

**COURSE SYLLABUS**  
**API-202B/C/D**  
**Empirical Methods II**  
**Spring 2007**

<u>Section</u>	<u>Professor</u>	<u>Office</u>	<u>Assistant</u>
B	Suzanne Cooper	L112	Chris Rappley
C	Dan Levy	L115	Maryjane Rose
D	Susan Dynarski	L231	Kathleen Kaminski

Class Time: Tu., Th. 10:10-11:30

Review Sessions: Fri., 10:10-11:30 and 11:40-1:00

**COURSE DESCRIPTION**

The purpose of this course is to equip students with the tools necessary to tackle issues that involve the empirical analysis of public policy problems of the sort they might encounter in a professional environment. Specifically, the course introduces students to the use of multiple regression analysis and program evaluation for analyzing data in the social sciences. The emphasis is on empirical applications.

The course is designed with twin objectives in mind. The first is to provide students with the ability to analyze critically the empirical analysis done by others at a level sufficient to make intelligent decisions about how to use that analysis in the design of public policy. The second is to provide students with the skills necessary to perform empirical policy analysis on their own or to participate on a team involved in such an empirical analysis. An important segment of the course focuses on program evaluation. This includes both the design and analysis of experiments that aim at measuring policy effectiveness and the use of non-experimental data to evaluate policy effectiveness.

**PREREQUISITE**

A knowledge of statistics at the level of API-201 is assumed.

**TEXTBOOK**

Stock, J. and Watson, M., *Introduction to Econometrics*, 2<sup>nd</sup> edition, Addison-Wesley (2007). The first edition is also acceptable.

**GRADING**

Quiz	10%
Midterm Exam:	30%
Final exercise:	15%
Final Exam:	45%

## **EXAMS**

There will be a quiz, a midterm and a final. These will be closed book and closed notes. Students are expected present on each of these days.

## **PROBLEM SETS & FINAL EXERCISE**

- 1) Students are required to turn in their solutions to the problem sets. Although problem sets will not be graded in detail, they will be corrected by the course assistants. Detailed answers will also be posted on the course website for students to review.
- 2) Problem sets must be handed in at the beginning of class (in the classroom, at 10:10 a.m.) on the day they are due. Late problem sets will not be evaluated.
- 3) If a particular problem set is not turned in on time, two points (i.e. out of a potential 100 points) will be taken off from the final score in the class.
- 4) It will be extremely difficult to do well in the quiz, midterm and final exams unless the student is familiar with and can solve the types of problems that are assigned in the problem sets.
- 5) You may work on the problem sets in small groups. However, answers must be written up ***individually, in your own words***. Please put the names of your study group member(s) on your problem set. Duplicate answers will be penalized as if the assignment were not submitted at all (i.e., 2 points out of a potential 100 points from the final score in the class).
- 6) Stata, a statistical software package, is available both in the computer lab and from the CMO.

## **REGRADE POLICY**

Requests for reconsideration of grades on exams are not encouraged, and will be accepted only in writing, with a clear statement of what has been mis-graded, and within one week of receiving your graded exam. Please submit your full exam so grading on all questions can be reconsidered.

All course activities, including class meetings, homework assignments, and exams are subject to the KSG Academic Code and Code of Conduct.

## COURSE SCHEDULE

Date	Topic	Stock and Watson Readings*		Assignments Due
		1 <sup>st</sup> Edition	2 <sup>nd</sup> Edition	
Feb 1	INTRODUCTION: Course Overview	1, 7.1, 7.3, 11.1	1, 9.1, 9.4	
Feb 6	BIVARIATE REGRESSION: Introduction	4.1	4.1	
Feb 8	BIVARIATE REGRESSION: Ordinary Least Squares	4.2-4.6	4.2-4.6, 5.1-5.2	PS1
Feb 13	BIVARIATE REGRESSION: Qualitative Data	4.7- 4.9	5.3	
Feb 15	MULTIPLE REGRESSION: Introduction	5.2-5.6	6.2-6.6, 7.1	<b>QUIZ</b>
Feb 20	MULTIPLE REGRESSION: Omitted Variable Bias	5.1	6.1	
Feb 22	MULTIPLE REGRESSION: Qualitative Data			PS2
Feb 27	MULTIPLE REGRESSION: Joint Hypothesis Tests	5.7	7.2	
March 1	FUNCTIONAL FORM: Interactive Dummy Variables	6.1, 6.3	8.1, 8.3	PS3
March 6	FUNCTIONAL FORM: Logs	6.2	8.2	
March 8	FUNCTIONAL FORM: Quadratics	6.2	8.2	PS4
March 13	<b>MIDTERM EXAM</b>			
March 15	FUNCTIONAL FORM: Binary Dependent Variables	9.1-9.3	11.1-11.3	PS5
March 20	CRITICAL ASSESSMENT OF STUDIES: Mortgage Discrimination	9.4	11.4	
March 22	CRITICAL ASSESSMENT OF STUDIES: Problems and Solutions	7.2	9.2	PS6
March 27-29	SPRING BREAK			
April 3	ADVANCED TOPICS IN REGRESSION/PROGRAM EVALUATION: Randomized Experiments	11.2-11.4	13.1-13.4	
April 5	ADVANCED TOPICS IN REGRESSION/PROGRAM EVALUATION: Differences in Differences	8.1-8.2	10.1-10.2	PS7
April 10	ADVANCED TOPICS IN REGRESSION/PROGRAM EVALUATION: Fixed Effects	8.3-8.6	10.3-10.7	
April 12	ADVANCED TOPICS IN REGRESSION/PROGRAM EVALUATION: Instrumental Variables	10	12	PS8
April 17	TBA			
April 19	DISCUSSION OF FINAL EXERCISE			<b>FINAL EXERCISE</b>
May 21	<b>FINAL EXAM</b>			

\*: Refer to reading from Stock and Watson textbook. Readings from other sources will be assigned at various points during the semester.