Economics 4848 Applied Econometrics
Summer Session B 2018

Professor J. Klein
O ce: ECON 04A
O ce Hours: M, T, Th 11:00am-12:45pm or by appointment/email
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Website: Canvas

Course Description

Applied Econometrics provides an overview of econometric techniques commonly used in ap-
plied research in microeconomics. Methods and topics covered in this course will help students
develop a deeper understanding of econometrics as well as learn to use STATA, a statistical
software package commonly used in economics. Learning to use STATA will take a signi cant
amount of time and e ort but will be extremely valuable as it is much more powerful than what
you can do in Excel, EViews, etc. Students will apply the econometric models using data from
the US Census Bureau and other sources. In addition, students will be able to apply these skills
to a research topic of their choosing.

Typically each week we will discuss the theory for the current topic and then spend some time
working with data to apply the theory in STATA. This data analysis that we do in class will be
similar to your assignments, however the theory portion will also be covered on exams.

Prerequisite

This class requires previous completion of Economics 3818, Intro to Statistics, or the equivalent.

Course Materials

There is no required text but you may nd the following resources helpful:

Introductory Econometrics: A Modern Approach by Je ery M. Wooldridge

Using Econometrics: A Practical Guide by A.H. Studenmund

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If you choose to purchase your own copy of STATA, it will allow you to work on assignments and your research project outside the computer labs. Students can receive a discount on the software through Stata's GradPlan. Information is available at: https://www.stata.com/order/new/edu/gradplans/student-pricing/ I would suggest Stata/IC license which is $45 for 6 months.

Hardware: You will need a USB memory device to store copies of data and log les from our work in class.

Grade Breakdown

Grades for this course will be based on the following criteria:
- Assignments (20% total)
- 2 Midterm Exams (20% each)
- Final Exam (20%)
- Data project and presentation (20%)

Final grades will be determined by your cumulative performance at the end of the semester, and this may or may not correspond to the typical ten-point grading scale (A's are 90-10, B's are 80-89, etc.) If the nal distribution of grades are lower than expected, I reserve the right to change the grading scale at that time.

Assignments (20% total): Students may work alone or with one other student. If you work with a partner please upload one assignment for both of you. These assignments will be similar in content to the lab activities we do in class. Assignments must be uploaded on D2L by 10:00pm on the day they are due. No late assignments will be accepted for any reason. Your lowest homework assignment will be dropped from your overall score for the course. For each assignment you should upload a .do le with your code, and a Word document or PDF of your answers to the questions.Note that I cannot read .pages les, so these must be saved as a PDF.

Midterm Exams (20% each): Midterm exams will be held on July 23 and Aug. 1 during the regularly scheduled class time. The exams will be similar to your homework assignments in that you will be given some data to analyze with accompanying questions and a few theory based questions. Given the nature of programming in STATA and this course, all exams should be considered \cumulative" in the sense that you will need to know how to any and all of the tasks we've learned throughout the semester.

Students must take exams at scheduled times so ensure now that you can attend

must take the nal exam on this day, so write down the date now to ensure you will be there.

Students with documented disabilities who may need academic accommodations should speak with me during rst three weeks of the class. Also contact the Disability Services O ce, Willard 322 (phone 303-492-8671).

Data Project and Presentation (20%):

before class is dismissed, or spending signi cant time on non-class activities will also be counted as absent.

   Disability Accommodations: If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at

be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with di erences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the student code.

Since the course is in the computer lab, I realize that there can be the temptation to work on other things during lecture, browse the internet, etc. However, as a courtesy to me and your classmates, as well as to ensure you understand the presented material, I ask that during lectures (non-lab activities) you only use the computers to follow along with the slides and not for any other purpose. We will often also have practice lab activities that are intended to reinforce the analysis techniques that you will need for your homework.

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Tentative Class Schedule

Week	Content	Assignments
Week 1	July 10: Course Information, ACS/CPS Introduction July 11: Statistics and Sampling July 12: Introduction to STATA, Creating Variables July 13: Creating Variables, Data management, Error checking	Homework 1 Due 7/13
Week 2	July 16: Exploring Continuous Data, Categorical Data July 17: Bivariate Regression, Hypothesis Testing July 18: Hypothesis Testing, Conducting Economic Research July 19: Analyzing your Regression, Classical Assumptions and Violations July 20: Simple Multivariate Regression, ACS/CPS Tutorial	Homework 2 Due 7/17 Proposal Due 7/21 Homework 3 Due 7/20
Week 3	July 23: Exam 1: Up to July 19th July 24: Non-linear Models July 25: Categorical Variables in Regressions July 26: Interaction Models July 27: Omitted Variable Bias	Homework 4 Due 7/25 Data Set Due 7/27
Week 4	July 30: Limited Dependent Variables July 31: Exam 2: up to July 27 Aug 1: Multicollinearity, Heteroskedasticity Aug 2: Panel Data, Fixed E ects Aug 3: Individual Meetings	Homework 5 Due 7/29 Analysis Due 8/2
Week 5	Aug 6: TBD Aug 7: Time Series Topics Aug 8: Time Series Topics Aug 9: Presentations Aug 10: Final Exam	Homework 6 Due 8/5 Presentation Due 8/9 at 8:30am Final Paper Due 8/12