

## EconS 311 - Introductory Econometrics [M] - (3 credits) – Spring 2017

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### Teaching Assistants:

#### Graduate:

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#### Undergraduates:

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Please check the syllabus on Blackboard for possible changes to office hours and the calendar office hours file that I have posted in the General Course Materials folder on Blackboard.

**Course Website:** <http://learn.wsu.edu/>  
(Blackboard learn<sup>+</sup>™ - Bb)

**Class Hours and Rooms:** Lecture: Sections 1 and 2 - T, Th, 9:10-10 a.m., Hulbert Hall 27  
Computer Lab: Section 1 - Th 1:25-2:40 p.m., Hulbert Hall 5  
Section 2 - Th 2:50-4:05 p.m., Hulbert Hall 5

**Prerequisites:** EconS 101; EconS 102; Stat 212 or MgtOp 215

**Textbook** (required; available for purchase at the Bookie, Amazon, etc; available for rent at Knetbooks):

*Real econometrics: the right tools to answer important questions*, First Edition, by Michael A. Bailey, Oxford University Press, 2016, ISBN 9780190296827 (paperback)/LCCN 2015047786. Data for problems in the textbook and limited other resources for the text are available at <http://global.oup.com/us/companion.websites/9780190296827/stud/>

A physical copy is on reserve in Holland and Terrell Libraries. <http://www.wsulibs.wsu.edu/holland/holhp.htm>

### Other Required Materials:

Required materials such as homework assignments, handouts, lecture overheads, lab documents (but not lab assignments; see below) and readings will be posted on Blackboard: <http://learn.wsu.edu/>.

Computer lab materials are on the computer lab server. To access the class files from the computers in the Hulbert 5 or 21 labs, either click directly on EconS 311 on the Desktop, or go to My Computer on the lab computers and click on *Tools* then *Map network drive*, then type in:  
<\\cil-mgmtsrvr\econ311>

The files are in the Spring 2017 folder. Assignments for each lab will be posted during the Lab session.

## Course Overview:

Introductory Econometrics (EconS 311) is a core course in economics that introduces you to the *science* and *art* of building and using models in the context of economic analysis and forecasting. The focus is on understanding regression methods (including estimation, hypothesis testing, and prediction) and learning how to appropriately apply these techniques in the analysis of real-world economic data. This course also fulfills one of your two Writing-in-the Major [M] requirements.

## Course Goals and Student Learning Outcomes:

This course will help prepare you to be a successful professional in economics and related fields, providing you with analytical tools that are highly sought after in the workplace (and in graduate school). Our overall teaching goals are to help you build a foundation of knowledge in the basic principles of econometrics and to help you develop critical thinking and problem solving skills in applying these quantitative principles in future scenarios. In addition, this course will help support the development of your information literacy and written communication skills within the economics major.

Student Learning Outcomes – Upon completion of EconS 311, you will be able to:

- Apply basic economic concepts to identify researchable economic issues
- Collect, organize, evaluate, and analyze appropriate economic information/data
- Specify and test economic hypotheses
- Utilize quantitative skills to estimate models with results that can be used for management decisions or policy recommendations
- Effectively communicate methodology and results of empirical econometric analyses

## Grading and Course Requirements:

<i>Grade Components</i>	Quizzes/Class Participation	8%
	Homework Assignments	15%
	Lab Assignments	15%
	Group Project/ Individual Paper	30%
	Examinations	32% [2 midterms (16% for each)]

*Midterm Grading:* the C or F option will be used to provide your midterm grade.

*Final Grading:* Guaranteed Grading Scale (pluses and minuses will be used):

- A: [90-100]
- B: [80-90)
- C: [70-80)
- D: [60-70)
- F: (<60]

A curve (in your favor) might be applied at the discretion of your professor.

*Assigning Incompletes:* University policy (Academic Regulation #90) states that Incompletes may only be awarded if: "the student is unable to complete their work on time due to circumstances beyond their control".

