Spring 2020  
DUKE UNIVERSITY  
Department of Economics

Economics 605: ADVANCED MICROECONOMIC THEORY

Professor: Charles Becker  
Telephone: 919-660-1885  
Email: cbecker@duke.edu  
Office: 312 Social Sciences  
Office Hours: by appointment  
Class: Monday and Wednesday 4:40 – 5:55 Social Sciences 311  
TA & presentation sessions Tuesday-Thursday 4:40-5:55 Social Sciences 311  
Teaching Assistants: Jeffrey Hill jeffrey.hill@duke.edu  
Xiaonan Hong xiaonan.hong@duke.edu  
Sahil Khatkar sahil.khatkar@duke.edu

1. **Course description.** This course provides an overview of major theoretical contributions using microeconomic theory along with an introduction to dynamic optimization. The course is intended to give participants a sense of different fields in microeconomics – labor, health, industrial organization, international trade, economic development, urban economics, and more. In the process, students will gain an appreciation of modeling approaches.

2. **Prerequisites.** Econ 601 or equivalent. Working knowledge of multivariate calculus is necessary; some matrix algebra and a cursory overview of the first chapters of a differential equations text will be needed as well. Students are assumed to be familiar with Varian’s *Microeconomic Analysis* (Ed. 3) or a comparable text like Jehle & Reny; you should own a copy for reference purposes.

3. **Texts and readings.** There are no texts. Readings (usually) will be posted on Sakai. Instead, the course consists of a vast number of required readings, which each student is expected to cover thoroughly with an eye to content, theory, model, and econometric technique. There are many papers by Nobel Laureates on the reading list.

   During the course of the term the list will evolve. It is not possible to cover more than one reading per class period, and so some of the papers will be cut, depending on student interest and what we deem essential and feasible.

4. **Honor code and course policies.** Failure to acknowledge assistance on an assignment, or to cite a source of information used in an assignment, or to represent the work of others as your own, constitutes a violation of the University's honor code. Any violations may result in failure of the assignment or the course, or expulsion from the University. Any exam missed for a non-legitimate reason will be accorded the grade of 0. Any exam missed for a legitimate reason will be made up with an oral exam as soon as it can be scheduled by EcoTeach. Late work will be penalized by 1/3 grade point per day late (excluding Sundays). Presentation notes must be posted on Sakai at least 24 hours prior to the class at which the presentation will take place.
5. **Grading, assignments, presentations, and attendance.** The grades will be determined as weighted averages of exams and presentations:

- Class participation: 8%
- In-class presentations and supporting notes (3 to 4 per team): 32%
- Midterm examination: 24%
- Final examination or original theory paper: 36%

Students also may choose whether to write an original theory paper or to take the final exam. A decision on this choice must be reported to the faculty and TAs by Wednesday April 1. **In order to receive capstone credit for this course you must write a theory paper. Theory papers are due 24 hours prior to the final exam.**

6. **Presentations and class conduct.**

To enhance the efficiency of class presentations, each team (3 people) of presenters is expected to prepare a handout for distribution to the entire class. The handout should contain pertinent aspects of the formal presentation to avoid having to write out lots of equations in class. Even if you are not a presenter, you are expected to have read the article in detail before class. The presenters will (a) provide detailed mathematical derivations and (b) make critical analytical comments as well as simply presenting the paper; other students should be prepared to discuss the article. At times, the professors will provide brief background lectures on related literature. The intention is to provoke discussion, and for the presenter to discuss new techniques, modeling approaches, data sets, and findings, as well as to discuss shortcomings.

The exact design of the course will depend on final enrolment. I anticipate a class of roughly 8 groups. This means that there will be approximately: 4 lectures by faculty and TAs, 1 exam class, at least 2 review sessions, 1 homework session, 1 post-midterm session, and 24 presentations for a total of 33 meetings. We have 26 regular class sessions and (since there will be none during the first week) 24 presentation/TA sessions. Students are expected to attend the lectures, the exam, and 25 presentations. We will keep track of attendance and, while exams will have some options, we expect you to attend at least 75% of peer presentations.

Note also that a large share of the papers on the reading list already have presentations posted online. Each team is expected to present:

- One “difficult” (we’ll define these) paper that has not previously been presented;
- One “easy” paper that has not already been presented, or a re-presentation of a more difficult paper for which notes already exist;
- One or two elective papers

In addition to student presentations, your instructors will provide mini-presentations of papers we regard as key that are not covered by students, and also will provide background on related papers when appropriate.

**Readings** (yellow highlight denotes a paper we would very much like to cover – notes are already available on the class website in almost all cases – though since there are 22 that are highlighted, the instructors will present some briefly).
I. **DYNAMICS AND GETTING STARTED (AND OTHER INTERESTING PAPERS…)**


Fryer, Roland, and Steven Levitt, 2013, "Hatred and profits: under the hood of the Ku Klux Klan," *Quarterly Journal of Economics*.


