



**Course:** Macroeconomic Policy

**Faculty:** Luis Rojas

**Term:** Second

**Module:** Economic Models

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**Description:**

In this course we continue developing useful tools and equilibrium theory for modern economic analysis and in particular we study environments in which economic agents (households and firms) are heterogeneous in relevant dimensions. We introduce the model with incomplete insurance markets against idiosyncratic uncertainty, which can be seen as one of the current work-horses in the macro arena, and several of its applications will be reviewed. The book by Ljungqvist and Sargent listed below is a reference that contains part of the materials of the course. In addition, several specific readings will be indicated for each theme. Finally, during the course there will be problem sets to be submitted every week, and a final exam.

**Objective:**

The goal of the course is to introduce equilibrium models in which agents are heterogeneous in non trivial dimensions, and to adapt the techniques acquired in previous courses to deal with these environments. The interest in these models comes from the fact that they allow us to study the equilibrium effects of a given policy by taking into account its differentiated effects on agents that are heterogeneous in relevant dimensions. The objective, therefore, is to formulate models to perform policy evaluation analysis, specially using quantitative methods.

**Outline:**

**Theme 1:** Introduction to the course. The NMG with heterogeneous agents: the case of efficient economies and perfect aggregation. Efficient allocations and the Negishi approach.

**Theme 2:** A motivation for the interest in the IM model. A theoretical decision problem with idiosyncratic uncertainty and IM. The recursive formulation and properties of decision rules. A notion of constrained efficiency.

**Theme 3:** Transition functions and associated operators. The general equilibrium of the IM model. The case of endogenous labor: labor income risk becomes endogenous.

**Theme 4:** Constrained efficiency under IM a la DHKRR. Optimal income taxation with commitment (Chamley/Judd).

**Theme 5:** The primal approach to optimal policy. Revisiting optimal income taxation in IM economies.

**Theme 6:** The indivisible labor model. Models of the labor market: basic search and matching. Aiyagari and Huggett meet Mortensen and Pissarides.

**Theme 7:** Heterogeneous firms: the Lucas model of the “span of control”. An application to assess the effects of size dependent policies.

**References:**

Ljungqvist, L., and T. Sargent (2000): *Recursive Macroeconomic Theory*, MIT press.

Stokey, N. L., and R. E. Lucas (1989): *Recursive Methods in Economic Dynamics*, Harvard University Press.

**Grading:**

A final exam 80%, 20% Problem sets