



Syllabus

Course Information	<p>ECON 895-018: Microeconometrics</p> <p><u>Location:</u> Tuesdays, 1:30 pm – 4:10 pm, Arlington: Van Metre Hall 312</p> <p>The class will not be recorded.</p>
Instructor	<p>Thomas Stratmann, Professor Email: tstratma@gmu.edu</p> <p>Office Hours:</p> <ul style="list-style-type: none"> • Each Wednesday, 3 pm to 4 pm, Arlington Campus, Vernon Smith Hall, 4th Floor • By appointment, or feel free to stop by my office without an appointment
Teaching Assistant	<p>Amberly Dozier, Economics Ph.D. student Email: adozier2@gmu.edu Office hours via Zoom: Each Thursday, 10 am to 11 am https://gmu.zoom.us/j/3422571818?pwd=bWFORDlWSDljMEh1Mndxd3lkZEVYdz09</p>
Course Description	<p>This course will introduce you to modern statistical techniques frequently used to analyze data in the social sciences. The emphasis is on estimating causal effects and empirical applications. There are three main objectives of the course:</p> <ol style="list-style-type: none"> 1. To provide you with the skills necessary to estimate causal effects and critically evaluate identification strategies and empirical designs. 2. To provide you with the ability to analyze critically the empirical analysis done by others at a level sufficient to make sound decisions based on the analysis. 3. To familiarize you with concepts such as Properties of Regressions and Directed Acyclical Graphs and the Potential Outcomes Causal Model by providing you with the skills to estimate regression models that rely on methods such as Matching, Regression Discontinuity, Instrumental Variables, Panel Data, Differences-in-Differences, and Synthetic Controls.
Course Objectives	<p>Upon completion of the course, students will be able to:</p> <ol style="list-style-type: none"> 1. Describe the core concepts of applied econometrics 2. Analyze data using “selection on observable” methodologies 3. Analyze data using “selection on unobservable” methodologies 4. Assess identification strategies and research designs critically 5. Construct appropriate outputs such as visualizations and tables
Course Methodology	<p>The class format will combine readings, lectures, problem sets, and other learning tools.</p> <p>The class will be interactive and require every student to be engaged in the classroom discussion and assignments. Every student will be expected to be an active participant.</p>
Required textbook(s) and/or materials	<p>Required Text:</p> <p>Scott Cunningham. “Causal Inference: The Mixtape.” Yale University Press. 2021.</p>

	<p>Recommended Texts:</p> <p>Angrist, Joshua D. and Jörn-Steffen Pischke. "Mostly Harmless Econometrics: An Empiricist's Companion." Princeton University Press. 2009.</p> <p>Other readings and materials will be made available electronically on Blackboard.</p> <p>Required Software:</p> <p>Stata (for more details, see "Course-specific Hardware/Software" below)</p>
Computer Requirements	<p>Software:</p> <p>This course uses Blackboard as the learning management system. You will need a browser and operating system listed compatible or certified with the Blackboard version available on the myMason Portal. See supported browsers and operating systems. Log in to myMason to access your registered courses. Online courses typically use Acrobat Reader, Java, Windows Media Player, QuickTime, and Real Media Player. Your computer should be capable of running current versions of those applications. Also, ensure your computer is protected from viruses by downloading recommended Anti-Virus software for free here.</p> <p>Students owning Macs or Linux should be aware that some courses may use software that only runs on Windows. You can set up a Mac computer with Boot Camp or virtualization software, so Windows will also run on it. Watch this video about using Windows on a Mac. Linux computers can also be configured with virtualization software or dual boot with Windows.</p> <p>Note: If you are using an employer-provided computer or corporate office for class attendance, please verify with your systems administrators that you will be able to install the necessary applications and that system or corporate firewalls do not block access to any sites or media types.</p> <p>Course-specific Hardware/Software</p> <p>This course will include applied computing, using Microsoft Excel and Stata. Stata software is probably the most favored statistical package used by applied economists. You will be required to utilize Stata/IC, which is available through the university and for purchase. Here are some Mason links to Stata, how to access Stata on and off Campus, and purchasing options.</p> <p>https://infoguides.gmu.edu/software/stata</p> <p>https://its.gmu.edu/service/virtual-computing-lab/</p> <p>https://its.gmu.edu/service/virtual-private-network-vpn/</p> <p>To access Stata, go to https://its.gmu.edu/service/virtual-computing-lab/. This gets you to the virtual computing lab to access Stata. If you are off campus, you must use a VPN connection. Sometimes, even on campus, you'll need a VPN connection to access the virtual computing lab. For details on installing a VPN on your laptop or computer, go to https://its.gmu.edu/service/virtual-private-network-vpn/.</p> <p>Alternatively, or in addition, you can get by a six-month, annual, or perpetual license. For students, the cheapest option is Stata/BE, which you can rent for six months for \$48. A perpetual license costs Stata/BE costs \$225, and you have the option to upgrade to Stata/SE. Stata/SE allows for larger data sets, and there are other favors of Stata, such as Stata/MP,</p>

