

ECON 4651

Econometrics for BEA - Fall 2017
3 Credits

General Information¹

Prerequisites: MATH 1220 AND Statistics.

Time: Mondays and Wednesdays from 11:50 a.m.-1:10 p.m.

Location: BEH S 115

Instructor: Eric Sjöberg

E-mail: eric.sjoberg@economics.utah.edu

Office Hours: Wednesdays 9.30 AM - 10.30 AM or by appointment

Location: Bldg 73, Rm 238

TA: Junfu Zhao

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Office Hours: Thursdays 9 AM - 10.45 AM

Location: Building 72 Cubicle Economics 41

Course Overview

In this course, we will explore basic techniques that let us use real world data to study economic concepts and theories. Topics include data analysis, statistical estimation, inference, and forecasting. This course is specifically designed to lead into the other two courses in the Econometrics sequence of the QAMO program with a heavier emphasis on theory than a stand alone econometrics course. Please contact me if you have any questions regarding this.

Course Objectives

In this course, you will be prepared to:

- Use Stata to do basic analysis of data.
- Have a good understanding of the theory underlying bivariate regression analysis and a basic understanding of the theory underlying multivariate regression analysis and binary outcome models.
- Detect and deal with violations of the classical model assumptions.
- Using real data, a) estimate multivariate regressions of different functional forms, b) motivate functional form in terms of specification and standard errors, and c) present and interpret the multivariate regression estimates.
- Be able to explain clearly endogeneity problems using real world econometric questions and explain why randomized controlled experiment is seen as the golden standard to estimate causal effects.
- Explain using real examples the potential internal and external validity problems associated with experiments.

For specific topics, please see the tentative schedule in this syllabus.

¹This syllabus is meant to serve as an outline and guide for the course. Please note that it may be modified at any time with reasonable notice to students. The schedule might also be modified at any time to accommodate the needs of the class. Should you have any questions or concerns about the syllabus, please contact me for clarifications.

Required Texts

Bailey MA - "Real Econometrics", latest edition'. This is the book that the lectures will be based on. Other suggested (but not required) texts are Stock and Watson - "Introduction to Econometrics" and Wooldridge - "Introductory Econometrics".

Teaching and Learning Methods

The course will be based on in-class lectures. We will go through theory and I will demonstrate how to apply the techniques that we learn in practice. We will also have discussions, where active participation is encouraged, of how econometric can be applied and how econometrics results can be interpreted. There will be a set of assignments (preliminary 6) for you to hand in. Some of these will require analysis with the help of Stata. I will introduce you to the software and also give you a brief reference guide on the most common commands.

Computers and Software

We will use software to solve some of the assignments in this course. The main program is Stata and the solutions to the assignments will be presented using this program. You will have access to Stata through the university or you can purchase a student version of the program. You can also obtain the Studenmund textbook bundled with Stata Small. If you have a strong desire to use another statistical software, please contact me in advance.

Policies

You should speak with me in advance to request special consideration in the case of some extenuating circumstance that prevents you from taking an exam or submitting an assignment at the scheduled time. The final exam will not be given at multiple dates in order to accomodate travel plans. Attendance is mandatory at all lectures and exams but attendance is not taken.

Grading Policies

Evaluation will be based according to the table below. Late assignments will be marked down by degree of lateness. Assignments submitted on or after the first lecture after the due date will have a max score of 50 % of total points. on that assignment. The midterm will be a small project you will do from home. The final exam is a traditional exam and will take place as specified by the final exam schedule ([link](#)).

Activity	Grade Weighting
Readings	5%
Assignments	30%
Midterm Exam	30%
Final Exam	35%

Students with disabilities

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

Grading Scale				
Grade	Score (s)			
A	0.92	\leq	s	
A ⁻	0.9	\leq	s	< 0.92
B ⁺	0.88	\leq	s	< 0.9
B	0.82	\leq	s	< 0.88
B ⁻	0.8	\leq	s	< 0.82
C ⁺	0.75	\leq	s	< 0.80
C	0.70	\leq	s	< 0.75
C ⁻	0.65	\leq	s	< 0.70
D ⁺	0.63	\leq	s	< 0.65
D	0.57	\leq	s	< 0.63
D ⁻	0.55	\leq	s	< 0.57
E			s	< 55

Wellness Statement

Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness; www.wellness.utah.edu; 801-581-7776.

About the University of Utah

As the only institution in the state classified in the highest research category (R1), at the University of Utah you will have access to state-of-the-art research facilities and be able to be part of the knowledge creation process. You will have the opportunity to do research of your own with faculty who are leading experts in their field, engaging in [programs](#) that match your research interests. Further, you will interact with and often take classes with graduate students that provide an advanced understanding of the knowledge in your field.

