ECON 578 – SPRING 2013  
ADVANCED COMPUTER METHODS AND COMPLEX DATASETS  
T-R 10:30-11:45am  
Course Syllabus

● Instructor: Joseph Terza

● Office: Rm. 509B, Cavanaugh Hall

● Office Phone: 274-4747

● E-mail: jvterza@iupui.edu

● Office Hrs.: Tuesday and Wednesday noon-2:00pm and by appointment

● Instructor’s Website:

● Prerequisite Course:

E571. If you have not successfully completed E571 you cannot be enrolled in this class.

● Software: Stata 12®.

● Exams, Homework and Grading:

1. There will be two exams -- a midterm exam and a final. The midterm will comprise 40% of your course grade. The final will be comprehensive (i.e., it will cover material for the entire semester) and carry 30% weight in the computation of your course grade.

2. Four problem sets will be assigned throughout the semester. The average homework grade will constitute the remaining 30% of your course grade.

3. There are a few ground rules regarding questions about the homework problems. I will be happy to answer any question about any homework problem (including those yet to be handed in) any time during my office hours (or by appointment). I will also be happy to answer questions in class dealing with homework problems that have already been handed in, graded, and returned. I will not, however, answer questions in class that deal with homework problems that have not yet been handed in.
● Course objectives:

There are three objectives of this course— 1) to introduce the student to the use of econometric methods for policy analysis and causal inference; 2) to introduce the student to the consequences of, and methodological remedies for, violations of the assumptions of the classical linear regression model; and 3) to achieve objectives 1 and 2 in applied contexts with “real world” datasets.

● Academic Integrity Policy:

Indiana University-Purdue University Indianapolis has a Code of Student Conduct, administered by the office of the Dean of Students. This Code sets standards for academic integrity at IUPUI for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism.

● Topics to be Covered, Assigned Readings, and [Supplementary Reading]:

1. Introduction to Econometrics from a Policy Analytic Perspective including a Review of the Multiple Linear Regression Model (MLRM) in a Policy Analytic Context: Matrix Notation, Classical Assumptions, the Ordinary Least Squares (OLS) Estimator, Confidence Intervals and Hypothesis Testing.

   TE – Chapter 7
   [GR – Chapter 2, Chapter 3 (3.1, 3.2), Chapter 4 (4.1 – 4.4, 4.6, 4.7), Chapter 5 (5.1 – 5.3), Appendix A
   CT – Chapter 4 (4.1 – 4.4)]


   TE – Chapter 8
   [GR – Chapter 6 (6.1 – 6.3), Chapter 11 (11.1 – 11.3 except for 11.2.4)
   WO – Chapter 12 (12.1, 12.4, 12.7), Chapter 13 (13.1 – 13.3, 13.10)
   CT – Chapter 5, Chapter 10]


   TE – Chapter 9
   [GR – Appendix D, Chapter 4 (4.9), Chapter 11 (11.2.4, 11.4, 11.6)
   WO – Chapter 3, Chapter 4 (4.2), Chapter 12 (12.2, 12.3, 12.5, 12.6), Chapter 13 (13.4 – 13.6, 13.10)
   CT – Appendix A
   NM
   WH – Chapters 1-6, especially Chapter 6]

4. Discrete choice models: Binary Response Models (Probit, Logit), Ordered Response Models (Ordered Probit/Logit), Multinomial Response (Multinomial Logit, Nested Logit, Mixed Logit).
5. Limited Dependent Variable Models: Censored Data, Two-Part Models
TE -- Chapter 10
[GR – Chapter 23 (23.1 – 23.4, 23.10.1, 23.11.1 – 23.11.7)
WO – Chapter 15 (15.1 – 15.7, 15.9, 15.10)
CT – Chapter 14 (14.1 – 14.4), Chapter 15]

TE -- Chapter 11
[GR -- Chapter 12 (12.1 – 12.7), 23.7
WO – 15.7 (15.7.1 – 15.7.3)
CT -- Chapter 6 (6.1, 6.2, 6.4)]

TE – Chapter 12
[GR – Chapter 15, 16.6
WO – Chapter 14 (14.1 – 14.3, 14.5)
CT – Chapter 6 (6.3, 6.5, 6.6)]

8. Models with Discrete Endogenous Regressors and Sample Selection Models
TE – Chapter 13
[GR – Chapter 15, 16.6
WO – Chapter 17 (17.1 – 17.4)
CT – Chapter 16 (16.5 – 16.8)]

9. Specification and Estimation of Endogenous and Heterogeneous Policy Effects
TE -- Chapter 14

Texts and Readings for This Course:

The Assigned Text for this Course is:


Supplementary Readings from Econometrics Texts:


**Supplementary Readings from Journal Articles and Working Papers:**


