Social Choice Theory (Econ 211)  
(With focus on voting theory)  
Spring 2013  
Monday and Wednesday 10:30 – 11:50am at McNeil xxx.  
Instructor: SangMok Lee

Course Logistics

Office hours: Thursday 1-3pm (McNeil 462)  
Email: sangmok-at-sas.upenn.edu  
Teaching Assistant: Ilwoo (Iru) Hwang  
TA Office Hours, Class Websites: TBA  

Please check website regularly for announcements, class handouts, notes, homework assignments etc.

Update: No Class on Mar 13. Office hours on Mar 14 will be 1-3pm on Mar 11.

Course Description

Summary: The course will provide an introduction to social choice theory, which is a formal analysis of the problem of preference aggregation in general, and of alternative voting rules.

Prerequisites: Econ 101 (Intermediate Micro Theory), Math 104 and either Math 114 or Math 115 (Calculus Part I and II). Second half of the course will use Game Theory. I highly recommend you to take Econ 212 (Game Theory) as well.

Textbooks: I recommend the following textbooks, though they are not required. There will be lecture notes, supplemented by papers and handouts.

Recommended textbook:  


Other textbooks:  
**Requirement and Grading Policy**

1. **Grades**

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<tr>
<th>Requirement</th>
<th>Grade</th>
<th>Due/Exam dates</th>
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<tbody>
<tr>
<td>Three problem sets</td>
<td>3 x 10%</td>
<td>Jan 30, Mar 18, Apr 17</td>
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<tr>
<td>Two midterm exams</td>
<td>2 x 25%</td>
<td>Feb 13, Mar 27 (class time)</td>
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<tr>
<td>Term paper</td>
<td>1 x 20%</td>
<td>May 1 (due 5pm)</td>
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2. **Assignments** will be given one-week prior to the due dates and will be due at the start of the lecture on the day they are due. You can submit in class, or electronic submission via email is also allowed. Collaboration on homework assignments is allowed and encouraged, but final solutions must be written independently. Each student should participate fully in solving each problem and understand the answer.

3. **Midterm examinations** will be *in-class* and *closed-book*. Collaboration on the examinations is prohibited.

4. **Term paper**: A student is required to study any cases on collective choices. One option is to evaluate a choice rule currently used in an organization. You are expected to clearly state the choice rule and examine pros and cons. If the rule suffers from drawbacks, you may propose an alternative choice rule and justify the new rule by discussing potential outcomes. Another option is to propose new ideas for choice rules in a situation where a formal choice rule has not yet been implemented. During the course, we will discuss a few term-paper ideas and I will also provide one term-paper example. I encourage you to search for a case from your personal experiences, rather than, for example, presidential elections. The paper should not exceed 10 pages with 1.5 spacing. The originality of the idea and logically tight arguments are much more valued than the length of the paper.

**Topics to be covered (Subject to change)**

I. **Elements of Social Choice Theory**

   - *Intro*: Course Introduction. Motivating examples. A Special Case with Two Alternatives: Simple majority. May’s theorem, Condorcet winner. Condorcet paradox.: Kelly (Chapter 1 and 2), Riker (Chapter 3, Chapter 4.B)

II. **General Social Choice Theory**

   1. **Preference Aggregation Rules**: Binary Relations. Preferences. Preference aggregation rule. Arrow’s Impossibility Theorem with a sketchy proof: Kelly (Chapter 6, 7), Riker (Chapter 3, Chapter 4.A, 5. A-B)

3. **Possibility Results**: Single peaked preferences. Approval voting: Kelly (Chapter 2, Chapter 3, Chapter 12), Riker (Chapter 4.E, Chapter 5.B-C)


* Students are not required to read journal articles.


### III. Voting and Information Aggregation


   Austen-Smith and Banks (1996): Information Aggregation, Rationality, and the Condorcet Jury Theorem; American Political Science Review Vol. 90(1)


### IV. Voting with Side Payments:
1. **Vote market** (within an electorate)


2. **Vote bidding/buying** (Mechanism design approach).


   E. Glen Weyl (2012), Quadratic Vote Buying, mimeo

3. **Vote bidding/buying** (Lobbying)


**Other Course Policies**

1. Late assignments and final paper will not be accepted without either proper prior arrangement or a compelling and verifiable reason.

2. All hand written answers to exam questions should be legible. Anything that the TA or I cannot read or understand is wrong.

3. Assignments and exams will be returned to you during class. You are responsible for picking them up. Your exams will be scanned to deter cheating.

4. A request for a re-grade of a problem set or an exam must be submitted to me in writing within 1 week after the graded assignment has been returned. In such a case, I will reevaluate your complete homework set or exam.

5. If you miss an exam, you need to obtain a letter signed by the coordinator of the undergraduate studies, Lynn Costello, that excuses your absence. If you do not obtain such a letter, you will fail the exam.
6. There are no make-up midterm exams. If you have to miss one in-class midterm exam, the other mid-term exam and the final paper will be worth 40pts and 30pts, respectively.