

**Economics 450 D1-001**  
**Advanced Economics Theory - Honours**

“The consequences for human welfare involved in questions like these (*related to growth*) are simply staggering: Once one starts to think about them, it is hard to think about anything else”

Robert E. Lucas Jr.

Credits: 3

Method: Two lectures per week, last 3 weeks class presentations.

Meeting Times and Location: Tue and Thu 1:05-2:25 p.m. LEA 14

Professor: Francisco Alvarez-Cuadrado

E-mail: [francisco.alvarez-cuadrado@mcgill.ca](mailto:francisco.alvarez-cuadrado@mcgill.ca)

Office: Leacock 321E

Office hours: Thu 3:00-5:00 p.m.

Teaching Assistant: No

**Learning Objectives:** The course offers a thorough overview of the modern growth literature. Emphasis is placed on the construction of growth models with microeconomic foundations. The objectives of the course are:

1. Provide an introduction to the mathematical tools required to understand the scientific literature in this field.
2. Provide an overview of the evolution of growth theory over the last 50 years.
3. Build a connection between these theoretical exercises and the actual policies followed by developing/developed countries.
4. Introduce you to the most recent topics under debate in this literature.

**Math Requirements:** Calculus is freely used in this course, furthermore we will make use a set of mathematical techniques that you might not be familiar with. The first 4 lectures will be devoted to the introduction of these techniques at a user level.

**Prerequisites:** ECON 250D1/ECON 250D2 and ECON 352D1/ECON 352D2  
Students must register for both ECON 450D1 and ECON 450D2. No credit will be given for this course unless both ECON 450D1 and ECON 450D2 are successfully completed in consecutive terms

**Textbook:** You should read the following book during the course: “The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics” by William Easterly. This is not a formal textbook but the author discusses the applications of some of the theoretical models that we are going to be exploring in class.

There are several books on growth theory that might be helpful. Some of them cover the topics at a lower technical level than the attempted in this course, Economic Growth, David N. Weil, Pearson Addison Wesley, 2005

Introduction to Economic Growth, Charles I. Jones, W.W.Norton & Company, 2002  
Economic Growth, Benigno Valdes, Edward Elgar, 1999

There is one book that covers the topics at a more advanced level,  
Economic Growth, Robert J. Barro and Xavier Sala-i-Martin, MIT Press, 1999

**Grading policy:** This is the first term of a two-term course. This half of the course accounts for 50% of the year grade that is for 50 points. There will be two in-class exams, three homework sets and one presentation. The 50 points of the grade will be distributed in the following way.

Homework (3 points)

Exam 1 (Oct. 18<sup>th</sup>) (13 points)

Exam 2 (Nov. 10<sup>th</sup>) (20 points)

Presentation (14 points). Besides presenting, each student needs to attend at least 7 presentations to obtain the presentation points.

Exam dates: During class, on Tuesday, October 18<sup>th</sup> and Thursday, November 10<sup>th</sup>. You can only miss an exam if you have a medical reason (doctor's note required). If you miss the first exam, there will be **no** make-up exam and your exam grade will be based the second exam (i.e. the second exam will be worth 35 points of the final grade for this half of the course).

*McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see [www.mcgill.ca/students/srr/honest/](http://www.mcgill.ca/students/srr/honest/) <<http://www.mcgill.ca/students/srr/honest/>> for more information).*

*L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site [www.mcgill.ca/students/srr/honest/](http://www.mcgill.ca/students/srr/honest/) <<http://www.mcgill.ca/students/srr/honest/>> ).*

*In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.*

Here is an outline of the course, with the associated readings (Starred (\*) are required). Given that our lecture time is limited, some of the readings are aimed to complement the material covered in class.

## **0. Some mathematical tools**

ODE, systems of ODE's, qualitative solutions (phase diagram) and stability, intertemporal optimization.

Barro, R. and X. Sala-i-Martin, *Economic Growth*. Appendix on Mathematical Methods. MIT Press.

