econometrics of Financial Markets*. Princeton NJ, Princeton University Press

Cochrane, John (2023), *The Fiscal Theory of the Price Level*. Princeton NJ, Princeton University Press

Farmer, Roger (1999), *Macroeconomics of Self-Fulfilling Prophecies*. 2^e édition, Cambridge MA, MIT Press

Galí, Jordi (2015), *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and Its Applications*. 2^e édition, Princeton NJ, Princeton University Press

Greenwood, Jeremy (2002), *Lecture Notes on Dynamic Competitive Analysis*. University of Rochester

<https://www.coursehero.com/file/75393946/lecture-notes-Greenwoodpdf>

Heijdra, B. J. (2017), *Foundations of Modern Macroeconomics*. 3^e édition, Oxford, Oxford University Press

Krueger, Dirk (2012), *Macroeconomic Theory* University of Pennsylvania

<https://users.ssc.wisc.edu/~aseshadr/econ714/MacroTheory.pdf>

Ljungqvist, Lars and Thomas Sargent (2000), *Recursive Macroeconomic Theory*. Cambridge MA, MIT Press

Lucas, Robert E. (1987), *Models of Business Cycles*. Oxford, Basil Blackwell

Romer, David (1997), *Macroéconomie approfondie*. Paris, McGraw Hill-Éditions

Romer, David (2018), *Advanced Macroeconomics*. fifth edition, New York NY, McGraw Hill

Uribe, Martín and Stephanie Schmitt-Grohé (2017), *Open Economy Macroeconomics*. Princeton NJ, Princeton University Press

Woodford, Michael (2003), *Interest and Prices*. Princeton, Princeton University Press

Lecture notes

My old lecture notes are in French. I will concentrate on producing detailed slides from the notes for presentation in class, which will cover the same material. I will post them to my personal website at UQAM and on CANVAS.

Ambler, Steve (2024), “Introduction général au cours.” UQAM

<https://stevambler.uqam.ca/511/oldnotes/introduc.pdf>

Ambler, Steve (2024b), “Le modèle de croissance de Solow.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/croissas.pdf>

Ambler, Steve (2024c), “Croissance optimale.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/croissan.pdf>

Ambler, Steve (2024d), “Notes sur les modèles de cycles réels et leurs successeurs.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/cycleree.pdf>

Ambler, Steve (2024e), “Les modèles du cycle réel.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/cyclere2.pdf>

Ambler, Steve (2024f), “Notes on the Forward-Backward Simulation Method.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/forbackd.pdf>

Ambler, Steve (2024g), “Notes sur les microfondements des rigidités nominales.” UQAM

scriptsize <https://steveambler.uqam.ca/511/oldnotes/prixfixe.pdf>

Ambler, Steve (2024h), “Le modèle néo-keynésien de base.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/newkeynes.pdf>

Ambler, Steve (2024i), “Consommation.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/consomma.pdf>

Ambler, Steve (2024j), “Notes sur la consommation.” (avec André Kurmann) UQAM

<https://steveambler.uqam.ca/511/oldnotes/consomma2.pdf>

Ambler, Steve (2024k), “Notes sur l’investissement.” UQAM

<https://steveambler.uqam.ca/511/oldnotes/investis.pdf>

Ambler, Steve (2024l), “General Introduction.” Mohammed VI Polytechnic

<https://stevambler.uqam.ca/511/introducs.pdf>

Ambler, Steve (2024m), “Solow Growth Model and Overlapping Generations.” Mohammed VI Polytechnic

<https://stevambler.uqam.ca/511/solows.pdf>

Ambler, Steve (2024n), “Optimal Growth Models.” Mohammed VI Polytechnic

<https://stevambler.uqam.ca/511/croissans.pdf>

Ambler, Steve (2024n1), “Notes on the Sims Model.” Mohammed VI Polytechnic

<http://stevambler.uqam.ca/511/simsmodel.pdf>

Ambler, Steve (2024o), “Microfoundations of Nominal Rigidities.” Mohammed VI Polytechnic

<https://stevambler.uqam.ca/511/prixfixes.pdf>

Ambler, Steve (2024p), “The New Keynesian Model.” Mohammed VI Polytechnic

<https://steveambler.uqam.ca/511/newkeyness.pdf>

Ambler, Steve (2024q), “The Welfare Costs of Fluctuations.” Mohammed VI Polytechnic

<https://steveambler.uqam.ca/511/welfarecosts.pdf>

Ambler, Steve (2024r), “Monetary and Fiscal Policy.” Mohammed VI Polytechnic

<https://steveambler.uqam.ca/511/monetary.pdf>

Ambler, Steve (2024s), “Endogenous Growth Models.” Mohammed VI Polytechnic

<https://steveambler.uqam.ca/511/endgrowth.pdf>

Articles and book chapters

Abramovitz, Moses (1956), “Resource and Output Trends in the United States since 1870.” *American Economic Review* 46, 5–23

Aghion, Philippe and Peter Howitt (2006), “Appropriate Growth Policy: A Unifying Framework.” *Journal of the European Economic Association* 4, 269–314

Ambler, Steve (2010), “Real Rigidities and Endogenous Nominal Wage Rigidity.” UQAM

