1 Course Description and Learning Objectives

This course will survey selected contemporary topics in macroeconomic research, treated from a general and rigorously mathematical standpoint. Emphasis will be put on developing analytical and modeling skills that will enable the interested student to approach problems as close as possible to the research frontier, as well as to contribute originally to these research fields, either theoretically or empirically.

The course will focus on the following areas: i) growth theory and policy; ii) theories of structural and frictional unemployment, unemployment policy, and growth models that account for unemployment. Most of these topics have common methodological features, which are to be found in standard dynamic optimization techniques—optimal control theory and dynamic programming in particular. Therefore, we will pay some attention to developing such techniques in a way that is as rigorous as possible given the time constraints.

2 Texts

Topics will be selected among the following books, and/or journal articles that will be distributed through RamCT. Starred items in the following list feature required readings for the course. Additional lecture notes may be provided through RamCT at the instructor’s discretion.


3 Required Work

The final grade will be a weighted average of the score you’ll obtain in weekly problem sets (40%), a take-home mid term exam (30%), and an in-class final exam (30%).

The table below lists expectations about the contact hours for the various activities involved in this class.
3.1 Exams

A take-home midterm exam, due October 20th, 2014, at the beginning of class (30% of the grade). An in-class final exam, concerning topics pertaining to the final eight weeks of class (30% of the grade). According to the University Calendar, the final exam will take place December 16, 7.30–9.30am, in MRBsc 109. The final exam will be open book – open notes.

3.2 Problem Sets

Approximately 1 problem set per week that will be posted on RamCT and due by the specified due date (40% of the grade).

Tentative problem set due dates:

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Variations in the due date of the problem sets and/or midterm exam schedule depend on the actual progress made in class, and will be promptly communicated through RamCT.

3.3 Class Participation

This course is a seminar class, and students are expected to participate actively to the discussion. Class participation is useful because it raises the level of the interaction, other than inspiring research ideas. It is always a good idea to take a look at the readings before class in order to enhance the learning experience.

4 Make up Policy

You must be able to provide written evidence of any medical or family emergency which causes you to unexpectedly miss the midterm or the final exam as scheduled. In case no such evidence is provided, and you miss an exam, you will receive 0 points for it.

Alternative due dates for problem sets can be negotiated in advance with me, but they will apply to the whole class.
5 Academic Integrity

Academic misconduct like cheating, plagiarism, etc., will be taken very seriously in this course, and can lead to an overall F grade. Plagiarism, for instance, includes quoting sources while writing a paper without referencing them. I will strictly follow university policies relating to academic misconduct. See http://www.facultycouncil.colostate.edu/files/manual/sectioni.htm#.I.5.

At the beginning of the semester or, if for any reason you add the class later, the first day you attend class, I will ask you to sign the following CSU Student Honor Pledge:

“I have not given, received, or used any unauthorized assistance.”

6 Accomodation for Disability

Reasonable requests for accomodation to disabilities will be entertained. However, students are responsible for requesting accommodations in a timely manner and must be recognized as eligible for the accommodation through Resources for Disabled Students (RDS). For more information see http://rds.colostate.edu/index.asp.

7 Topics

Below you will find a tentative list of topics. Some topics will likely take more than a week, and therefore it may be difficult to get to cover all the topics listed. Also, please note that the following list is tentative. Thus, topics may be changed and/or dropped according to how the class progresses, and according to students’ interest.

Part 1. Economic Growth

**Topic 1.** Stylized facts of economic growth. World income distribution (A 1-4, AH Introduction, BSM Introduction and Chapter 1). Readings:


Topic 7. Credit Constraints, Inequality and Growth (AH 6). Readings:

Topic 8. Directed Technical Change I: Early models. Readings:


Topic 10. Institutions and Growth (AH 11, A 22). Readings:


Topic 12. (as time permits) The Environment and Directed Technical Change (A 17, AH 16). Additional Readings:
Topic 13. (as time permits) The diffusion of technology (A 18, BSM 3.3 and 8). Additional Readings:

Part 2. Coordination Problems and Externalities in Macroeconomics


Part 3. Equilibrium Unemployment

Topic 15. Equilibrium Unemployment Theory I: Efficiency Wages. Reading:

Topic 16. Equilibrium Unemployment Theory II: Matching Models (P 1-3)

Topic 17. (as time permits) Endogenous Job Destruction. Long-Run Equilibrium and Balanced Growth with Unemployment (P2,3). Additional Readings: