

Vanderbilt University  
Leadership, Policy and Organizations  
Class Number 9952  
Spring 2016

## Practicum

William R. Doyle  
Office: 207D Payne  
Office Hours: Mondays and Wednesdays 2-4 or by appointment  
w.doyle@vanderbilt.edu  
phone (615) 322-2904

## Course Overview

The overview includes an introduction to the course, guidelines on grading, and required texts.

### Introduction

This course is the second of a three semester series of courses designed to introduce you to the *practice* of research, particularly the applied side of quantitative research. The goal of this course to help you to prepare a paper that can be presented at a major research conference and, hopefully, submitted to a journal for publication.

This semester, we will focus on the analysis of the data that you compiled last semester. Prior to undertaking this analysis, you will have a chance to refine your research question, and you will be asked to compile a brief review of the literature in your area. Once this is complete, we will begin analyzing the data in your dataset. This will culminate in the final assignment—a replication file which will include all of the data and a program that provides publication-ready tables and figures. Your paper to be finished in May will be based on this analysis.

Along the way, you will develop skills that will be helpful in future work using any kind of data. This class has a strong emphasis on using programming skills to aid in the replication of work and to simplify complex analyses.

### Grading

Evaluation for the course will be based on the following factors:

*Assignments: 33%*

There will be a total of eleven assignments, which will be graded. Late assignments will not be accepted. These assignments will account for a third of your grade. Collaboration on assignments is fine, however, many of the assignments will ask you to work with variables and datasets of your own choosing. Ten of these assignments will count toward your grade. The lowest scoring assignment will be removed.

*Literature Review: 33%*

I will ask you to compile a brief (no more than five page) literature review on your chosen subject. This literature review, along with a revised research question, will be due midnight, February 12.

*Replication File: 34%*

A replication file containing all of the data (or links to the data) for your analysis, a codebook and your Stata program to analyze this data will be due by midnight on April 29. This assignment will be evaluated based on the following factors:

- The quality of the underlying analysis
- How well the replication file produces publication-ready results, including tables and graphics
- The clarity of the accompanying text in describing the analysis in the replication file

## **Texts**

The following textbooks are optional, but recommended

Baum, C (2006) *An Introduction to Modern Econometrics Using Stata*. College Station: Stata Press

Long, J. Scott (2008) *The Workflow of Data Analysis Using Stata* College Station: Stata Press

In addition some on-line readings are included in this syllabus. Direct links to the texts are available by clicking on the "Online" links below.

## **Software**

STATA will again be the order of the day for this semester for statistical analysis.

## **Schedule for Meetings**

Class meetings will teach specific skills that are helpful for data analysts as they seek to answer questions. Class meetings will combine some instruction with hands on practice of the skill for that week,

Students are responsible for their own projects, and I expect that you will make progress toward the final assignment throughout the semester. Office hours and/or appointments are an excellent time to discuss the direction of your project and to get feedback on completed work.

At the end of the semester, we will use class time for individual sessions to prepare your final analysis.

The schedule for all class meetings is as follows:

### **January 14**

The logic of conditional means; review of programming skills.

#### *Readings*

Baum, Appendix B

Baum, C. (2005) "A little bit of Stata programming goes a long way" [Online](#)

### **January 21**

Regression in Stata

#### *Readings*

Baum ch. 4

#### *Assignments*

Assignment 1 due January 20, midnight.

### **January 28**

Interpreting Regression Results

#### *Assignments*

Assignment 2 due January 27, midnight.

## **February 4**

Diagnosing Common Problems With Regression

*Readings*

Baum, Ch. 6

*Assignments*

Assignment 3 due February 3, midnight.

## **February 11**

Using Prediction to Interpret Regression

*Readings* Gelman, A., Pasarica, C., & Dodhia, R. (2002). Let's practice what we preach: Turning tables into graphs. American Statistician, 121-130. [Online](#)

*Assignments*

Assignment 4 due February 10, midnight.

## **February 18**

Using Simulation to Deal with Issues in Regression

*Readings* Gelman, A., & Hill, J. (2007). Data analysis using regression and multilevel/hierarchical models. Cambridge University Press Cambridge, UK: Chapter 8. (Posted on OAK)

*Assignments* Assignment 5 due February 17, midnight.

Literature review due February 12, midnight.

## **February 25**

Model Specification, Data Problems

*Readings* Baum, Ch. 5

*Assignments*

Assignment 6 due February 24, midnight.

## **March 3**

Replication

*Readings*

Hammermesh, D. (2007) Replication in Economics. NBER Working Papers 13026. [Online](#)

*Assignments* Assignment 7 due March 2, midnight.

## **March 10**

No Class- Spring Break

## **March 17**

Advanced Programming Topics

*N.B.: I will post notes on this topic, but it is likely that many of us will be at AEEP during this time.*

*Readings*

Baum, C. (2008) Using Mata to work more effectively with Stata: A tutorial. [Online](#)

*Assignments* Assignment 8 due March 16, midnight.

## **March 24**

Analysis of Panel Data: Using Fixed Effects

*Readings* Baum, Ch. 9

*Assignments* Assignment 9 due March 23, midnight.

## **March 31**

Logistic Regression

*Readings* Baum, Ch. 10

*Assignments*

Assignment 10 due March 30, midnight

## **April 7**

Lab Hours

*Assignments*

Assignment 11 due April 6, midnight

## **April 14**

Monte Carlo Approaches to Understanding Statistical Properties of Estimators

Readings to be distributed

## **April 21**

Lab hours

**FINAL ASSIGNMENTS DUE APRIL 29, MIDNIGHT**