

Instructor: Daniele Tavani, Assistant Professor, Department of Economics, C310 Clark.

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Class meets: TR 2–3.15, 108 Nat Res.

1 Course Description

This course will survey contemporary heterodox approaches to economic research, both from a microeconomic and a macroeconomic perspective. Topics will be treated from a general, critical, and rigorously mathematical standpoint. The adjective ‘heterodox’ must be understood broadly. Some of the ideas and models developed in the course will not be strictly speaking ‘heterodox’ from a methodological point of view, even though their implications fall outside those of ‘mainstream’ economics.

The term ‘heterodox economics’ is usually associated with ‘Political Economy’. Defining political economy is not an easy task. Recently, Nancy Folbre of UMass Amherst has provided the following, compelling definition: political economy is ‘an approach that examines the impact of group identity and collective conflict on the organization of economic activity’.¹ This definition recognizes: 1) that individuals are not isolated, but are embedded in collective processes, decision-making, and outcomes; 2) that (distributional, political, etc.) conflict is a central aspect of economics. I would also add that group identity, collective conflict, and the resulting *institutions*—property rights, class, power, laws, markets, firms, informal agreements, government—not only arise in a *complex, evolving environment*, but also play a role in shaping the complexity and evolution of such environment. A fundamental aspect of the interaction between individuals on the one hand, and between individuals and groups or institutions on the other, is that aggregate outcomes have consequences that are often unintended by individuals.²

One of the main themes of the course will be to understand how do ideas that have to do with political economy can be formalized into mathematical models and how these ideas do apply to current economic issues. The main goal of developing models is to be able to draw policy implications (*comparative statics*, or *dynamics*, depending on the model specifics) that can be used to inform policy making. Emphasis will be put on developing analytical and modeling skills that will enable the interested student to contribute originally to these research fields, either theoretically or empirically (or both).

The course is divided in two parts, and each part will roughly take 8 weeks.

- The first part of the course will focus on contemporary micro and macro developments of ideas tracing their roots in the Political Economy of Classical economists (Smith, Ricardo, Malthus, Marx..). Topics will include: the emergence of economic institutions; bargaining; coordination failures and uneven development; evolutionary game theory and evolutionary dynamics; the contested nature of exchange; information problems and power in labor markets, credit markets and their general equilibrium implications; self- and other-regarding preferences, altruism, and

¹Folbre, Nancy, 2012. ‘The Political Economy of Human Capital’. Review of Radical Political Economics, vol. 44 no. 3: pp. 281-292.

²Here are two mainstream examples of what I am talking about. Think of the effect of an increase in the income of one person, among many others, acting according to basic consumer’s theory. Individual demand for all goods will increase, thus generating a (very little, perhaps) shift in the aggregate demand curve, and therefore an increase in prices. This effect is unintended from a strictly individual standpoint. Alternatively, think about the choice of driving your car or using public transportation in a city like New York when it rains. Individually, it makes sense to drive your car to minimize the hassle associated with public commuting given the weather. Many people will therefore choose to drive, and the result will be that everyone gets stuck in massive traffic jams. The jam is obviously an unintended outcome.

cooperation.

- The second part of the course will be centered around developing intuition and modeling techniques in order to study the linkages between economic growth and income distribution, both in developing and advanced economies. One focus of this part of the course will be on *class*, defined in relation to the ownership (or the lack thereof) of capital assets, and its implications for growth and distribution patterns. Topics will include: Classical theories of the long-run tendencies of capital accumulation, technological change, growth and distribution; medium run fluctuations and distributional conflict; Keynesian and Post-Keynesian theories of investment, income distribution, and growth. The objective is to provide solid analytical, other than historical (and philosophical, perhaps), foundations to the study of these issues. From a mathematical point of view, techniques will be developed to understand one of the most basic features of economic reasoning, no matter what school of thought one adheres to: arbitrage. We will develop an appreciation for the fact that arbitrage conditions are a natural outcome of dynamic optimization techniques, hence the need to carefully (although compatibly with the time constraints) develop such techniques. A related focus is on the microeconomic foundations for macroeconomics.

The course will be heavy on the math, but we will try to put equal weight on the quantitative part as well as on the interpretation of mathematical results. The hope is that students will not much learn one model or another, but how to think like economists.

2 Course Objectives

At the end of the course, successful students should be able to:

- Apply basic concepts of classical and evolutionary game theory to understand institutional design, coordination problems, public goods, externalities.
- Develop tools in asymmetric information modeling in order to understand principal–agent problems with applications to labor markets and credit markets.
- Develop a working knowledge of models incorporating growth and distribution dynamics in the long run, medium run, and short run, and alternative ways to ‘close’ such models.
- Develop an introductory understanding of dynamic optimization in continuous time, and of systems of differential equations.

