

Vanderbilt University  
Leadership, Policy and Organizations  
Class Number 9553  
Maymester 2017

## Methods Practicum

William R. Doyle  
Office: 207E Payne  
Office Hours: We'll meet almost every day in May. If you need to see me at another time, let me know.  
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### Course Overview

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

### Introduction

This course is the final 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.

During this session, we will work as a group to refine and improve your analysis. By the end of the term, each of you will have a completed paper suitable for presentation at a major research conference.

Along the way, you will continue to develop the same set of skills you have been working on all year, along with some more specific set of techniques that I will spend the first week describing.

### Grading

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

**Final Paper** The final paper should be a publication-ready manuscript, reporting the results of the analysis conducted over the course of the year. You will need to turn in a replication file with this paper. This will be worth 100% of your grade. The paper will be due at midnight on June 10.

**Presentation** You will give a presentation based on your paper on May 27. The presentation will be in preparation for the presentation you will give to all students and faculty in the fall. I will give you feedback on this presentation along with the rest of the class.

### Software

Stata will again be the order of the day for this semester.

### Schedule for Meetings

Class will meet from 12-3 in Payne 108.

## May 8

Missing data, multiple imputation

Readings:

Little, R. J. A. and Rubin, D. B. (1987). *Statistical analysis with missing data*. Wiley

Schafer, J. L. (1997). *Analysis of incomplete multivariate data*. CRC Press

Schafer, J. L. and Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological methods*, 7(2):147–177

## May 9

Methods for Selection Bias: Propensity Score Matching

Readings:

Agodini, R. and Dynarski, M. (2004). Are experiments the only option? a look at dropout prevention programs. *Review of Economics and Statistics*, 86(1):180–194

Ho, D. E., Imai, K., King, G., and Stuart, E. A. (2007). Matching as nonparametric preprocessing for reducing model dependence in parametric causal inference. *Political Analysis*, page mpl013

Imbens, G. W. (2004). Nonparametric estimation of average treatment effects under exogeneity: A review. *Review of Economics and Statistics*, 86(1):4–29

Moffitt, R. A. (2004). Introduction to the symposium on the econometrics of matching. *Review of Economics and Statistics*, 86(1):1–3

Rubin, D. B. (2001). Using propensity scores to help design observational studies: Application to the tobacco litigation. *Health Services and Outcomes Research Methodology*, 2(3):169–188

## May 10

Latent Class Analysis: Factor Analysis, PCA, etc

Readings:

Hagenaars, J. A. (2002). *Applied latent class analysis [electronic resource]*. Cambridge University Press, Cambridge; New York

ebrary, Inc (2015). *Advances in latent variables: methods, models and applications*. Springer, Cham; New York

Bartholomew, D. J. and ebrary, Inc (2011). *Latent variable models and factor analysis [electronic resource]: a unified approach*. Wiley, Hoboken, N.J., 3rd ed edition

McCutcheon, A. L. (1987). *Latent class analysis*. Sage Publications, Newbury Park

## **May 11**

Polychotomous Outcomes

Readings:

Long, J. S. and Freese, J. (2005). *Regression Models for Categorical Dependent Variables Using Stata, Second Edition*. Stata Press, 2 edition

Greene, W. H. (2008). *Econometric analysis*. Pearson/Prentice Hall, Upper Saddle River, N.J., 6th ed edition, Chapter 18

Amemiya, T. (1985). *Advanced econometrics*. Harvard University Press, Cambridge, Mass, Chapter 9

## **May 12**

No Class: Commencement

## **May 15**

Event History Analysis

## **May 16**

Student Presentations: Chris Bennett

## **May 17**

Student Presentations: Michael Crouch

## **May 18**

Student Presentations: Jennifer Darling-Aduana

## **May 19**

Student Presentations: Walt Ecton

## **May 22**

No Class

## **May 23**

Student Presentations: Ashley Jones

## **May 24**

Student Presentations: Anna Weiss

**May 25**

Code-A-Rama: We'll hold the class all day, students can come in and ask questions any time.

**May 26**

In-Class conference style presentations