Econ 445  
Design and Analysis of Experimental Economics

Class: Thursday 4:30 - 7:10 pm  
Location: IN 323

Instructor  
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Co-instructor  
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Course Description  
This class provides an introduction to the design and analysis of economics experiments. The topics covered will be useful to anybody interested in running scientific experiments, but will be primarily geared toward behavioral experiments as conducted by economists and psychologists.

Textbooks  

Grades

<table>
<thead>
<tr>
<th>Undergraduates</th>
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</thead>
<tbody>
<tr>
<td>Homework</td>
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<tr>
<td>Presentation</td>
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<tr>
<td>Midterm – on Oct. 22nd</td>
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<tr>
<td>Final exam – on Dec 17th</td>
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Your course grade will be based 25% on the problem sets (drop one with lowest grade, the rest equally weighted), 10% on the presentation of one of the reading assignments, 25% on the midterm exam, the rest 40% is all on final exam. Good class participation can improve
your evaluation. We do not give make-up exams. Homework must be turned in on time. Late homework won't be accepted.

**Office Hours**
Professor Houser will hold office hours in our classroom after class on Thursday, or by appointment. Siyu Wang will hold office hour every Thursday at Mason Hall D150 Tutoring Room, 3:30-4:30 pm. You can also reach Siyu by phone 703-989-4844 or email at swang14@masonlive.gmu.edu.

**Outlines**
Notes are available at [http://mason.gmu.edu/~dhouser/courses.htm](http://mason.gmu.edu/~dhouser/courses.htm)

1. **Science and Experiments**
   *Box, Hunter & Hunter, Chapter 1; Cox, Chapter 1; Houser website, Lecture 1*

2. **Review of Basic Statistics**
   Probability distributions, parameters, statistics
   *Box, Hunter & Hunter, Chapter 2; Houser website, Lecture 2*

3. **Comparing Two Entities**
   a. Relevant reference sets and distributions
   b. Randomized Paired Comparison Design
   c. Blocking and Randomization
   *Box, Hunter & Hunter, Chapter 3; Houser website, Lecture 3*

4. **Comparing k treatment means**
   a. Completely Randomized Design - One-way ANOVA
   b. Randomized Block Design - Two-way ANOVA
   *Box, Hunter & Hunter, Chapter 4; Houser website, Lecture 4*

5. **Designs with more than one blocking variable**
   a. Latin squares
   b. Greaco and hyper-greacolatin squares
   c. Balanced incomplete block designs
   *Houser website, Lecture 5*

6. **Repeated Measures**
   a. Introduction
   b. Standard ANOVA for repeated measures without order dependencies
   c. Comments on repeated measures designs that address order and sequencing effects
   *Houser website, Lecture 6*

**Reading Articles**

**Students with disabilities**
Students with Faculty Contact Sheets for this class need to present them to the instructor as soon as possible. Other students requiring reasonable accommodations, as covered under the Americans with Disabilities Act, should contact the Disability Resource Center (DRC) to open up a DRC file and discuss needed accommodations. Questions and requests for reasonable accommodations should be directed to DRC, 234 SUB I, phone (703) 993.2474 or email dwyene@gmu.edu.

**Honor code**
George Mason University is an honor code university. Students pledge not to cheat, lie, plagiarize or steal in academic matters.