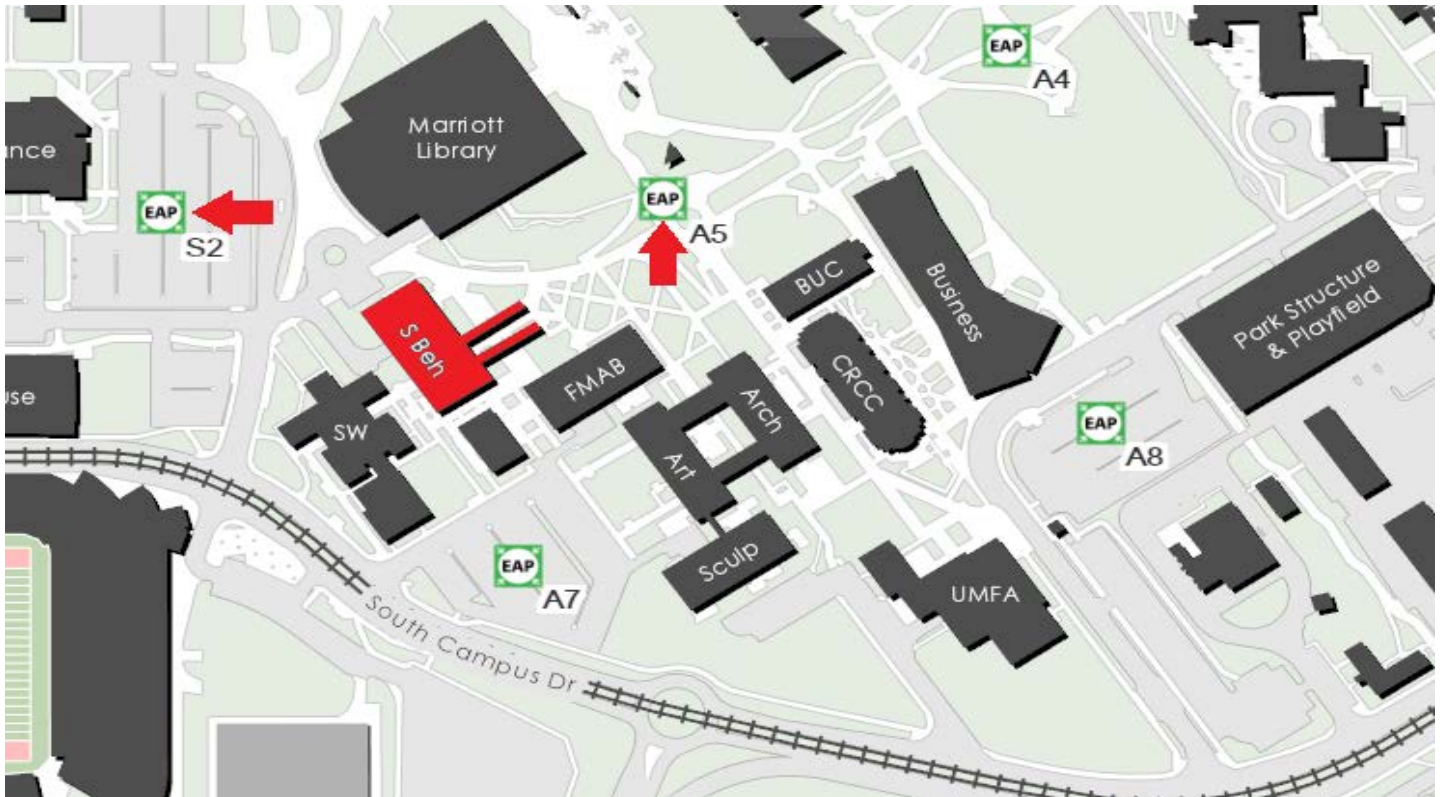
Tentative Schedule

The due dates for the assignments (A1, A2,...) are usually Fridays for the specified week but the dates are only tentative. I strongly recommend that you read the relevant sections in preparation for each class to stimulate in-class discussions and facilitate learning.

Week	Mon	Wed	Chapter(s), topic	Note
1	8/21	8/23	Ch.17, Statistics refresher, appendices A- I	
2	8/28	8/30	Intro to regression analysis, OLS, Ch1, 2	A1
3		9/6	OLS, Learning to use regressions, Ch 3	Labor Day 9/4
4	9/11	9/13	Stata introduction ^a , The classical model, ch 14	A2
5	9/18	9/20	The classical model	
6	9/25	9/27	Hypothesis testing, Ch 4	A3
7	10/2	10/4	Hypothesis testing, Ch 4	Midterm
8				Fall Break
9	10/16	10/18	Specification issues Ch 5, 6, 7	
10	10/23	10/25	Specification issues, Ch 5, 6, 7 Experimental methods ^a	A4
11	10/30	11/1	Experimental methods ^a , Heteroskedasticity, Ch 3.6	
12	11/6	11/8	Serial Correlation Ch 3.6	A5
13	11/13	11/15	Dummy Dependent Variables, Ch 12	
14	11/20	11/22	Dummy Dependent Variables, Ch.12	A6
15	11/27	11/29	Intro to Time-Series Ch.13	
16	12/4	12/6	Review	
17				Final Exam 12/13 10.30 am.

^a Supplementary material will be distributed for these lectures.

CSBS EMERGENCY ACTION PLAN



BUILDING EVACUATION

EAP (Emergency Assembly Point) – When you receive a notification to evacuate the building either by campus text alert system or by building fire alarm, please follow your instructor in an orderly fashion to the EAP marked on the map below. Once everyone is at the EAP, you will receive further instructions from Emergency Management personnel. You can also look up the EAP for any building you may be in on campus at <http://emergencymanagement.utah.edu/eap>.



CAMPUS RESOURCES

U Heads Up App: There's an app for that. Download the app on your smartphone at alert.utah.edu/headsup to access the following resources:

- **Emergency Response Guide:** Provides instructions on how to handle any type of emergency, such as earthquake, utility failure, fire, active shooter, etc. Flip charts with this information are also available around campus.
- **See Something, Say Something:** Report unsafe or hazardous conditions on campus. If you see a life threatening or emergency situation, please call 911!

Safety Escorts: For students who are on campus at night or past business hours and would like an escort to your car, please call **801-585-2677**. You can call 24/7 and a security officer will be sent to walk with you or give you a ride to your desired on-campus location.