

COURSE AND CONTACT INFORMATION

Course: PPPA 6013 Econometrics for Policy Research I
Semester: Fall 2020
Synchronous class sessions: Wed 6:10-8:00

INSTRUCTORS

Professor: Dylan Conger
e-mail: dconger@gwu.edu
Office Hours: email to schedule an appointment

Teaching Assistant: Musirah Farrukh
e-mail: musirah@gwmail.gwu.edu
Office Hours: Apart from lab sessions (Wed 8:10-10:00), email the TA ahead to schedule an appointment (subject to availability)

COURSE DESCRIPTION AND LEARNING OUTCOMES

This is a course in applied econometrics, a powerful set of statistical techniques for conducting policy research. Much of the course concerns the use of multiple regression in testing the impact of public policies, practices, and programs. Though the course is called econometrics, examples from many disciplines will be discussed. The course covers the following topics in particular:

- review of basic statistical concepts;
- overview of the linear regression model;
- issues of specification and functional form;
- assumptions that are required in order for the model to produce valid estimates, including the implications of violating these assumptions; and
- some methods for addressing these “threats to validity” with a focus on techniques for establishing causal relationships between public policies and outcomes

As a result of the course, students will know:

- how to evaluate the methodological integrity of public policy research that relies on regression analyses;
- how to communicate regression results to a non-statistical audience; and
- basic commands in Stata, a popular statistical software package.

COURSE REQUIREMENTS

Prerequisites: The course is accessible to students who do not have an extensive mathematical background (e.g. calculus and matrix algebra are not required). Nonetheless, there will be use of algebra throughout the course. The prerequisite for the course is the completion of one graduate course in statistics, such as PPPA 6002 or an equivalent course that covers basic descriptive and inferential statistics.

Optional Text: Studenmund, A.H. *Using Econometrics: A Practical Guide, 7th edition*. Note: there are many standard econometrics textbooks. I will assign readings from this text, but I do not assign any problems from the book. You should feel free to obtain any version of this textbook that is the least expensive.

Avg. minimum amount of work: Students will spend ~2 hours per week on direct instruction (a combination of asynchronous and synchronous activities) and ~5.5 hours per week on independent activities, on average. Over the course of the semester, students will spend 7.5 hours in instructional time per week for a total of 112.5 hours for the semester.

GRADING

- Midterm exam (30%)
- Evaluation of article – (35%)
 - For masters students, 5% of the grade comes from peers
- Final exam (35%)

Exams: Exams are open note and open book. Exams are scheduled for 1 hour and 30 minutes and will begin at 6:15pm on Wednesdays.

Evaluation of article: One goal of this course is for you to become a literate consumer of policy research. Toward that goal, masters students will work in groups of 4 to prepare a virtual presentation to the class consisting of a critique of an article that uses econometric techniques. I will select the articles and form the groups. More explanation will be provided after the midterm. Doctoral students will work individually and prepare written responses to articles (not presentations). More detail for the doctoral student assignment is provided in the [GuidelinesforWritingManuscriptReviews.pdf](#), which can be found in the Documents folder on Blackboard. The doctoral student paper is due on 12.2.

Grades and Expectations

A (Excellent): Exceptional work for a graduate student. Shows a strong command of the material.

A- (Very Good): Very strong work for a graduate student. Shows signs of a solid understanding of appropriate analytical approaches and meets professional standards.

B+ (Good): Sound work for a graduate student. This grade indicates the student has fully accomplished the basic course objectives.

B (Adequate): Competent work for a graduate student with some evident weaknesses. Demonstrates competency in the key course objectives but the understanding or application of some important issues is less than complete.

B- (Inadequate): Weak work for a graduate student. Understanding of key issues is incomplete. A cumulative GPA of B- will lead to academic probation.

Grades of below B- indicate extremely weak performance and insufficient grasp of the material.

