PUBPOL 639/ EDUC 794
Quantitative Methods for Program Evaluation
Fall 2015

Instructor: Professor Susan Dynarski, dynarski@umich.edu

Office Hours   Vary by week, to allow for differing student schedules
                                       Sign up at: http://goo.gl/XczlB

GSIs: Steven Hamilton, steveham@umich.edu
                                       Jonathan Luke, lukejona@umich.edu

Office Hours: Hamilton, TBD
                                       Luke, TBD

Class Meetings: 1110 Weill, Monday & Wednesday 1:00-2:30
Required Sections: 1230 Weill, Fridays 2:30-4:00

OVERVIEW
This course introduces students to the use and interpretation of multiple regression analysis and program evaluation. The topical focus will be education, using real data and addressing real policy topics such as class size, teacher certification, education finance and the payoff to education in the labor market. The goals of the class are to:

1)   Train students to *critically consume* empirical research. We will teach you to read and understand technical, empirical studies and to judge whether they constitute a firm, evidentiary basis for policy.
2)   Train students to *thoughtfully produce* their own empirical research. We will develop a core set of analytical tools that will allow you to conduct empirical research in a professional setting.

PREREQUISITE
The course requires introductory statistics (hypothesis testing, t-statistics, confidence intervals) at the level of PUBPOL 529 or EDUC 793. A diagnostic quiz will check your statistical foundations.

CTOOLS
CTools is the go-to site for course information and materials. You will upoad your homework there, and retrieve your graded assignment. All announcements are located at CTools, as well as the Google Drive folder that contains the assignments and instructions for preparing for each class.

PREPARING FOR CLASS
In preparation for each class, you will read, watch a video, and/or do an exercise. These will prepare you for the discussion and group work that we will do in class. The list of activities is on CTools under GDrive.

Textbooks
1) Stock and Watson, *Introduction to Econometrics:* Any edition. Get an old, cheap one! Syllabus references are to 2nd edition, but we provide a crosswalk between editions.
2) Angrist and Pischke, *Mastering 'Metrics*.

Articles
We will read papers and reports on education. I will link to these on the course website. If a link is broken, notify the GSIs but use the information on the syllabus to find the article (e.g., on Google Scholar). *You are responsible for obtaining the readings*.

GRADING

Performance on quizzes, homework, and the final contribute 85% of the course grade. Attendance and participation in class, section and office hours contribute 15%.

Quizzes 1-5 (lowest dropped)	30%
Quiz 6	15%
Written Assignments 1-6 (lowest dropped)	25%
Participation & Attendance	15%
Take-Home Final Exam	15%

QUIZZES & FINAL (60%)

Six quizzes will test material from homework, reading and lectures. The quizzes are closed book. You may consult a single index card of notes and use a calculator (no cell phones or tablets).

Your lowest quiz score of the first five will be dropped. Should you need to miss a quiz, the missed quiz is the one that will be dropped. There will be no rscheduling of quizzes on an individual basis.

There will be a take-home final. The take-home final will be distributed on Monday, December 20. It is due Wednesday, December 22.

WRITTEN ASSIGNMENTS (25%)

Six homework assignments consist of data analysis and short essays. They are graded on three-point scale: check (=acceptable), check-plus (=great), check-minus (=deficient). Your lowest assignment will be dropped.

Type your problem set, convert to a PDF and upload to CTools. We will annotate the PDF and return it, graded, to CTools. An executable Stata do-file and a log file (in PDF format) should accompany each assignment.

We will provide guidance on best practices for writing a well-documented do-file and log file. We will provide a template that you should use for your assignments.

You are encouraged to discuss the assignments in groups of up to three students, but *your answers must be written up individually, in your own words*. It's a violation of UM's academic policies if you violate this rule. List your study group members on your problem set.

Late assignments will be given feedback but count as a zero in your final grade.

CLASS/SECTION PARTICIPATION & ATTENDANCE (15%)

During each class, I will ask questions of randomly selected students. This is intended to encourage democratic participation and discourage napping. Names will be drawn from the class list using a random number generator. The questions will be based on the reading assignments, problem sets and lectures. The quality of your replies determines your participation grade.

We will also ask questions via clicker in section and class. For example, students will solve a problem, log the answer, and discuss the answer with the class. We understand that you will sometimes forget your clicker or the batteries will fail. We will therefore drop clicker responses for one class session from the calculation of the course grade.

EXTRA HELP AND REVIEW
We will provide additional problems for those who want extra practice. They will be distributed in the days preceding a quiz. They are a great way to check your understanding before sitting down to a test.

Depending on need, we will run an extra review session for those who want extra reinforcement with the material. These sections will complement rather than substitute for the regular section.

STATA
We will program in Stata, a software program used widely by policy analysts. Having "Stata" on your resume makes you more employable, so embrace it!

We provide links to online Stata tutorials and provide training in sections. Since there is no computer lab large enough to hold our class, you will rely on your laptops to practice Stata programming during these sections. *You must therefore own a copy of Stata*.

You can get a Stata license for just this semester at a relatively low price. Order through the Stata website (http://www.stata.com/order/new/edu/gradplans/us-pickup/) and then pick up at Computer Showcase.

- We recommend Stata/IC (6 month license: $75), which works with an unlimited number of observations.
- We do not recommend Small Stata, since it maxes out at 1,200 observations.

LAPTOP POLICY/TAKING NOTES
To keep us focused on the class and on each other, we will put away laptops and all other electronic devices. I will distribute copies of overhead slides for you to take notes on. If you want to store all class material on your laptop, transcribing your handwritten notes after lecture is a great a way to nail the material. I will post on CTools a PDF of the slides after lecture to facilitate this process.

ACCOMODATIONS
If you believe you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities to help us determine appropriate accommodations. I will treat any information you provide as private and confidential.