

**Econ 482A**  
**Econometric Theory and Practice**  
(M T W Th F 1.10 – 3.20 P.M., SAV 131)

**Instructor: Bijetri Bose**

**Office Hours:** By Appointment, ART 343.

**E-mail Address:** [bijetri@uw.edu](mailto:bijetri@uw.edu)

I encourage you to email me with questions regarding the lecture or assignments. While I will try to reply promptly, please allow a 48 hour window for all replies.

**Course Materials:**

**Text**

**Required:**

- Wooldridge, Jeffery: “Introductory Econometrics – A Modern Approach”, Fifth Edition, Cengage learning, 2013. (You can use any other edition but assume all risks associated with doing so.)

**Recommended:**

- Dougherty, Christopher: “Introduction to Econometrics”, Fourth Edition, Oxford University Press, 2011.
- Stock, James and Mark Watson: “Introduction to Econometrics”, Third Edition, Addison-Wesley, 2010.
- The STATA Journal. <http://www.stata-journal.com/>

**Technology**

- STATA (You can order the software at <http://www.stata.com/order/dl/> . It is also available at CSSCR on the first floor of Savery Hall).

**Website:** <https://canvas.uw.edu/courses/972934>

- A copy of this syllabus, lectures notes, handouts, readings, assignments, solutions, grades and everything else you need for this class will be accessible here.
- Check the webpage regularly for all important announcements about this class. Ideally you should set the notifications ON to let you know when I have posted something.

*You are responsible for all materials, updates and announcements covered during class sessions. I also expect you to use your UW e-mail account regularly, so that I can communicate with each of you electronically between classes.*

**Course Description:**

Econ 482 is an upper division undergraduate course in applied econometrics. Econometrics is distinguished by the unification of economic theory and statistical methodology. It is concerned with estimating economic relationships, confronting economic theory with facts, and testing hypotheses involving economic behavior.

Specific topics addressed in this course include single and multiple variable regression analysis, hypothesis testing, model specification, dummy variables, heteroscedastic and serially correlated errors, simultaneous equations and instrumental variables, and binary choice models. Regression estimators and their properties are formally derived using calculus.

Though the course is largely theoretical, we will frequently use these methods with real world financial and economic data. We will use STATA (econometric software) for data analysis. Some mathematical, statistical, and computer proficiency will be assumed, specifically, familiarity with algebra, differential calculus, mathematical statistics, intermediate microeconomics and macroeconomics is assumed.

### **Learning Objectives:**

- be able to understand, interpret, and implement multiple regression and related statistical techniques,
- know the limitations and pitfalls of regression methods, and
- be able to write a focused explanation of the findings of a statistical investigation, clearly and concisely.

### **Grading and Evaluation**

#### **1. Home-work (20%)**

- There will be 4 home-works during the quarter.
- Each homework will account for 5% of your total grade.
- Everyone must turn in their own home-work but collaboration is highly encouraged.
- Home-works will be due at the beginning of the class on due dates.
- Grading of homework questions will be random, that is, only a couple of questions will be selected randomly and will be graded thoroughly.
- Late home-works will not be accepted.

#### **2. Exams (60%)**

- There will be 2 in-class written exam.
- Each exam will account for 30% of your total grade.
- There is no makeup exam for any of the exams in this course. Please plan on attending all the exams on time and as scheduled. In case of unexpected and unforeseen medical/emergency circumstances for the First Exam (for which you are required to provide a proof or documentation), the grade of your second exam will be doubled. Also, you must inform me about the same as soon as you can.

#### **3. Research Project (20%)**

- Every student is expected to actively participate in a group project during the quarter.
- This project is worth 20% of the total grade.
- You will work in groups of 2 or 3 to complete the project. The groups must be finalized by June 26<sup>th</sup> by sending me an email with the names of the group members.
- Every group will be required to meet in addition to the classroom time for several hours

every week to prepare for the project.

- The details about the final project is available on the class website.
- Project proposal is due on the 1st of July and the final paper is due on the last day (22nd Aug) of the class.
- There will be no extension.

### Classroom Conduct

- Be considerate of other students in the class.
- You are expected to be on time for each class.
- You can use your phones and laptops to take notes and for calculations. All other functions (e.g. texting, facebook, etc.) shall only be used outside the classroom.

## TENTATIVE COURSE SCHEDULE

*The course calendar can change over time due to unforeseen circumstances; please be sure you are using the most recent version. If any changes are made to the schedule, the most recent version will be available on Canvas along with an announcement regarding the change.*

### Topics

1. Introduction to Econometrics (Chapter 1)
2. Review of Mathematical Statistics (Appendix)
3. Simple Regression Analysis (Chapter 2)
4. Multiple Regression Analysis (Chapter 3, 4, 5)
5. Model Selection & Data Issues (Chapter 6, 9)
6. Dummy Variables (Chapter 7)
7. Heteroskedasticity (Chapter 8)
8. Serial Correlation and Time Series Analysis (Chapter 10, 11, 12)

Week	Class Dates	Important Dates
1	22 <sup>nd</sup> June - 26 <sup>th</sup> June	26 <sup>th</sup> June: Finalize project groups.
2	29 <sup>th</sup> June - 2 <sup>nd</sup> July	29 <sup>th</sup> June: HW 1 due. 1 <sup>st</sup> July: Project proposal due.
3	6 <sup>th</sup> July - 10 <sup>th</sup> July	6 <sup>th</sup> July: HW 2 due. 8 <sup>th</sup> July: Midterm Exam.
4	13 <sup>th</sup> July - 17 <sup>th</sup> July	13 <sup>th</sup> July: HW 3 due.
5	20 <sup>th</sup> July - 22 <sup>nd</sup> July	20 <sup>th</sup> July: HW 4 due. 22 <sup>nd</sup> July: Project due + Final Exam.