תאוריה כלכלית - מאקרו , 14225101,סתיו 2011

Economic Theory- Macro, 14225101, Fall 2011

דר׳ סאלם אבו זאיד

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You may find a copy of the syllabus, problems sets and other materials in this website.

Objectives

This course is the first part in the M.A. Macroeconomic theory sequence. The course is designed to provide the basic tools and background to modern macroeconomic theory (focusing on dynamic macroeconomics).

Short Outline

The main topics of the course are: introduction to dynamical systems and dynamic programming, rational expectations, intertemporal macroeconomic analyses, consumption, investment, asset pricing, the optimal growth model, the overlapping generations model, the new growth theory and, time permitting, the basic growth model with money demand.

Prerequisites

1. B.A. courses

2. Mathematical Methods in Economics A & B.

Structure of the Total Course Grade

Your total grade will be determined as follows:

Assignments- 25% of total grade.

Final exam-   75% of total grade.

References

You will be referred to the following textbooks and journal articles:

Textbooks

The main recommended textbooks are:

Romer David "Advanced Macroeconomics," 3rd edition, McGraw-Hill/Irwin, 2006.

Blanchard Oliver and Fischer Stanley "Lectures on Macroeconomics" MIT Press, 1989.

Ljungvist Lars and Sargent Thomas "Recursive Macroeconomic Theory," 2nd edition, MIT press, 2004.

Stokey Nancy and Robert Lucas Robert with Edward C. Prescott "Recursive Methods in Economic Dynamics" Harvard University Press, 1989.

You may also find the following textbooks useful:

Sargent Thomas "Dynamic Macroeconomic Theory" Harvard University Press, 1987.

Walsh Carl "Monetary Theory and Policy" 2nd edition, MIT Press, 2010.

Journal Articles

Cass David "Optimum Growth in an Aggregative Model of Capital Accumulation," *Review of Economic Studies*, 32, 1965, pp. 233-240.

Diamond Peter "National Debt in a Neoclassical Growth Model," *American Economic Review*, 60, 1965, pp. 1126-1150.

Hall Robert "Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence," *Journal of Political Economy*, 86, 1978, pp.971-987.

Solow Robert "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics*, 70, 1956, pp. 65-94.

Mankiw Gregory, Romer David and Weil David "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, 107, 1992, pp. 407-437.

Romer Paul "Increasing Returns and Long-Run Growth," *Journal of Political Economy*, 94, 1986, pp. 1002-1037.

Romer Paul "Endogenous Technical Change," *Journal of Political Economy*, 98, 1990, pp. S71-S102

Solow Robert "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics*, 70, 1956, pp. 65-94.

Samuelson Paul "An Exact Consumption-Loan Model of Interest with or Without the Social Contrivance of Money," *Journal of Political Economy*, 66, 1958, pp. 467-482.

Topics

I. Introduction
- Introduction to the course
- Short introduction to macroeconomic theory

Readings
- Blanchard and Fischer, Ch.1
- Mankiw Gregory "The Macroeconomist as Scientist and Engineer," *Journal of Economic Perspectives*, 20, 2006, pp. 29-46.

II. Mathematical Refresher
- Unconstrained optimization
- Constrained optimization
- Dynamical systems

Readings
- Sargent, Ch.1

III. The Two-Period Consumption-Saving Model
- The basic model
- Lifetime formulation
- Intertemporal budget constraint
- Life cycle/permanent income model
- Consumption smoothing
- Intertemporal elasticity of substitution
- Steady state

IV. The Multi-Period and Infinite-Period Consumption-Saving Models
- The basic model
- Lifetime formulation
- Intertemporal budget constraint
- Optimal intertemporal allocation
- Rational Expectations
- Asset pricing
- Steady state

Readings
- Romer, Ch.7
- Blanchard and Fischer, Ch.6.2-6.3
- Sargent, Ch.3
- Hall Robert "Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence," *Journal of Political Economy*, 86, 1978, pp.971-987.

V. Key Concepts in Consumption-Saving Models
- Certainty Equivalence
- Precautionary Savings
- Borrowing/ Liquidity constraints
- Consumption smoothing

Readings
- Romer, Ch.7

IV. Introduction to Dynamic Programming
- State and control variables
- Bellman equation
- Value function
- Envelope Theorem
- Recursive Formulation

Readings
- Ljungvist and Sargent, Ch.3
- Stokey, Lucas with Prescott, Ch.5

IIV. The Neoclassical Growth Model
- Introduction to growth models
- The Solow model
- The Solow model with human capital

Readings
- Romer, Ch.1, Ch. 3.8
- Solow Robert "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics*, 70, 1956, pp. 65-94.
- Mankiw Gregory, Romer David and Weil David "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, 107, 1992, pp. 407-437.

IV. The Optimal Growth Model
The optimal growth model of Ramsey-Kass-Koopmans
Households' optimization
Phase diagrams and convergence to equilbrium

Readings
- Romer, Ch.2, Part A.
- Stokey, Lucas with Prescott, Ch. 2.
- Cass David "Optimum Growth in an Aggregative Model of Capital Accumulation," *Review of Economic Studies*, 32, 1965, pp. 233-240.
- Romer, Ch.2A
- Blanchard and Fischer, Ch.2 2.1-2.3

V. The Overlapping Generations Models
The two-period Overlapping Generations (OLG) model
Basic Overlapping Generations (OLG) model with altruism
The Golden Rule
The Modified Golden Rule

<u>Readings</u>
- Blanchard and Fischer, Ch. 3.1-3.3.
- Romer, Ch. 2, Part B.
- Samuelson Paul "An Exact Consumption-Loan Model of Interest with or Without the Social Contrivance of Money," *Journal of Political Economy*, 66, 1958, pp. 467-482.
- Diamond Peter "National Debt in a Neoclassical Growth Model," *American Economic Review*, 60, 1965, pp. 1126-1150.

VI. The New Growth Theory (Endogenous Growth Theory)
The growth model of Romer
The role of innovations, knowledge, human capital in growth
Spillovers, externalities

<u>Readings</u>
- Romer, Ch.3, Part A
- Romer Paul "Increasing Returns and Long-Run Growth," *Journal of Political Economy*, 94, 1986, pp. 1002-1037.
- Romer Paul "Endogenous Technical Change," *Journal of Political Economy*, 98, 1990, pp. S71-S102.

VII. Investment
Investment and the cost of capital
Tobin's q

<u>Readings</u>
- Romer, Ch.8

VIII. The Basic Growth Model with Money
- The Sidrauski model
- Money in the utility (MIU)
- Cash in Advance (CIA) Constraints
- Neutrality and Superneutrality of Money

<u>Readings</u>
- Walsh, Ch.2, Ch.3.3
- Blanchard and Fischer, Ch. 4.5
- Sidrauski Miguel "Rational Choice and Patterns of Growth in a Monetary Economy," *American Economic Review*, 57, 1967, pp.534-544.