<http://www.steveambler.uqam.ca/papers/fixwage.2010.pdf>

Ambler, Steve and Emanuela Cardia (1995), “Les modèles réels de la transmission internationale du cycle économique.” *Actualité économique: revue d’analyse économique* 71, 193–217

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<http://steveambler.uqam.ca/papers/transmis.pdf>

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- Backus, David, Patrick Kehoe and Finn Kydland (1993), “International Business Cycles: Theory and Evidence.” Working paper
- Backus, David, Patrick Kehoe and Finn Kydland (1995), “International Business Cycles: Theory and Evidence.”, in Thomas F. Cooley (ed.), *Frontiers of Business Cycle Research*. Princeton NJ, Princeton University Press
- Ball, Laurence and David Romer (1990), “Real Rigidities and the Non-Neutrality of Money.” *Review of Economic Studies*, 57, 183–203
- Baumol, William (1986), “Productivity Growth, Convergence, and Welfare.” *American Economic Review* 76, 1072–1085
- Benhabib, Jess, Stephanie Schmitt-Grohé and Martín Uribe (2001), “Monetary Policy and Multiple Equilibria.” *American Economic Review* 91, pages 167–186
- Bernanke, Benjamin, Mark Gertler, and Stephen Gilchrist (1998). “The Financial Accelerator in a Quantitative Business Cycle Framework.” *Handbook of Macroeconomics*, Amsterdam, North Holland (also NBER working paper 6455)
- Blanchard, Olivier and Jordi Galí (2007), “Real Wage Rigidities and the New Keynesian Model.” *Journal of Money, Credit and Banking* 39, 35–64
- Blanchard, Olivier and Charles Kahn (1980), “The Solution of Linear Difference Models under Rational Expectations.” *Econometrica* 48, 1305–1311
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- Danthine, Jean-Pierre and André Kurmann (2004), “Fair Wages in a New Keynesian Model of the Business Cycle.” *Review of Economic Dynamics*, 7, 107–142
- de Carvalho Guillén, Osmani Teixeira, João Victor Isslerz and Afonso Arinos de Mello Franco-Netox (2012), “On the Welfare Costs of Business-Cycle Fluctuations and Economic-Growth Variation in the 20th Century.” working paper

284, Banco Central do Brasil

<https://www.bcb.gov.br/pec/wps/ingl/wps284.pdf>

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- Dotsey, Michael et Robert G. King (2001), “Pricing, Production and Persistence.” NBER working paper 8407
- Erceg, Christopher, Dale Henderson and Andrew Levin (2000), “Optimal Monetary Policy with Staggered Wage and Price Contracts.” *Journal of Monetary Economics* 46, 281–313
- Fiorito, Riccardo and Tryphon Kollintzas (1994), “Stylized Facts of Business Cycles in the G7 From a Real Business Cycles Perspective.” *European Economic Review* 38, 235–269
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- <https://cepr.org/voxeu/columns/why-you-should-never-use-hodrick-prescott-filter>
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- Kiley, Michael (2002), "Partial Adjustment and Staggered Pricing." *Journal of Money, Credit and Banking* 34, 283–298
- King, Robert G. (2000), "The New IS-LM Model: Language, Logic and Limits," *Federal Reserve Bank of Richmond Economic Quarterly*, 86, 45–103
- King, Robert G., Charles I. Plosser and Sergio Rebelo (1988a), "Production, Growth and Business Cycles: 1. The Basic Neoclassical Model." *Journal of Monetary Economics* 21, 195–232
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- Lucas, Robert E. (2003), "Macroeconomic Priorities." *American Economic Review* 93, 1–14
- Mankiw, N. Gregory (1990), "A Quick Refresher Course in Macroeconomics." *Journal of Economic Literature* 28, 1645–1660
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- Monacelli, Tommaso (2004), “Into the Mussa Puzzle: Monetary Policy Regimes and the Real Exchange Rate in a Small Open Economy.” *Journal of International Economics* 62, 191–217
- Obstfeld, Maurice and Kenneth Rogoff (2000), “New Directions for Stochastic Open Economy Models.” *Journal of International Economics* 50, 117–154 (and NBER working paper 7313)
- Romer, David (1993), “The New Keynesian Synthesis.” *Journal of Economic Perspectives* 7, 5–22
- Romer, Paul (1994), “The Origins of Endogenous Growth.” *Journal of Economic Perspectives* 8, 3–22
- Romer, David (2000), “Keynesian Economics without the LM Curve.” *Journal of Economic Perspectives* 14, 149–169
- Sala-i-Martin, Xavier (2002), “15 Years of Growth Economics: What Have We Learnt?,” *Journal Economía Chilena* (Central Bank of Chile) 5, 5–15 (and Universitat Pompeu Fabra working paper 620)
<https://econ-papers.upf.edu/papers/620.pdf>
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https://sites.nd.edu/esims/files/2023/05/rbc_notes_2017.pdf
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https://sites.nd.edu/esims/files/2023/05/stylized_facts_rbc_sp17.pdf
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- Uhlig, Harald (1998), “A Toolkit for Analysing Nonlinear Dynamic Stochastic Models Easily.” in Ramon Marimon and Andrew Scott, (eds.), *Computational Methods for the Study of Dynamic Economies*. Oxford, Oxford University Press (and QM&RBC codes 123, Quantitative Macroeconomics & Real Business Cycles)
<https://dqe.repec.org/codes/marimon-scott/Uhlig/>

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