- **Quizzes/Class Participation** - Class and computer lab participation is required. You are expected to be on time to class and to not leave the classroom during the scheduled class time. You will be graded on attendance and involvement in discussions during class and labs. Quizzes/short problems/group work will be given in lecture and collected on a routine basis. You are expected to be prepared for class and labs and to keep up with the materials as the class progresses. You are expected to provide feedback concerning the class, during the semester and via the course evaluation which will be distributed electronically at the end of the semester.
- **Homework Assignments** - There will be 9 - 10 ten homework assignments throughout the semester. NO homework assignments are dropped; you need to do all assignments. These consist of a mix of analytical problems (some will be from your textbook) and computer work, and will frequently build upon the prior week's computer lab content. We will use EXCEL and the software package **Stata** in the computer lab, and you will generally be expected to use these (as assigned) for your computer work in your assignments.

The homework assignments will typically be due in class (at the beginning of lecture class at 9:10 am) on Thursday, one week from the day when the homework is assigned. The assignments will be posted on the Blackboard site <http://learn.wsu.edu/> in the Homework Assignments folder. You will turn in physical copies of your completed assignment in the classroom during lecture at 9:10. Late assignments will be penalized at a rate of 20% per day that the assignment is late, with the late penalty starting once class begins on the due date. After an assignment answer key is posted on the Blackboard, late assignments will no longer be accepted. You may work with your classmates for the homework assignments, but you are required to write up your own answers for the assignment. VIOLATION OF THIS IS PLAGIARISM AND WILL BE DEALT WITH ACCORDINGLY.

- **Lab Assignments** - During each lab session you will receive an assignment for that session which will be due at the end of that lab session (unless otherwise announced). The lab assignments will be posted on the lab server and completed assignments will be turned in at the end of the lab, in the appropriate LAB DROP BOX ON Blackboard. No early or late submissions will be accepted unless you have an official University-sanctioned excuse.

The lab during Week 14 (Lab 14) is your lab quiz and counts as double the points of the other labs. During Week 15 the lab time will be used for you to work on your Project (there will not be a lab assignment, but your professor and TAs will be available to answer questions related to your project). Your lowest lab assignment grade, not including the lab quiz (Lab 14), will be dropped. In the lab you will be using relevant techniques to analyze data and estimate econometric models (utilizing the software package **Stata** or on several occasions EXCEL).

- **Group Project/Individual Paper** - You are required to conduct an empirical regression analysis of economic data, and to write up the results of this study. The five phases of this project (and tentative report due dates) are:
  1. Choosing a topic (due by 5 pm on February 2, Thursday) – GROUP REPORT\* - printed copy
  2. Collecting data (due by 11:59 pm on February 17, Friday) – GROUP REPORT – upload to Drop Box
  3. Conducting the regression analysis (due by 5 pm on April 13, Thursday) – INDIVIDUAL REPORT\* - printed copy
  4. Interpreting the results AND writing the complete paper (due by 5 pm on April 28, Friday) – INDIVIDUAL COMPLETE PAPER – printed copy
  5. Writing a one pager/executive summary of your project (due by 5 pm on May 1, Monday) – INDIVIDUAL REPORT – upload to Drop Box; note that this is the day that your final is scheduled

You will receive a more thorough description of the project with the exact due dates listed. You are required to work as a team in choosing a topic, collecting the data, and starting to do your regression analyses. However you are required to work alone in writing up your reports for Phase 3 and in developing and writing your reports for Phase 4 and 5.

\* You will be given the opportunity to revise Phase 1 (Group Report) and Phase 3 (Individual Report) based on my comments and turn them back in for re-grading. Your grade will be what you receive on your final submission (second submission if you resubmit; first submission if you don't resubmit).

