

*Capital Theory*

*Fernando Alvarez*

*Spring 2001*

This class studies discrete time dynamic programming and applications of it in economics. I will extensively use “Recursive Methods in Economic Dynamics” (RMED) by Stokey and Lucas with Prescott. The plan is to cover chapters 3 to 13 of RMED.

I will devote less time to cover the more technical material, which you will have to read by yourself to a largest extent that the rest of the chapters. Problem sets will be assigned from the more technical chapters to help you with this material. These chapters are 3, 7, 8, 11 and 12.

If time permits I will cover applications of recursive methods. In particular I plan to teach applications of the methods developed by Abreu, Pierce and Stachetti for the analysis of various dynamic problems. These are the papers I plan to cover:

Atkeson, Andrew, “International lending with moral hazard and risk of repudiation”, *Econometrica*, 59(4), 1991.

Atkeson, Andrew and Lucas, Robert, “On efficient distributions with private information”, *Review of Economic Studies*, 1992.

Chang, Roberto, “Credible monetary policy in an infinite horizon model: recursive approaches”, *Journal of Economic Theory*, 1998.

Kocherlakota, Narayana “Implications of efficient risk sharing without commitment”, *Review of Economic Studies*, 1996.

There will be no midterm in this class. Your grade will be based in the grade of your final and in grades of your problem sets, with weights 0.75 and 0.25 respectively.

The time and place of the review sessions will be decided in class. During the review sessions the TA’s, Francisco Buera and Claudio Irigoyen, will present the solutions of the assigned problems.