Chiang, A. *Fundamental Methods of Mathematical Economics*, McGraw-Hill, Inc.

## **1. Growth Facts and the world income distribution**

\* Easterly Ch. 1

\* The Economist, "More or less equal", March 11<sup>th</sup>, 2004

\* The Economist, "Pessimistic on Poverty", April 7<sup>th</sup>, 2004.

Jones, C. (1997) "On the Evolution of the World Income Distribution" JEP

Sala-i-Martin, X. (2006) "The World Distribution of Income: Falling Poverty and ...convergence, period", QJE

Bourguignon, F. and C. Morrisson (2002) "Inequality among World Citizens: 1820-1992" AER

Dollar, David and Kraay, Aart, (2002) "Growth Is Good for the Poor," JEG.

## **2. Keynesian Growth: Harrod-Domar Model.**

\*Easterly Ch. 2

Solow (2000), Growth Theory: An Exposition. Ch.1

## **3. Physical Capital: The Solow Model.**

\* Easterly Ch. 3 and 11

Solow (1956), "A Contribution to the Theory of Economic Growth" QJE

Phelps (1961), "The Golden Rule of Accumulation: A Fable for Growthmen" AER

Solow (2000), Growth Theory: An Exposition. Ch. 2 and 3

## **4. Evaluation of the Neoclassical Growth Model.**

Pritchett, L. (1997) "Divergence, Big Time" JEP

Solow (1957) "Technical Change and the Aggregate Production Function" RES

## **5. Endogenous Fertility and the Demographic Transition.**

\* Easterly Ch. 5

\* Galor and Weil (1999) "From Malthusian Stagnation to Modern Growth" AER

Brander and Taylor (1998) "The Simple Economics of Easter Island: A Ricardo-Malthus Model of Renewable Resource Use" AER

Becker, Glaeser and Murphy (1999) "Population and Economic Growth" AER

## **6. Human Capital in the Neoclassical Growth Model.**

\* Easterly Ch. 4

- \* Lucas, R. (1990), “Why Doesn’t Capital Flow from Rich to Poor Countries” AER
- \* Mankiw, G, D. Romer and D. Weil (1992) “A Contribution to the Empirics of Economic Growth” QJE
- Lucas, R. (1988) “On the Mechanics of Economic Development” JME
- Bosworth, B. and S. Collins (2008), “Accounting for Growth: Comparing China and India” JEP

## **7. Ideas: The Economics of Technical Change.**

- \* Easterly Ch. 8 and 9
- \* Solow R. (1994) “Perspectives on Growth Theory” JEP
- \* Romer, P. (1994) “The Origins of Endogenous Growth” JEP
- \* The Economist “The growth of growth theory”. May 18<sup>th</sup> 2006
- \* “Economic Growth” by Paul M. Romer. The Concise Encyclopedia of Economics.  
<http://www.stanford.edu/~promer/EconomicGrowth.pdf>
- Murphy, K., A. Shleifer and R. Vishny (1989) “Industrialization and the Big Push” JPE
- Grossman, G. and E Helpman (1994) “Endogenous Innovation in the Theory of Growth” JEP
- Romer, P. (1986) “Increasing Returns and Long-Run Growth” JPE
- Irwin, D. and P. Klenow (1994) “Learning-by-doing Spillovers in the Semiconductor Industry” JPE
- Jones, C. (1995) "Time Series Tests of Endogenous Growth Models" QJE

## **8. Beyond K, H and Ideas : Growth and Institutions**

- \*Easterly remaining chapters.
- Olson, M. (1996) “Big Bills Left on the Sidewalk: Why Some Nations are Rich, and Others Poor” JEP
- Hall, R. and C. Jones (1999) “Why Do Some Countries Produce So Much More Output per Worker than Others?” QJE

## **Class Presentations (3-4 students per group)**

### **1. Institutions**

**A)**

Acemoglu, D., S. Johnson and J. Robinson (2004) “Institutions as the Fundamental Cause of Long-Run Growth” NBER

