Course Syllabus: **Economics 4650 Online Spring 2018**

Instructors: Robbi Poulson & Sofia Nystrom (To contact instructors, please use Canvas mail system). Unless you feel that your question(s)/comment(s) pertain to both of us, please contact only one of us at a time. Emails to instructor(s) will generally be answered within 24 hours. We strongly encourage you to use the discussion board for general questions about the chapters, assignments and to prepare for exams--it is a great way to collaborate and connect with you peers.

Introduction

This class has the potential for being one of the most rewarding classes you can take as an undergraduate. You will learn to use the statistical software R (along with Excel) to perform econometric analysis. This will be an applied class and should prepare you for working with data in a job environment or in graduate school. The class builds on Economics 3650 and we will review basic probability and statistics as we move through the course material.

Goals

- To learn how to use the statistical software package R
- To become familiar with multivariable regression analysis
- To learn about the statistical foundations of ordinary least squares
- To Learn how to detect violations of classical model assumptions (CLRM)
- To learn how to deal with violations of the CLRM
- To learn how to analyze and work with various kinds of data sets

Evaluation

- Set of assignments (15% grade)
- Midterm examination (30% grade, open book)
- Final examination (40% grade, open book)
- One applied paper (15% grade)
- Extra credit (up to 2.5%)
- Grades based generally on 90, 80, 65% cuts (A-, B-, C-)

Text

The textbook is a custom edition based on 10 chapters from A.H. Studenmund, *Using Econometrics: A Practical Guide* (6/e). The ISBN 10 for the custom text is: 1-269-23602-4 and for the full text it is: 0-13-136773-0. You can use either. Older editions of the text are also acceptable, but **please be aware that the order of the chapters and some content (e.g., the assignment questions) may be different in older editions.** A copy of the custom edition textbook is available at the Marriott Library Reserve Desk.

Modules

The online course is based on a series of modules which track chapters from the custom text--chapters from the "full text" are noted in parenthetical remarks. The majority of work in this course is applied and these modules are designed to help you succeed in assignments, exams, and your paper/project.

The first chapter is a review of statistics (chapter 17 in full text). You should be comfortable with this material from Economics 3650, or your basic probability and statistics course. We then progress through ordinary least squares, and the important assumptions of the "classical" regression model (custom edition text chapters 3 and 4; full text chapters 2 and 4).

We then move through hypothesis testing and model specification, including the choice of explanatory variables and the choice of functional form (custom edition text chapters 4, 5, and 6; full text chapters 5, 6 and 7). The midterm, an exam administered by the University Testing Center, will be based mainly on this material. Diagnostics are covered in the next three modules: muliticollinearity, serial correlation, and heteroskedasticity (custom edition text chapters 7, 8, and 9; full text chapters 8, 9, and 10). The final exam, also administered by the University Testing Center, will focus on the diagnostic tests and solutions to violations of the assumptions of the classical model.

The final module (custom edition text chapter 10; full text chapter 11) will help you with your final project. Modules will open up over the course and include overviews, links to videos, sample data, R code, and assignments.

Assignments and Exams

Assignments (schedule is listed below or under "Assignments" tab) are available on Canvas for download, and must be uploaded before the due date noted. These assignments are designed to enhance your understanding of key material and ensure you are able to apply your understanding appropriately. Whenever possible, please only submit one file for each assignment and make sure to write your name on each file you submit.

The midterm and final exams will be timed and administered at the Uonline center (or an approved proctoring center). Both the midterm and final exams are open book tests. Please see THIS LINK for information about exam scheduling.

Software

The course uses R extensively. It is widely used in business, academia, and government. R is also free and operates the same across computing platforms. Because this course is very applied in nature, we will learn econometrics by *doing* econometrics and thus by learning to use R. It is available at **http://cran.us.r-project.org (http://cran.us.r-project.org)** , where you can download it for Linux, OS X, and Windows. Within each of the class modules, .R files consisting of commands needed to complete the assignment are included in the text guides (also included in the

modules) for reference and use. You will also discover thousands of useful ways to use R on the internet.

Discussions

The Canvas Discussion Boards can be one of your most useful learning tools. Please participate in these discussions by requesting help from your fellow students or instructor when needed, or when you can assist or offer an opinion. Students can open discussions on any topic, allowing you to ask and answer questions, find data, and provide helpful comments to other members of the course. Also, **you can earn up to 2.5% extra credit** by actively and meaningfully participating in discussion groups. (The extra credit will not show up in the Canvas system, but will be added by the Instructor at the end of the term).

