
Professor	Max Auffhammer	Office hours	Tuesdays, 4:00PM-5:00PM
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Section time	Fridays, 11:00AM-12:00PM	e-mail	danhammer@berkeley.edu
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The purpose of this document is to outline the sections for Max Auffhammer's econometrics course, the first semester of the ARE econometrics sequence. The purpose of the sections is to introduce R for econometrics, illustrating the theory presented in class with applied examples. Actual data work.

This is my first attempt as a graduate student instructor, so be gentle. I tell you this to warn you that the section notes might change throughout the course, not to reveal my weaknesses — of which I have none. The outline of sections below is based on the progression from previous years. The outline might change, but the final section notes will always be posted on Blackboard at least one week in advance of class. The development version of the notes and R code will be posted to my Github repository:

www.github.com/danhammer/ARE212

Here, you will be able to see the evolution of the notes, as well as the structure and protocol associated with production code. If you want to collaborate on the notes, join Github and send me an e-mail. I will help get you started, if needed.¹

January 25	Matrix operations in R
February 1	OLS regression from first principles
February 8	Goodness of fit
February 15	Hypothesis testing
February 22	Returns to education, empirical example
March 1	Efficiency of GLS
March 8	Large sample properties of OLS
March 15	Empirical example
March 22	Testing for Heteroskedasticity
March 29	Feasible generalized least squares
April 5	Serial correlation
April 12	Instrumental variables
April 19	Empirical example
April 26	Spatial analysis in R
May 3	Web scraping in R

The R code for each section is posted on the Github site, and should run on any machine and any operating system. Please feel free to e-mail me with any questions.

Office hours: I don't use my office on campus. In fact, I'm not even sure where it is. Instead, I'll be in 204 Giannini from 4:00pm - 5:00pm on Tuesdays. Please stop by! If you can't make regular office hours, please

¹A side note: I have reserved the handle `auffhammer`, just in case Max ever wants to join. I will try dearly to extract the rents associated with absolute scarcity. He claims he'll just get another handle; but this is not a credible threat, since `auffhammer` is an awesome Github handle.

e-mail me with questions! I'll respond promptly, over e-mail or in person.

Homework: Problem sets will be collected at the end of class on the specified date. Ultimately, Max will decide the deductions for late homework. I will not stray from his stated policies.

Grading: The problem sets will be graded on a 100 point scale. A face-plant fail or no-show will be assigned a 0; a tried-and-came-close will be assigned a 70; and a good-showing will be assigned a 100. I can't imagine anyone will take issue with the problem set grades, since they don't matter too much toward the final grade. But see me if you have questions.

Attendance: You are not required to come. I hope the sections are helpful, but I carry no conception that the sections will be uniformly helpful. Only come if the sections are helpful to you.

Quizzes: There are no quizzes. But I scared you, didn't I?

Additional resources: There are many online, free resources to learn R and basic econometrics; and there even exist resources that do both at once. I have listed a few helpful resources for both writing code and scripting econometric routines.

1. **Econometrics in R**, cran.r-project.org/doc/contrib/Farnsworth-EconometricsInR.pdf
2. **R Style Guide**, google-styleguide.googlecode.com/svn/trunk/google-r-style.html
3. **Econometrics**, *Bruce Hansen*, www.ssc.wisc.edu/~bhansen/econometrics/Econometrics.pdf

Academic integrity: *This is cribbed directly from the UC Berkeley site:* These are some basic expectations of students with regards to academic integrity: ◦ Any work submitted should be your own individual thoughts, and should not have been submitted for credit in another course unless you have prior written permission to re-use it in this course from this instructor. ◦ All assignments must use "proper attribution," meaning that you have identified the original source and extent of words or ideas that you reproduce or use in your assignment. This includes drafts and homework assignments! ◦ If you are unclear about expectations, ask your instructor or GSI. ◦ Do not collaborate or work with other students on assignments or projects unless you have been given permission or instruction to do so.