

# SYLLABUS ECON 818: ECONOMETRICS II

Fall 2019

Line Number 27964

**Professor Donna K. Ginther**

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**Office Hours:** Tues 9:30-10:30 or by appointment.

## Course Description:

This course introduces students to the data and econometric methods used in the fields of applied micro and macroeconomics. The course will focus on econometric theory, estimator choice, and applications of empirical methods. Topics covered include economic data and statistical programming, measurement error, instrumental variables, seemingly unrelated regression, simultaneous equation models, generalized method of moments, maximum likelihood, limited dependent variable models, and time series. Attention will be given to the suitability of the methods to the research question under consideration. Prerequisites: Econ 817 or permission of the instructor.

## Requirements:

Course grades are determined by a combination of 4 problem sets, a midterm exam, and a research paper. Problem sets will be a combination of mathematical and empirical exercises.

### *The Research Paper:*

The research paper is an empirical project that involves replicating a published research paper. Several journals now post data and code associated with published papers. You will use that code and data to confirm the analysis in the paper. Next, you will develop an extension to that research question using methods learned in this course. In some cases you may be able to use this paper to fulfill the second year paper requirement.

### Grading Policy:

Late assignments will not be accepted. Letter grades you receive in the course are final. If you disagree with how course assignments are graded, you may submit a request for re-grading in writing. If the request is granted, the entire assignment will be re-graded. Your grade will be determined by a weighted average of the total points accumulated on the following requirements:

<u>Requirement:</u>	<u>Weight:</u>
1. 4 Problem Sets	60 %
2. Midterm Exam	20 %
3. Research Paper	20 %

**Course-Related Policies:**

- Attendance is not required. However, if you consistently miss class, it will adversely affect your grade because most of the material is not in the text book. Students are responsible for obtaining missed lecture notes from their classmates. I expect that you arrive to class on time and not depart early. I also request that all cell phones and pagers are turned off for the duration of the class.
- This course requires computer literacy. You are expected to access the course website for access to problem sets, information, and readings. In addition, we will be using STATA for some of the problem sets.
- Any student with a disability that may preclude full course participation should contact the instructor in order to discuss accommodations.
- Any student who plans to observe a religious holiday that conflicts in any way with this course should contact the instructor in order to discuss accommodations.
- This course requires some writing. Bad writing = lower grade. If a paper does not meet a minimal quality of writing, I will not accept it. Thus, I encourage you to use the KU Writing Center. When you visit, bring your work in progress and a list of issues that you would like to discuss with the peer instructors. Please check the website at <http://www.writing.ku.edu> for current locations and hours. For more information, please call 864-2399 or send an e-mail to [writing@ku.edu](mailto:writing@ku.edu).

**Office Hours:**

Office hours are on Tuesdays from 9:30 AM – 10:30 PM or by appointment. Occasionally, the instructor will reschedule office hours and will make announcements in class and on the course website. The most efficient way to contact the instructor outside of class is by using email: [dginther@ku.edu](mailto:dginther@ku.edu). You may also leave a voice mail at 864-3251. However, please be certain to leave a phone number where I may reach you.

**Textbooks:**

Russell Davidson and James G. MacKinnon (**DM**), *Econometric Theory and Methods*, Oxford University Press, 2003.

Hamilton, James (**H**), *Time Series Analysis*, Princeton U. Press, 1994.

*Recommended but not required:*

Cameron, A. Colin, and Pravin K. Trivedi. *Microeconometrics Using Stata*, Second Edition, College Station, TX: Stata Press, 2010.

Stock, James H. and Mark W. Watson 2011. *Introduction to Econometrics*, Third Edition. Boston: Pearson (Addison-Wesley).

**Software:**

STATA is available in the Economics graduate student lab and in a virtual computer lab. No previous computing experience is required for this course. If you prefer to do your assignments on your home computer, you may purchase a student version of STATA. KU has a Grad Plan that gives students a discount for purchasing the software. Students may also purchase SAS from the university at a discount.

**Tentative Course Calendar:**

*Any changes in the course calendar will be announced in class and posted on the website.*

<b>The Week of:</b>	<b>Topic:</b>	<b>Assignment:</b>
<b>August 27</b>	Introduction & Review	
<b>September 3</b>	Heteroskedasticity & Serial Correlation	<b>DM 7.5, 7.6, 7.7, 7.9</b>
<b>September 10</b>	Nonlinear Regression	<u>Problem Set 1</u> ; <b>DM 6.1-6.5, 6.7 (6.8)</b>
<b>September 17</b>	Instrumental Variables	<b>DM 8.1-8.3, 8.5-8.7</b>
<b>September 24</b>	Instrumental Variables	
<b>October 1</b>	SUR and Simultaneous Equations	<u>Problem Set 2</u> ; <b>DM 12.2, 12.4, 12.5</b>
<b>October 8</b>	GMM	<b>DM 9.1-9.4</b>
<b>October 15</b>	<b>Fall Break No Class 10/15</b>	
<b>October 22</b>		<u>Midterm Exam</u>
<b>October 29</b>	Maximum Likelihood	<b>DM 10.1-10.2, 10.4-10.5, 10.7-10.8</b>
<b>November 5</b>		
<b>November 12</b>	Limited Dependent Variables	<b>DM 11.2-11.3, 11.6-11.7</b> <u>Problem Set 3</u>
<b>November 19</b>		
<b>November 26</b>	<b>No Class 11/26 Thanksgiving Break</b>	
<b>December 3</b>	Time Series	<b>H Chapter 3, <u>Problem Set 4</u></b>
<b>December 10</b>	Paper Presentations in class	
<b>December 19</b>	<b>Paper Due</b>	