Spring 2017
DUKE UNIVERSITY
Department of Economics

Economics 605: ADVANCED MICROECONOMIC THEORY

Professor: Charles Becker
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Email: cbecker@duke.edu
Office: 312 Social Sciences
Office Hours: by appointment
Class: Monday and Wednesday 4:40 – 5:55 Social Psychology 126
TA & presentation sessions Monday 6:30-7:20 Thursday 6:15 – 7:05
Allen 103 Allen 103
Teaching Assistants:
Susan Cherry   susan.cherry@duke.edu
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Class website: https://sites.duke.edu/econ206_01_s2011/

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 Monday April 4. **In order to receive capstone credit for this course you must write a theory paper.**

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. We are projecting a class of about 10 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 30 presentations for a total of 39 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 4 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).

Dates:

<table>
<thead>
<tr>
<th>Date</th>
<th>Paper</th>
<th>group</th>
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<tbody>
<tr>
<td>Jan 11 Wed</td>
<td>Courant, racial prejudice in a search model</td>
<td>Becker</td>
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<tr>
<td>Jan 12 Thu</td>
<td>Kahneman &amp; Tversky, prospect theory, <em>Econometrica</em> 1979</td>
<td>Becker</td>
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<tr>
<td>Jan 18 Wed</td>
<td>Becker, theory of marriage, <em>JPE</em> 1973</td>
<td>Karol</td>
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<td>Jan 19 Thu</td>
<td>Akerlof &amp; Dickens, cognitive dissonance, <em>AER</em>, 1982</td>
<td>Cherry</td>
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<td>Jan 23 Mon</td>
<td>Abdulkadiroglu &amp; Sonmez, school choice, <em>AER</em>, 2003</td>
<td>He</td>
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<tr>
<td>Jan 25 Wed</td>
<td>Roth, Sonmez, and Unver, kidney exchange, <em>QJE</em> 2004</td>
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<td>Jan 27 Thu</td>
<td>LaTeX intro</td>
<td>Jiang</td>
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<tr>
<td>Jan 30 Mon</td>
<td>Becker &amp; Murphy, rational addiction, <em>JPE</em>, 1988</td>
<td>He</td>
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<tr>
<td>Feb 2 Thu</td>
<td>Dynamics intro I: discrete time, Euler equation</td>
<td>Jiang</td>
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<td>Feb 6 Mon</td>
<td>Glaeser, hatred, <em>QJE</em>, 2005</td>
<td>Karol</td>
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<td>Feb 8 Wed</td>
<td>Banerjee &amp; Mullainathan, temptation, <em>NBER w.p.</em>, 2010</td>
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<td>Feb 9 Thu</td>
<td>Dynamics intro II: Pontryagin’s maximum principal</td>
<td>Jiang</td>
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<td>Feb 13 Mon</td>
<td>Ambrus et al., hierarchical cheap talk, <em>Theoretical Econ</em>, 2013</td>
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<td>Feb 16 Thu</td>
<td>Stiglitz &amp; Weiss, credit rationing, <em>AER</em>, 1981</td>
<td></td>
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<td>Feb 22 Wed</td>
<td>Alesina &amp; Spolaore, number &amp; size of nations, <em>QJE</em>, 1997</td>
<td></td>
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<td>Feb 23 Thu</td>
<td>Spence, signaling, <em>QJE</em> 1973</td>
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<td>March 1 Wed</td>
<td>Helsley &amp; Strange, coagglomeration, <em>JPE</em>, 2014</td>
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<tr>
<td>March 6 Mon</td>
<td>Diamond &amp; Dybvig, bank runs, 1983</td>
<td></td>
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<td>March 8 Wed</td>
<td>Acemoglu &amp; Robinson, why did the West extend the franchise? <em>QJE</em> 2000</td>
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<td>March 9 Thu</td>
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<td>March 13, 15, 16</td>
<td>Spring break</td>
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<td>March 20</td>
<td>Mid-term exam</td>
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March 22 Wed
March 27 Mon

March 29 Wed
March 30 Thu

April 3 Mon
April 5 Wed
April 6 Thu
April 10 Mon
April 12 Wed
April 13 Thu
April 17 Mon
April 19 Wed

May 2 Tue Final exam 2:00 – 5:00 pm
I. DYNAMICS AND GETTING STARTED (AND OTHER INTERESTING PAPERS…)

II. RISK & UNCERTAINTY

III. HEALTH
Galeotti, Andrea and Brian Rogers, 2013, Strategic immunization and group structure, American Economic Journal – Microeconomics 5(2).

IV. ECONOMICS OF THE HOUSEHOLD & LABOR MARKETS


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


Leventoglu, Bahar, forthcoming, “Social mobility, middle class and political transitions,” *Journal of Conflict Resolution*.


XVI. **Behavioral and Neuro-Economics**


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


XVII. OWNERSHIP AND CONTROL


XVIII. CONTRACT THEORY


Shao, Lei, 2015, Exclusive Dealing and Efficiency in Two-sided Markets with Heterogeneous Content Providers, University of Texas Dept of Economics, https://sites.google.com/a/utexas.edu/leishao/research

**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**

Acemoglu, Daron, 2010, Diversity and technological progress, MIT working paper 11-06.
Brunnermeier, Markus, and Yuliy Sannikov. 2010 A macroeconomic model with a financial sector. working paper, Princeton University

**XXII. NEW PAPERS I WANT TO READ**

Best, Michael Carlos, Jonas Hjort, and David Szakonyi. "Sources of Variation in State Effectiveness and Consequences
Esteban, Joan Maria, Massimo Morelli, and Dominic Rohner. "Strategic mass killings." JPE 2015