

**Professor Jim Engle-Warnick**

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**Office Hours: 4:00pm – 5:00pm Tuesday and Thursday**

**Course location:** Leacock 424 and CIRANO Computer lab at 2020 University Ave, 25<sup>th</sup> floor

**Date and time:** Tuesday and Thursday, 10:05 – 11:35

**WebCT Communication:** If you wish to contact the instructor by e-mail, please use the facility in WebCT. A discussion list named “Experimental Economics” is available for use on WebCT. Important events, including which classes will take place in the computer lab, will be posted on the WebCT calendar.

**Required textbooks:** Friedman, D. and S. Sunder, (1994): *Experimental Methods: A Primer for Economists*, Cambridge University Press, Cambridge, Kagel, J. and A. Roth (1995): *The Handbook of Experimental Economics*, Princeton University Press, Princeton.

**Course pack:** There is no course pack. Links to other readings are provided on the course outline in WebCT.

**Course material:** You will need access to a computer and at least a spreadsheet program to analyze data. Everything you need is available in McGill’s computer labs.

**Additional books on reserve at the library:** Davis, D. and C. Holt (1993): *Experimental Economics*, Princeton University Press, Princeton, NJ; Smith, V. (2000): *Bargaining and Market Behavior*, Cambridge University Press, Cambridge; Smith, V. (1991): *Papers in Experimental Economics*, Cambridge University Press, Cambridge; Camerer (2000) *Behavioral Game Theory*, Princeton University Press.

**Content:** This is a course in Experimental Economics, which is a growing body of research concerned with testing economic theories with decisions made by people in laboratory experiments. We will study the use of laboratory experiments as behavioral tests of economic theory, and as tools for market design. We will add readings according to the topics students choose for their projects to assist with the project design.

**Learning Outcomes:** You will learn to design a laboratory test of an economic theory.

**Assessment and composition:** Research paper project: 2/3; final exam: 1/3. The final exam covers everything we study in class, including project presentations by students. A separate handout describes the research paper project.

**General Information:**

McGill University values academic integrity. Therefore, all students must understand the meaning and the consequences of cheating, plagiarism, and other academic offenses under the Code of Student Conduct and Disciplinary Procedures (see [www.mcgill.ca/integrity](http://www.mcgill.ca/integrity) for more information).

If you have a disability please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 398-6009 before you do this.

Additional policies governing academic issues which affect students can be found in the McGill Charter of Students' Rights (online at <http://ww2.mcgill.ca/students~handbook/chapter1.html>).

## **Topics and Readings:**

Class interest will determine some of the topics we study.

### **I. Conduct of Science and Introduction**

[Roth, A. \(1994\): "Let's Keep the Con Out of Experimental Econ.: A Methodological Note", \*Empirical Economics\* \(Special Issue on Experimental Economics\), 19: 279-289.](#)

### **II. Economics experiments building blocks**

Becker, G., M. DeGroot, and J. Marschak (1964): "Measuring Utility by a Single-Response Sequential Method", *Behavioral Science*, 8:4:293-315.

[Berg, J., L. Daley, J. Dickhaut, and J. O'Brien \(1986\): "Controlling Preferences for Lotteries on Units of Experimental Exchange", \*Quarterly Journal of Economics\*, May, 1986:281-306.](#)

[Smith, V. \(1976\): "Experimental Economics: Induced Value Theory", \*American Economic Review\*, 66:274-279.](#)

[Holt, C. and S. Laury \(2002\): "Risk Aversion and Incentive Effects", \*American Economic Review\* 92:5:1644-1655.](#)

### **III. Experimental Design**

Friedman and Sunder.

### **IV. Identification of Behavior from Experimental Data**

[Engle-Warnick, J. and B. Ruffle. \(2006\): "The Strategies Behind Their Actions: A Method to Infer Repeated-Game Strategies and an Application to Buyer Behavior", mimeo, McGill University Department of Economics.](#)

[Manski, C. \(2002\): "Identification of Decision Rules in Experiments on Simple Games of Proposal and Response", \*European Economic Review\* 46:4-5:880-891.](#)

### **V. Market design**

[Kagel, J. and A. Roth \(2000\): "The Dynamics of Reorganization in Matching Markets: A Laboratory Experiment Motivated by a Natural Experiment", \*Quarterly Journal of Economics\* 115:1:201-235.](#)

[Roth, A. \(2002\): "The Economist as Engineer: Game Theory, Experimentation, and Computation as Tools for Design Economics", \*Econometrica\*, 70:4:1341-1377.](#)

[Wilson, R. \(2002\): "Architecture of Power Markets", \*Econometrica\*, 70:4:1299-1340.](#)

Klemperer, P. (2004): *Auctions: Theory and Practice*, Princeton University Press, Princeton. (optional reading) plus information posted at [www.pauklempere.org](http://www.pauklempere.org)

## **VI. Experiments in the field**

Harrison, G. and J. List (2004): "Field Experiments," *Journal of Economic Literature*, XLII (December): 1013-1059.

[Henrich, J. \(2000\): "Does Culture Matter in Economic Behavior? Ultimatum Bargaining Among the Machiguenga in the Peruvian Amazon", \*American Economic Review\* 90:4:973-979.](#)

## **VII. Non-expected utility and discounting**

[Kahneman, D. and A. Tversky, \(1979\): "Prospect Theory: An Analysis of Decision Under Risk", \*Econometrica\* 47:2:263-291.](#)

[Starmer, C., \(2000\): "Developments in Non-Expected Utility: The Hunt for a Descriptive Theory of Choice Under Risk", \*Journal of Economic Literature\* XXXVIII: 332-382.](#)

[Laibson, D. \(1997\): "Golden Eggs and Hyperbolic Discounting", \*Quarterly Journal of Economics\* 112:443-477.](#)

[Harrison, G., Lau, M. Lau and M. Williams \(2002\): "Estimating Individual Discount Rates for Denmark: A Field Experiment", \*American Economic Review\* 92:1606-1606.](#)

Frederick, S., Loewenstein, G. and O'Donoghue, T. (2002): "Time Discounting and Time Preference A Critical Review", 40(2), 351-401.

## **IV. Other topics**

Particular experiments to study will be determined by class interest. We will all read and discuss the assigned papers in class.

**Project:**

**Due Date:** A hard copy of your project is due on the last day of class, at 5:00pm. You will turn in the project electronically in pdf form.

**Length:** Approximately 15-20 pages (double spaced) plus references. References must be typed on a separate page, using the format prescribed by the Canadian Journal of Economics.

**What is expected:** You must design an experimental laboratory test of an economic theory. The paper you write must potentially make a novel contribution to experimental literature. You must (1) identify the topic and explain why it is important to economics, (2) survey the relevant literature, (3) present the theoretical model and its solution, (4) present the experimental manipulation that tests the theory, and (5) design the test, including the instructions for the participants. You may work in pairs if you wish.

**The topics:** The choice of the topic is up to you and subject to instructor approval.

**The method:** Within the first four weeks of the semester you will identify a topic that interests you, receive approval from the instructor, and give a one-hour presentation to the class. Shortly after reading week you will run a pilot of your experiment in class. In the final two weeks of class you will present a complete experimental design. By the last day of class you will submit your project paper that includes everything in the section labeled “what is required”. Your paper should be a complete research paper up to the execution of the experiment. This means that all that would be required to complete a research paper would be to actually run the experiment and analyze the results. You may include data from the in-class pilot you run.

**The project assessments:** You will be assessed by the instructor on the in-class presentations for 10% of your project grade. The research paper assessment will be given by the instructor and will count as 90% of your project grade.