	<p>which are faster than the other two versions and allow for even larger data sets. You will find more details here: https://www.stata.com/order/new/edu/gradplans/student-pricing/.</p> <p>Your instructor has no financial interest in what type of option you choose and whether you decide to purchase this software. The book <i>Statistics with Stata</i> by Lawrence C. Hamilton might be helpful for you to learn about using Stata, but this book is not required.</p>
Course Website	<p>In addition to in-person teaching, we will use Blackboard for this course. You can access the site at http://mymasonportal.gmu.edu. Log in and click on the "Courses" tab. You will see ECON 895.</p> <p>NOTE: Username and passwords are the same as your Mason email account. You must have consistent access to an internet connection to complete the assignments in this course through Blackboard (http://mymason.gmu.edu).</p> <p>Please note the technology requirements for the College of Humanities and Social Sciences in your Blackboard course menu—it contains details of minimum technology requirements.</p>
Participation	<p>Learning can only happen when you are playing an active role. Knowledge is more important than facts and definitions. It is a way of looking at the world, an ability to interpret and organize future information. An active learning approach will more likely result in long-term retention and better understanding because you make the content of what you are learning concrete and tangible in your mind.</p> <p>Although an active role can look different for various individuals, it is expected in this class that you will work to explore issues and ideas under the guidance of the professor and your peers. You can do this by reflecting on the content and activities of this course, asking questions, striving for answers, interpreting observations, and discussing issues with your peers.</p>
Rules and Expectations	<p>Expect to work at least 10 to 12 hours per week on assignments and readings for this course.</p> <p>Assignments will be handed in online. Paper copies are not accepted.</p> <p>You are expected to retain an electronic copy of all work submitted. If transmission of the work fails, you are expected to "resend" the document under our directions. Assignments will be submitted in Blackboard through Discussion Board forum postings via the Assignment feature or the SafeAssign feature. You are expected to verify your Blackboard responses by returning to the appropriate place in Blackboard after the work has been posted.</p> <p>In correspondence/communication, students will be expected to:</p> <ol style="list-style-type: none"> a) Be professional and respectful in correspondence b) Make reasonable requests of the instructor. I will be happy to clarify the course material and answer legitimate questions; however, please exhaust other information sources (e.g., syllabus, Blackboard) for answering your question before contacting me, and remember, "Poor planning on your part does not constitute an emergency on my part." <p>Regarding honesty in work, students will be expected to:</p> <ol style="list-style-type: none"> a) Review the University integrity and honesty policies in the student handbook for guidelines regarding plagiarism and cheating (summarized below). I will gladly clarify my stance on any questionable or "grey area" issues you may have. b) Refrain from dishonest work as it will receive a minimum penalty of zero on the assignment and a maximum penalty of a zero for the course with a report to the Honor committee. The GMU Honor Code requires that faculty submit any suspected Honor Code violations to the Honor Committee. Therefore, any suspected offense will be submitted for adjudication.
Mason Honor Code	<p>The complete Honor Code is as follows:</p> <p><i>To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University</i></p>