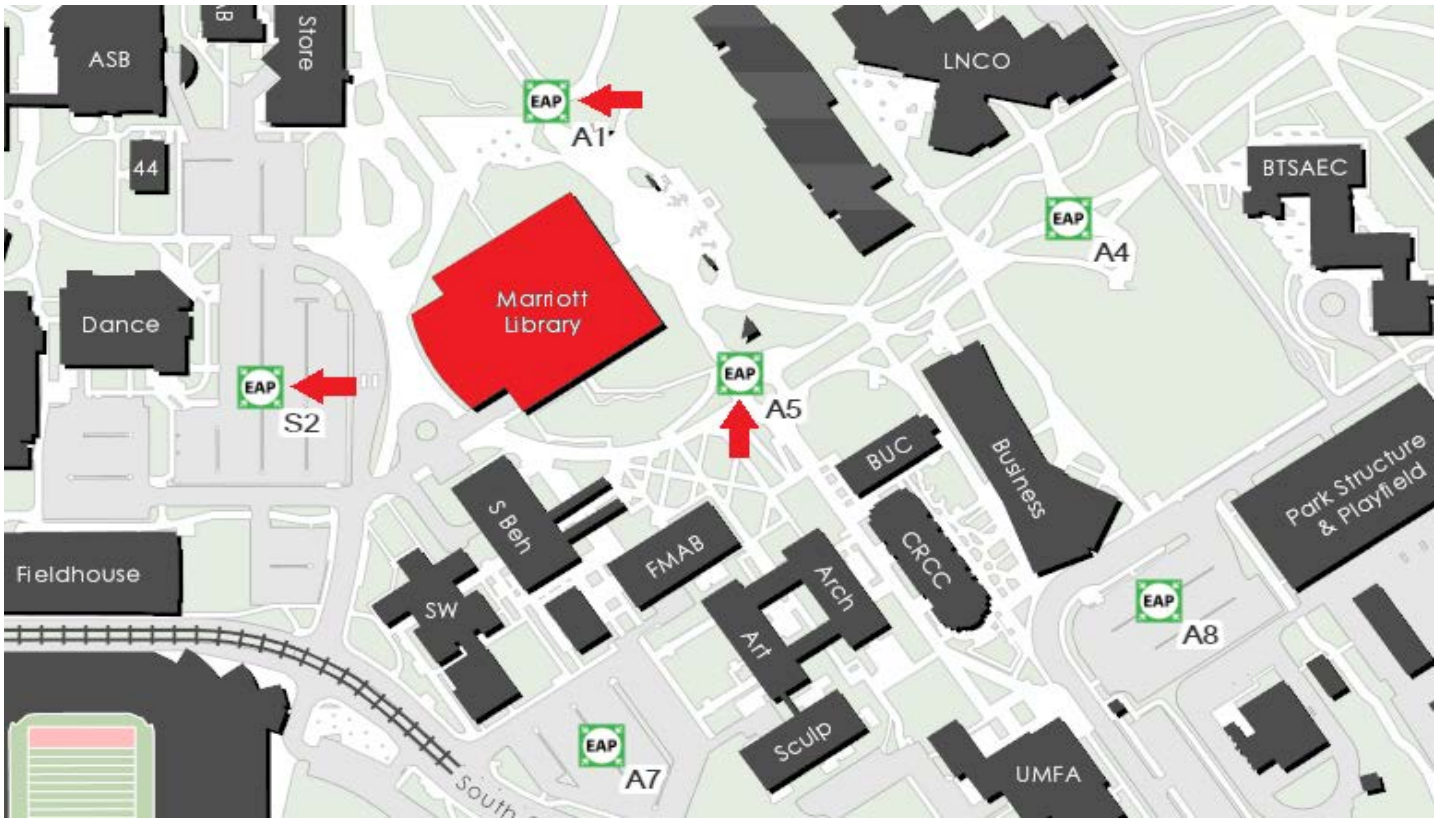
Disclaimers

Please Note: *It is your responsibility to maintain your computer and related equipment in order to participate in this online course. Equipment failures will not be an acceptable excuse for late or absent assignments.* Classroom equivalency: Discussion threads, e-mails, and chat rooms in an Online course are all considered to be equivalent to classrooms, and student behavior within those environments shall conform to the Student Code.

Documentation of a disability is required in order to receive services or accommodations. Any student eligible for and requesting reasonable academic accommodations due to a disability must provide a letter of accommodation to their professor from the Disability Resource Center within the first two weeks of the beginning of classes. Please contact the Center on the main campus to follow through with the documentation process. They are located in the Student Services Center, or you may call for an appointment and further information regarding the Americans with Disabilities Act (ADA).

Note that this syllabus is subject to change though students will be notified if and when a change occurs.

CSBS EMERGENCY ACTION PLAN



BUILDING EVACUATION

EAP (Emergency Assembly Point) – When you receive a notification to evacuate a building either by campus text alert system or by building fire alarm, please proceed in an orderly fashion to the EAP designated for that building. Once everyone is at the EAP, you will receive further instructions from Emergency Management personnel. You can 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.

College of Social and Behavioral Science
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