- **Examinations** - There will be two midterm exams given in class on February 21 (Tuesday) and April 11 (Tuesday). In place of an in-class final exam and counted as part of the project points, Phase 5 (a one-pager/executive summary) of your project will be due no later than 5 pm on the day that your final exam is scheduled (May 1, Monday). Note that you will be able to turn in your one-page executive summary before this time.

### **Classroom Expectations and Policies:**

Be a positive contributing member of the class – our class sessions will be a combination of lecture, discussion, and hands on activities. You are expected to come to class prepared and are expected to participate in a manner that will facilitate your learning as well as the learning of your classmates. Mutual respect and collaborative effort are essential and will be expected at all times. Also, attendance and active participation are expectations that will be documented and credited. NO CELL/SMART PHONES/TEXTING!!!

Changes in classroom policies, such as changes in due dates for assignments or corrections to assignments will be announced in class and on Blackboard. Announcements between class meetings will be made on Blackboard, and hence you should check the system on a routine basis. If you miss class, it is your responsibility to find out what you missed.

## **Academic Integrity:**

Academic integrity is the cornerstone of higher education. As such, all members of the university community share responsibility for maintaining and promoting the principles of integrity in all activities, including academic integrity and honest scholarship. Academic integrity will be strongly enforced in this course. Students who violate WSU's Academic Integrity Policy (identified in Washington Administrative Code (WAC) 504-26-010(3) and -404) will fail the assignment, and possibly the course; will not have the option to withdraw from the course pending an appeal; and will be reported to the Office of Student Conduct.

Cheating includes, but is not limited to, plagiarism and unauthorized collaboration as defined in the Standards of Conduct for Students, WAC 504-26-010(3). You need to read and understand all of the definitions of cheating: <http://app.leg.wa.gov/WAC/default.aspx?cite=504-26-010>. If you have any questions about what is and is not allowed in this course, you should ask course instructors before proceeding.

If you wish to appeal a faculty member's decision relating to academic integrity, please use the form available at [conduct.wsu.edu](http://conduct.wsu.edu)

## **Students with Disabilities:**

Reasonable accommodations are available for students with documented disabilities or chronic medical conditions. If you have a disability and need accommodations to fully participate in this class, please visit the Access Center website to follow published procedures to request accommodations: <http://www.accesscenter.wsu.edu>. Students may also either call or visit the Access Center in person to schedule an appointment with an Access Advisor. Location: Washington Building 217; Phone: 509-335-3417. All disability related accommodations MUST be approved through the Access Center. Students with approved accommodations are strongly encouraged to visit with instructors early in the semester during office hours to discuss logistics.

**Other Resources:** WSU has many resources that are designed to help you be successful as a student. Some helpful campus resources include

**The WSU Office of Undergraduate Educations Writing Program** (<https://writingprogram.wsu.edu/undergraduate-writing-center/>) offers free, non-credit, tutorial instruction to WSU students who need help with brainstorming, organization of writing, development of ideas, drafting papers, writing techniques, and sentence structure, grammar and punctuation. Check out their website for more detail on their open-writing lab located in CUE 303 (tutors are available without an appointment) and a link to a new online writing tutorial program <https://writingprogram.wsu.edu/etutoring/> for self-help information to become a better writer without having to come to the lab!

**Library Services:** The Holland and Terrell Libraries contain many resources for WSU students and faculty interested in Economic Sciences, many of which can be accessed through their website <http://libguides.wsulibs.wsu.edu/economics>. This includes links to data sources that might be useful in your class project. If you have any questions not answered by their website or would like to request a book or journal on any subject related to Economic Sciences, please contact Mary Gilles at [gilles@wsu.edu](mailto:gilles@wsu.edu) (Office: Terrell 120E, Phone: 335-8740).

The **Academic Success and Career Center** provides services to enhance student learning and career and employee relations. They provide a variety of structured services that aid student success, including academic advising, peer tutoring, and academic success coaching. They also serve students, alumni, and employers in the exploration and pursuit of a fulfilling employment partnership. You are encouraged to browse their website (<https://ascc.wsu.edu/>) and familiarize yourself with the variety of services available.