	<p>community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.</p> <p><i>(From the Catalog – https://catalog.gmu.edu/)</i></p>
Cheating Policy	<p>Any cheating on an activity, project, or exam will earn zero points.</p> <p>“Cheating” includes, but is not limited to, reviewing others’ exam papers, having ANY resources utilized when not allowed, and collaborating with another student during an individual assignment.</p> <p>If you have questions about when the contributions of others to your work must be acknowledged and appropriate ways to cite those contributions, please talk with the professor or utilize the GMU writing center.</p>
Plagiarism and the Internet	<p>Copyright rules also apply to users of the Internet who cite from Internet sources. Information and graphics accessed electronically must also be cited, giving credit to the sources.</p> <p>This material includes but is not limited to e-mail (don't cite or forward someone else's e-mail without permission), newsgroup material, and information from Web sites, including graphics. Even if you give credit, you must get permission from the original source to put any graphic you did not create on your web page. Shareware graphics are not free. Freeware clipart is available for you to use freely. If the material does not say "free," assume it is not.</p> <p>Putting someone else's Internet material on your web page is stealing intellectual property. At this time, making links to a site is okay, but getting permission is strongly advised, since many Websites have their own requirements for linking to their material. Review the Honor Code here.</p>
Individuals with Disabilities	<p>Students with documented disabilities should contact the Office of Disability Services (703 993-2474) to learn more about accommodations that may be available to them.</p> <p><i>(From the Catalog – catalog.gmu.edu)</i></p>
Academic Integrity and Inclusivity	<p>This course embodies the perspective that we all have different views and ideas and deserve the opportunity to share our thoughts. Therefore, we will conduct our discussions with respect for those differences.</p> <p>That means we each have the freedom to express our ideas. Still, we should also remember that our colleagues deserve to hear differing thoughts respectfully, i.e., we may disagree without being disagreeable. http://oai.gmu.edu/</p>
Student Privacy Policy	<p>George Mason University strives to fully comply with FERPA by protecting the privacy of student records and judiciously evaluating requests for the release of information from those records.</p> <p>Please see George Mason University’s student privacy policy https://registrar.gmu.edu/students/privacy/.</p>
E-Mail Policy	<p>Web: https://mail.gmu.edu/</p> <p>Mason uses electronic mail to provide official information to students. Examples include notices from the library, academic standing, financial aid information, class materials, assignments, questions, and instructor feedback. Students are responsible for the content of university communication sent to their Mason e-mail account and are required to activate that account and check it regularly. Students must also maintain an active and accurate mailing address to receive communications sent through the United States Postal Service.</p> <p><i>(From the Catalog – https://catalog.gmu.edu/)</i></p>
Late Work Policy	<p>Late assignments will not be accepted without prior written approval from the instructor. Emergency, unforeseen, and extenuating severe circumstances will be handled on a case-by-case basis.</p>
Course Grading & Evaluation	<p>Grades will be assigned as follows: A: 94-100</p>

	<p>A- : 90-93 B+: 87-89 B: 84-86 B- :80-83 C:70-79 F: 69 and Below</p>
Discussions	The discussion board will primarily be used as an ongoing dialogue or for students to pose questions and comments about the course assignments. Regular participation is encouraged through dialogue with your peers and instructor, though you will not be graded. The “Ask the Instructor” section may be used for general questions and comments.
Quizzes/Knowledge Checks – 10%	There will be both online and in-class quizzes and knowledge checks.
Assignments: Problem Sets, Homework, & Exercises– 20%	<p>Various graded assignments will be presented throughout the course, including problem sets. Suggested answers to problem sets will be posted on this site.</p> <p>Check Blackboard frequently for updates on problem sets, lecture notes, reading assignments, announcements, etc.</p> <p>You may work on the problem sets in small groups. You must, however, write your answers individually and in your own words. If you choose to work in a small group, include the names of your study group members on your problem set. Duplicate answers will not receive credit.</p> <p>Each week assignments are required to be uploaded to Blackboard. Assignments are due by Monday, 11:59 PM ET unless otherwise stated.</p> <p>Refer to the weekly course schedule on Blackboard for details.</p>
Research Paper– 20%	You are responsible for writing a professional economics research paper that uses one or several of the empirical methods discussed in this class. You are required to write this paper using https://www.overleaf.com/ .
Exams – 50% (Midterm 20% , Final 30%)	<p>There will be one midterm exam. This exam is a closed book exam. There will be no makeup midterm.</p> <p>If you miss the midterm with a valid excuse, its weight will be shifted to the final.</p> <p>The final exam will be cumulative and is also closed book.</p>
Important Dates	<p>Midterm: Week 7 of classes – October 4, 2022</p> <p>Week 7: Students present their term papers' topic and empirical design.</p> <p>Final Exam: Tuesday, December 13, 2022 1:30pm to 3:30pm Location: Regular Classroom</p>
Need Help?	Attend the office hours. Utilize the “Course Q&A” discussion forum. Email your instructor or the teaching assistant for this course directly.