Burhanettin (Burhan) Kuruscu
Fall 2014
Email: burhan.kuruscu@utoronto.ca
Office: GE 203
Office Phone: 416 – 978 8343

ECO 2021 - Macroeconomic Theory I

SYLLABUS

Objectives

This course covers important models in consumption and savings literature; especially those include heterogeneity due to income risk and incomplete insurance markets. The main focus of the course will be on quantitative analysis of these models. The students will learn computational techniques and programming in MATLAB.

Lectures: Monday 9-11am (GE 100) and Wednesday 9-11am (GE 100)

Office Hours:

My office hours are on **Wednesdays 2:00-3:00pm** in my office. Outside my office hours you can contact me via e-mail at burhan.kuruscu@utoronto.ca, *although* at busy times you will get a prompter response if you stop by during the office hours.

Required Material:

You are required to obtain a version of **MATLAB**. Student version is available at $99.00 at the following link:

http://www.mathworks.com/academia/student_version/

E-mail list: You are automatically added to the class email list if you are registered for this course. This email list will be the main way I will make announcements and communicate with the class.

Blackboard: Please check the blackboard frequently for course materials and announcements.

Course Requirements and Grading

Two projects: First project will be 40% and the second 60% of the total grade in this section. The first project can be done in groups of two students. The second one should be done individually.

Class Participation: You should feel comfortable to ask any questions if you cannot follow my lectures or you do not understand something.

Schedule:

- **Neo-Classical Growth Model**
    - Competitive Equilibrium of the Neo-classical Growth Model: (k,K) problem and analytical solution in 2-period with LOG and full depreciation
    - Numerical Solution of the Planner's Problem of the Neo-classical Growth Model: Brute Force Discrete Space Dynamic Programming Method
    - Stochastic Neo-Classical Growth Model
        - Discretizing an AR(1) process
- **Models with Heterogeneity**
    - Complete Markets Example.
    - Huggett, M. "The risk free rate in heterogeneous-agents, incomplete insurance economies," Journal of Economic Dynamics and Control, 1993, 17 (5/6), 953-970.
    - A simple model of bond pricing.
    - Aiyagari, S. R. "Uninsured idiosyncratic risk, and aggregate saving." Quarterly Journal of Economics, 1994, Vol. 109, 659—684.
    - Transition in Aiyagari Model.
    - Distribution of wealth and the behavior of aggregates under complete markets
    - Krusell, P. and A. Smith, " Income and wealth heterogeneity in the macroeconomy," Journal of Political Economy, 1998, Vol. 106, pp. 867-896.
    - Arrelano, C. "Default Risk and Income Fluctuations in Emerging Economies," American Economic Review, June 2008.
    - Guvenen, F., G. Kambourov, B. Kuruscu, S. Ocampo Diaz, and D. Chen, "Use It or Loose It: Efficiency Gains from Wealth Taxation", working paper.