Tips on How to Fully Grasp the Material in this Course

- complete the recommended reading and watch any prerecorded lectures before class
- look at the problem sets before class and see if there are any problems you can answer before the sessions
- attend the synchronous sessions
- take notes during videos and during the sessions
- have a calculator and scratch paper ready for practice problems during lectures
- search the internet for clarification of concepts that you might not grasp initially
- ask questions if something doesn't make sense
- email TA for further clarification
- do the problem sets without looking at the answer sheet so that you can determine how well you understand the material
- once problem set is complete, carefully review answer sheets and review concepts that gave you trouble
- focus more on learning concepts and less on learning how to use Stata. Stata is only useful if you have a full grasp of the material. You will not be tested on your ability to execute a Stata command
- sign up for the peer educator program at any point to work one-on-one with a peer. If you receive below a B on an assignment, contact Deneé Bottoms to sign up to work with a peer educator
- review all problem sets, practice problems at the ends of the lecture slides, and review sheets provided for the exams

SESSIONS AND RECORDINGS

Weekly synchronous meetings will be recorded so that students who missed the weekly classroom time can catch up on what was missed.

Recordings are for course purposes only and shall not be copied nor shared in part or in full outside of the class. This protects the safety and privacy of the classroom environment.

STATA AND LAB

I do not collect problem sets. The answers are posted on Blackboard. Datasets for problem sets are accessible from the GW Cloud. Problem sets will include the Stata code that you need to complete the assignment. Depending upon your learning style, you may become more proficient in Stata if you attempt the Stata work without the instructions. The TA will be available to answer questions. You may complete the problem sets on your own time if you prefer, either through the GW Cloud or by leasing (or purchasing) Stata for your home computer.

This is a course on econometrics, not Stata. As a result of taking this course, you will know how to execute basic commands in Stata, which will be a solid foundation for learning more. There are lots of on-line Stata tutorials. Feel free to read them and explore Stata on your own.

The TA will be available to answer questions about the problem sets every Wednesday after class (8:10 to 10:00pm). The TA will not have information about how to gain access to Stata through GW. GW offers virtual access to Stata through the Columbian Cloud Portal. Go to this site for more info: <https://ots.columbian.gwu.edu/virtual-applications-citrix-xenapp>.

WEEKLY COURSE SCHEDULE

Date	Week	Topic	Suggested Readings from book	Work on this week
9.2	1	Intro to class and review of intro stats		PS 1
9.9	2	Basics of Regression	1, 3	PS 2
9.16	3	Intro to Ordinary Least Squares	2,4	PS 3
9.23	4	Hypothesis Testing and Inference	5	PS 4
9.30	5	Nonlinearities 1: Logarithmic Equations	7.2	PS 5
10.7	6	Midterm Exam (6:15-7:45)		Exam
10.14	7	Nonlinearities 2: Polynomials, Interactions and Linear Probability Models	7.2, 7.4, 7.5, 13.1	PS 6
10.21	8	Specification: Choosing independent variables	6	PS 7
10.28	9	Intro to fixed effects		PS 8
11.4	10	Difference in Difference	16	PS 9
11.11	11	Standard Errors	8, 9, 10	PS 10
11.18	12	Presentations		Presentations
11.25		NO CLASS – THANKSGIVING BREAK		
12.2	13	Presentations		Presentations
12.9	14	Review for final exam		Exam prep
12.16	15	Final exam (6:15-7:45)		Exam

POLICIES AND PROCEDURES FOR THIS COURSE

University policy on observance of religious holidays

In accordance with University policy, students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. For details and policy, see: provost.gwu.edu/policies-procedures-and-guidelines

Academic Integrity Code

Academic Integrity is an integral part of the educational process, and GW takes these matters very seriously. Violations of academic integrity occur when students fail to cite research sources properly, engage in unauthorized collaboration, falsify data, and in other ways outlined in the Code of Academic Integrity. Students accused of academic integrity violations should contact the Office of Academic Integrity to learn more about their rights and options in the process. Outcomes can range from failure of assignment to expulsion from the University, including a transcript notation. The Office of Academic Integrity maintains a permanent record of the violation. More information is available from the Office of Academic Integrity at studentconduct.gwu.edu/academic-integrity. The University's "Guide of Academic Integrity in Online Learning Environments" is available at studentconduct.gwu.edu/guide-academic-integrity-online-learning-environments. Contact information: rights@gwu.edu or 202-994-6757.