**Safety Statement:** Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the "**Alert, Assess, Act**" protocol for all types of emergencies and the "**Run, Hide, Fight**" response for an active shooter incident. Remain **ALERT** (through direct observation or emergency notification), **ASSESS** your specific situation, and **ACT** in the most appropriate way to assure your own safety (and the safety of others if you are able).

Please sign up for emergency alerts on your account at [MyWSU](http://MyWSU). For more information on this subject, campus safety, and related topics, please view the [FBI's Run, Hide, Fight video](#) and visit the [WSU safety portal](#).

Week	Dates	Topic (Approximate Timing)	Text Readings	Supplemental Notes (SN)	Labs (Thursday afternoons)	Homework Due	Project and Exam Dates
1	Jan 9 - 13	Intro/Course Overview/Econometric Models	Ch 1	SN - 1 and 2	Lab 1. Data Management & Basic Statistics in Excel		
2	Jan 16 - 20	Data -- Collection and Good Practices	Ch 2 (and Appendix)	SN - 3 and 4	Lab 2. Intro to Stata Statistical Software	HW #1	
3	Jan 23 - 27	Continue Data and Group Work on Project Phase 1 (1/26 lecture)			Lecture - Ph 1 Group Work; Lab 3. Data Collection & Organization	HW #2	
4	Jan 30 - Feb 3	Simple OLS	Ch 3		Lab 4. Linear Regression in Excel & Stata	HW #3	Ph 1 - Feb 2 (Thurs) - 5 pm
5	Feb 6 - 10				Lab 5. Data Management & Basic Regression Techniques in Stata	HW #4	
6	Feb 13 - 17	Hypothesis Testing	Ch 4 (and Appendix)	SN - 5, 6, and 7	Lab 6. Hypothesis Testing and Regression Models	HW #5	Ph 2 - Feb 17 (Fri) - 11:59 pm - DROPBOX
7	Feb 20 - 24	Exam 1 - 2/21; Lab Work on Project Data (2/23 lecture and lab)			Lab 7. Individual Project Data - Summary and Analysis		<b>Exam 1</b> - Feb 21 (Tues)
8	Feb 27 - Mar 3	Multivariate OLS	Ch 5	SN - 8	Lab 8. Multivariate Regression	HW #6	
9	Mar 6 - 10			SN - 9	Lab 9. Multicollinearity and Other Model Considerations	HW #7	
	Mar 13 - 17	SPRING BREAK					
10	Mar 20 - 24	Dummy Variables	Ch 6	SN - 10	Lab 10. Dummy variables and Other Model Considerations	HW #8	
11	Mar 27 - 31		Ch 7.4, Ch 8.1 - 8.2	SN - 11	Lab 11. Model Selection and Comparison (F-tests and more)	HW #9	
12	Apr 3 - 7	Transformation, Functional Form, and Model Selection (4/4 in lab)	Ch 7		Lab 12. Functional Form Selection		
13	Apr 10 - 14	Exam 2 - 4/11			Lab 13. Dummy Dependent Variables and Autocorrelation		<b>Exam 2</b> - Apr 11 (Tues); Ph 3 - Apr 13 (Thurs) - 5 pm
14	Apr 17 - 21	More on Model Selection and Dummy Dependent Variables	Ch 12		Lab 14. Semester Summary and Quiz (Lab quiz - double points)		Lab Final/Quiz - Apr 20 (Thurs in Lab)
15	Apr 24 - 28	Applications and Project Work			Open Lab - Project Work during lecture and lab - No Lab Exercise		Ph 4 - Apr 28 (Fri) - 5 pm
Finals Week	May 1 - 5	Final Exam Week - Phase 5 due in place of final exam					Ph 5 - May 1 (Mon) - 5 pm - DROPBOX