3 Texts

1. Bowles, Samuel 2006 (**B**). Microeconomics, Princeton. ISBN-13: 978-0691126388
2. Foley, Duncan K., and Thomas Michl 1999 (**FM**). Growth and Distribution, Harvard. ISBN-13: 978-0674364202

B is **required** for the first half of the class (micro), while FM is **required** for the second half (macro/growth). In addition, topics will be selected among the following books. Starred items are those I will draw more often from. Some of the topics will be analyzed using recent research papers

published in refereed journals. Notes and/or articles from topics not covered in the main texts will be distributed through RamCT.

Basu, Kaushik 1999. Analytical Development Economics, MIT Press.
 Basu, Kaushik 2010. Beyond the Invisible Hand. Princeton.
 Foley, Duncan K. 2003. Unholy Trinity: Labor, capital, and land in the new economy. London and New York: Routledge.
 Gintis, Herbert 2009a. Game Theory Evolving, Second Edition. Princeton.
 Gintis, Herbert 2009b. The Bounds of Reason. Princeton.
 Kurz, Heinz, and Neri Salvadori 1995. Theory of Production, Cambridge.
 Novak, Martin 2007. Evolutionary Dynamics. Belknap Harvard.
 Taylor, Lance, 2011. Maynard’s Revenge. Harvard.

4 Required Work

The table below lists the *minimal* expectations about weekly effort for the class.

Activity	Contact Hours/week
Attend class	2.5
Read assigned readings	3.0
Review class notes	2.0
Work on problem sets	3.5
Study for exams	2.0
Total	11.0

The final grade for the class will be a weighted average of: weekly problem sets, a midterm exam, and a final exam.

1. **Exams:** A midterm exam (take home or in class, depending on the actual progress made in the class), due Tuesday, March 11th, 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 May 15th, 2014, 6.20–8.20p, in 108 Nat Res.
2. **Problem Sets:** approximately 12 weekly problem sets that will be posted on RamCT and due by the specified due date (40% of the grade).

Tentative due dates for the problem sets:

PSet 1: 1/28/14	PSet 2: 2/4/14	PSet 3: 2/11/14	PSet 4: 2/18/14
PSet 5: 2/25/14	PSet 6: 3/4/14	PSet 7: 4/1/14	PSet 8: 4/8/14
PSet 9: 4/15/14	PSet 10: 4/22/14	PSet 11: 4/29/14	PSet 12: 5/6/14

3. **Class Participation/Discussion:** Students are expected to actively participate in each class. Class participation raises the level of the discussion, other than inspiring research ideas. I expect students to participate actively during lectures. Please consult this syllabus for readings that will provide background for the lectures.

5 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.

6 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.”

7 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>.

8 Topics

The following list of topics is tentative, because many of the following topics will easily cover more than a week. Choices will be made according to the instructor’s and students’ interests. Topics may be added or dropped according to the actual progress made in class. Variations in the covered topics will be communicated in class and through RamCT.

- Part I: Micro (Weeks 1 - 8)
 1. Social Interactions and Institutional Design (B1, Basu 2010)
 2. Self-organization of economic life. An introduction to evolutionary game theory and evolutionary dynamics. Predators and preys, hawks and doves, replicators (B2, selected chapters in Novak).
 3. Preferences and behavior (B3).
 4. Strategic complementarities, coordination failures, and development issues (B4, Basu 1999: Chapters 3 and 7).
 5. ‘Gains from trade’, cooperative and non-cooperative bargaining. Applications (B5).
 6. Exchange: contracts, norms, and power (B7)

7. Contested exchange (i): Labor power, labor, and involuntary unemployment (B8).
 8. Contested exchange (ii): credit markets and credit rationing. General equilibrium features (B9).
- Part II: Macro/Growth and Distribution (Weeks 9 - 15)
 1. Growth and distribution. One sector models: consumption and growth, wages and profits. Income shares. Choice of technique and production functions (FM 1-3).
 2. Model closures: the labor market. Classifying Technical Change. Biased Technical Change and competing views of income distribution. Applications using the Extended Penn World Tables (3.0) (FM 4-5).
 3. Saving and capital accumulation. Arbitrage equations and intertemporal optimization (FM 6, notes on RamCT).
 4. N -sector models of growth and distribution. Equalization of profit rates. Issues with capital theory. Von Neumann's growth model (notes, selected chapters in Kurz and Salvadori).
 5. Goodwin's (1967) growth and distribution model, and modern developments.
 6. Capacity utilization, aggregate demand, and the business cycle: basic elements of post-Keynesian macroeconomics (FM11, various papers).
 7. Direction and intensity of technical progress and the functional distribution of income. Neo-classical (technology) and classical (class-conflict) perspectives (FM14, various papers).