**B)**

Acemoglu, D., S. Johnson and J. Robinson (2001) “The Colonial Origins of Comparative Development: An Empirical Investigation” AER

Acemoglu, D., S. Johnson and J. Robinson (2002) “Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution” QJE

### **2. Geography**

**A)**

Diamond, J., *Guns, Germs and Steel*, W.W. Norton & Co. (in the library they have a documentary based on the book)

**B)**

Bloom, D. and Sachs. J. (1998) "Geography, Demography, and Economic Growth in Africa" *Brookings*

Sachs, J. (2003) "Institutions don't rule: Direct effects of geography on per capita income" NBER

### **3. Property rights**

**A)**

De Soto, Hernando (1989) *The Mystery of Capital*

**B)**

Ostrom, Elinor (1990) *Governing the Commons*

### **4. History**

**A)**

Nunn, Nathan, (2009) "The Importance of History for Economic Development", Annual Review of Economics

Nunn, Nathan and Leonard Wantchekon, (forthcoming), "The slave trade and the origins of mistrust in Africa" AER

**B)**

Banerjee A, Iyer L, Somanathan R. (2005) "History, social divisions and public goods in rural India". J. Eur. Econ. Assoc.

Dell, Melissa, (2010) "The Mining Mita: Explaining Institutional Persistence", *Econometrica*

### **5. Policy I**

**A)**

Sachs, J. (2005) *The End of Poverty*

**B)**

Easterly, W. (2006) *The White Man's Burden*

### **6. Policy II**

**A)**

Henry, P.B. and C. Miller (2009) "Institutions versus Policies: A Tale of Two Islands," AER

Rodrik, D. (2004) "Growth Strategies" Handbook of Economic Growth

**B)**

R. Hausmann, B. Klinger, and R. Wagner (2008) "Doing Growth Diagnostics in Practice: A 'Mindbook'"

Rodrik, D. (2008) "Second-Best Institutions," AER

**Articles:** Articles can be downloaded from JSTOR ([www.jstor.org](http://www.jstor.org)), the library and most of them will be posted in WebCT. The NBER articles can be downloaded from [www.nber.org](http://www.nber.org).

**450**

	Date		Contents	HW (tentative)
1	01-Sep-11	Thursday	Hello	
2	06-Sep-11	Tuesday	Math	
3	08-Sep-11	Thursday	Math	HWI
4	13-Sep-11	Tuesday	Math	
5	15-Sep-11	Thursday	Growth Facts	
6	20-Sep-11	Tuesday	Harrod Domar	Due
7	22-Sep-11	Thursday	No Class	
8	27-Sep-11	Tuesday	Solow	HWII
9	29-Sep-11	Thursday	Solow	
10	04-Oct-11	Tuesday	Solow / RCK	
11	06-Oct-11	Thursday	RCK	
12	11-Oct-11	Tuesday	RCK / Eval Solow	Due
13	13-Oct-11	Thursday	Eval_Solow	
<b>14</b>	<b>18-Oct-11</b>	<b>Tuesday</b>	<b>Exam</b>	
15	20-Oct-11	Thursday	Fertility	
16	25-Oct-11	Tuesday	Fertility	HWIII
17	27-Oct-11	Thursday	Human capital	
18	01-Nov-11	Tuesday	Human capital	
19	03-Nov-11	Thursday	Ideas	Due
20	08-Nov-11	Tuesday	Ideas/Institutions	
<b>21</b>	<b>10-Nov-11</b>	<b>Thursday</b>	<b>Exam</b>	
22	15-Nov-11	Tuesday	Class Presentation	
23	17-Nov-11	Thursday	Class Presentation	
24	22-Nov-11	Tuesday	Class Presentation	
25	24-Nov-11	Thursday	Class Presentation	
26	29-Nov-11	Tuesday	Class Presentation	
27	01-Dec-11	Thursday	Class Presentation	
	06-Dec-11	Tuesday	No Class (Monday schedule)	