Support for students outside the classroom

Virtual academic support

A full range of academic support is offered virtually in fall 2020. See coronavirus.gwu.edu/top-faqs for updates.

Tutoring and course review sessions are offered through Academic Commons in an online format. See academiccommons.gwu.edu/tutoring

Writing and research consultations are available online. See academiccommons.gwu.edu/writing-research-help.

Coaching, offered through the Office of Student Success, is available in a virtual format. See studentsuccess.gwu.edu/academic-program-support

Academic Commons offers several short videos addressing different virtual learning strategies for the unique circumstances of the fall 2020 semester. See academiccommons.gwu.edu/study-skills. They also offer a variety of live virtual workshops to equip students with the tools they need to succeed in a virtual environment. See tinyurl.com/gw-virtual-learning

Writing Center

GW's Writing Center cultivates confident writers in the University community by facilitating collaborative, critical, and inclusive conversations at all stages of the writing process. Working alongside peer mentors, writers develop strategies to write independently in academic and public settings. Appointments can be booked online. See gwu.mywconline.

Academic Commons

Academic Commons provides tutoring and other academic support resources to students in many courses. Students can schedule virtual one-on-one appointments or attend virtual drop-in sessions. Students may schedule an appointment, review the tutoring schedule, or access

other academic support resources at academiccommons.gwu.edu. For assistance contact academiccommons@gwu.edu.

Disability Support Services (DSS) 202-994-8250

Any student who may need an accommodation based on the potential impact of a disability should contact [Disability Support Services](#) to establish eligibility and to coordinate reasonable accommodations. disabilitysupport.gwu.edu

Counseling and Psychological Services 202-994-5300

GW's Colonial Health Center offers counseling and psychological services, supporting mental health and personal development by collaborating directly with students to overcome challenges and difficulties that may interfere with academic, emotional, and personal success. healthcenter.gwu.edu/counseling-and-psychological-services

Safety and security

- In an emergency: call GWPD 202-994-6111 or 911
- For situation-specific actions: review the Emergency Response Handbook at safety.gwu.edu/emergency-response-handbook
- In an active violence situation: Get Out, Hide Out or Take Out. See go.gwu.edu/shooterprep
- Stay informed: safety.gwu.edu/stay-informed

Classroom Expectations

Higher education works best when it becomes a vigorous and lively marketplace of ideas in which all points of view are heard. Free expression in the classroom is an integral part of this process and works best when all of us approach the enterprise with empathy and respect for others.

GW Statement on Diversity and Inclusion

Diversity is crucial to an educational institution's pursuit of excellence in learning, research and service. In pursuit of those goals, a population of students, faculty, and staff with differing perspectives, backgrounds, talents, and needs can lead to a richer mix of ideas, energizing and enlightening debates, deeper commitments, and a host of educational, civic and work outcomes. Leveraging diversity is rarely achieved by accident. As individuals and as an institution we must intentionally act to create the diverse and inclusive community that enables everyone to flourish. All members and units of the GWU community must advance the institution's commitment to diversity and inclusion as a strategic priority.

Incompletes

A student must consult with the instructor to obtain a grade of "I" (incomplete) no later than the last day of classes in a semester. At that time, the student and instructor will both sign the CCAS contract for incompletes and submit a copy to the School Director. Please consult the TSPPPA Student Handbook (found on the Trachtenberg School website) or visit <https://columbian.gwu.edu/sites/columbian.gwu.edu/files/downloads/Incomplete%20Contract.pdf> for the complete CCAS policy on incompletes.

Submission of Written Work Products Outside of the Classroom

It is the responsibility of the student to ensure that an instructor receives each assignment. Students can submit written work electronically only with the express permission of the instructor.

Submission of Written Work Products after Due Date: Policy on Late Work

All work must be turned in by the assigned due date in order to receive full credit for that assignment, unless an exception is expressly made by the instructor.

Changing Grades After Completion of Course

No changes can be made in grades after the conclusion of the semester, other than in cases of clerical error.

The Syllabus

This syllabus is a guide to the course for the student. Sound educational practice requires flexibility and the instructor may therefore, at her/his discretion, revise content and requirements during the semester.