Lopez-Perez, Raul, and Eli Spiegelman, 2012, “Do economists lie more?” Universidad Autonoma de Madrid,
II. **RISK & UNCERTAINTY**


III. **HEALTH**


IV. **ECONOMICS OF THE HOUSEHOLD & LABOR MARKETS**


Arcidiacono, Peter, Andrew Beauchamp, and Marjorie McElroy. "Terms of endearment: An equilibrium model of sex


V. **ECONOMIC DEVELOPMENT**


VI. **FIRMS, INFORMATION, GOODS, & MECHANISM DESIGN**


**VII. BARGAINING THEORY**


VIII. SINGLE PEAKED PREFERENCES


IX. MANIPULATION OF ALLOCATION RULES


X. MATCHING


### XI. Property Rights & Corruption


### XII. Urban & Spatial Economics


He, Chao, Randall Wright, and Yu Zhu, 2015, Housing and liquidity, *Review of Economic Dynamics* **18**.


**XIII. INTERNATIONAL ECONOMICS**


XIV. **Natural Resource & Environmental Economics**


XV. **Political Economy & Public Economics**


Taylor, Curtis and Huseyin Yildirim, 2010, “Public information and electoral bias,” Games & Economic Behavior 68 

XVI. BEHAVIORAL AND NEURO-ECONOMICS


Machina, Mark, 2014, Ambiguity aversion with three or more outcomes, American Economic Review 104(12).


Dadler, Evan, 2020 (Jan) “Diffusion games” American Economic Review

Sarver, Todd, 2008, “Contemplating regret: why fewer options may be better,” Econometrica 76(2): 263-305


XVII. OWNERSHIP AND CONTROL


XVIII. CONTRACT THEORY


XIX. FINANCIAL INTERMEDIARY, LIQUIDITY, AND FINANCIAL SECURITIES


Elul, Ronel and Pietro Gottardi, 2015, Bankruptcy: is it enough to forgive or must we also forget? *American Economic Journal – Microeconomics* 7(4).

XX. CAPITAL STRUCTURE


XXI. MACRO AND INTERNATIONAL FINANCE, BUSINESS CYCLES


XXII. NEW PAPERS I WANT TO READ

XXIII. SUGGESTIONS FROM FELIX FENG, GREGORY PRICE, AND YIFAN TANG
From Felix Zhiyu Feng (MAE, PhD Duke) https://foster.uw.edu/faculty-research/directory/felix-zhiyu-feng/ with commentary:

Just like almost every modern capital structure model starts with “we build a Leland model (i.e. Leland 1994 or Leland and Toft 1996) with …. (i.e the new twist)”, almost every microstructure model starts with “we build a Kyle (1985) model with …”


If the entire research on mutual fund can be summarized as “finding the fund with the highest return”, then this paper says otherwise, and it is now too widely-known to be ignored in almost all new papers about asset management.

As Charlie mentioned, I have a very specialized focus mainly on contracting theory, information and agency frictions, with applications mainly in finance. Therefore my recommendations of the “good papers” are very subjective in that they are really “papers on which most of my research is based”. I also have a very strong preference for papers with methodological innovations. They tend to have below-the-average citations, even among the theory papers, because
they could be rather challenging to non-technical readers. Nevertheless a few of my recommendations are of this kind because they are “papers to which I go back whenever I run into a technical problem”. Finally I did my PhD between 2009-2014. Naturally, I am much more familiar with papers around those years.

In short, this is my very personal list in addition to Charlie’s (in particular the existing selections of the sections on “ownership and control”, “contracting”, “financial intermediary”, and “capital structure”). They are ranked in chronological order. While the earlier ones have generated higher overall impact, the later ones are probably more useful when conducting research of your own.


He, Z., 2011. A model of dynamic compensation and capital structure. *Journal of Financial Economics*, 100(2), pp.351-366. — methodological (although the focus of the paper may be on capital structure, nowadays people really cite it for showing the analytical convenience of CARA utility function in a dynamic moral hazard model)


Daley, B. and Green, B., 2012. Waiting for News in the Market for Lemons. *Econometrica*, 80(4), pp.1433-1504. — partly methodological. The two authors published/about to publish four top econ/finance papers using the same technique first introduced in this paper. BTW both of them are Dukies at some point.

I also find sometimes that survey articles are helpful, efficient ways in getting a quick, broad picture of a specific topic. Below are few examples. The last one is about an accounting topic that I came across just recently which, through my own example, demonstrates how one could get a sense of a particular topic within a relatively short time.


