Research Methods Lab: WWS 404

7:30-9:30pm ROB Bowl 1
February 3 – April 27

Instructors:

Dr. Dov Grohsgal
West College 412

Dr. Will Lowe
Corwin Hall 029

Preceptors:

Tommaso Pavone
Robertson 032

Chantal Berman
Corwin Hall 130

Carlos Velasco Rivera
Tyler Pratt

Course Description

The Research Methods Lab will provide instruction and practical experience in the core qualitative and quantitative methods useful in policy analysis. The lab, which is a required element of the WWS junior research seminar, is intended to provide students with the tools necessary to design and integrate methodologically sound research into junior papers and senior theses. The research methods lab will constitute 40 percent of the final grade in the policy research seminar.

Equal time will be devoted to teaching quantitative and qualitative methods with the aim of surveying topics relevant to your Junior Papers (and possibly future Senior Theses). Sessions will combine lecture, discussion, and hands-on lab activities.

Requirements and Grading

The success of the lab depends on your commitment to participate actively in class, critically reflect on the material covered, complete in-class and out-of-class assignments, and to integrate what you learn into your junior paper. Your attendance is required and absences will affect your research seminar grade. Any work submitted after the specified deadline will incur a penalty of one-half letter grade. Nothing will be accepted after 10 PM on the due date without explicit prior permission from one of the instructors.

Your grade for WWS 404 is calculated as: 40% of your work in the Research Methods Lab and 60% of your work in your Research Seminar. This grade is separate from your JP grade.

Your grade for the research methods lab portion of this course will be calculated as follows:

- Homework Assignments (40%) (=16% of total grade for Research Seminar)
- Lab activities (40%) (=16% of total grade for Research Seminar)
- Participation (10%). Students are expected to contribute to group and class discussions and may be called upon to elucidate course materials. This grade also includes any further
requests for materials from the instructors such as requests for JP topics. (=4% of total grade for Research Seminar)

- CITI certificate (5%) Students are expected to complete the CITI online training certificate (=2% of total grade for Research Seminar)
- Final Lab Project (5%) Students will be asked to complete an in-class group project in the semester's final class (=2% of total grade for Research Seminar)

See Princeton University's general standards for grading: http://www.princeton.edu/~odoc/grading_policies.html

Communication

All students are required to check their princeton.edu email addresses and any Blackboard posts for announcements about the course. Anything posted on blackboard or emailed directly to students supersedes what is found in this syllabus.

All emails to Instructors and Assistant Instructors should include ‘WWS 404 Methods Lab’ in the subject. (If you click on our names above, or on the homework links then this will be done for you). We will do our best to respond within 48 hours. Matters needing more than short responses should be dealt with in the respective office house of the instructors. Please check the syllabus and any given Blackboard instructions before emailing.

Policies Regarding Absences

Please contact the instructor via email about absences in the case of family or personal emergency or other exigent circumstances. In order for an absence to be excused, you must produce an official letter from your Director of Studies, athletic coach, McCosh, or other official and applicable university party.

We understand that sometimes school activity schedules conflict with the research methods lab. Please remember that you must put your academics first. We are not in the position to judge which activities are worthy of excused absences and which are not, so beyond certain emergencies or other excused absences allowed by University policy, no excused absences will be granted. If you miss a lab you will lose out on any participation or lab points for that class.

Should you need to miss class, you must complete the lab activity on your own in order to keep up and come to office hours with any questions.

Computing

The quantitative component of this lab will require the use of statistical software to do data analysis including creating graphs and figures, cross-tables, and tables of summary statistics, and fitting and criticizing regression models. The quantitative instructor and preceptors can support students using R or Stata. Students taking the class who have not used statistical software before, or are not comfortable opening datasets, making graphs, and describing variables, are strongly advised to attend one of the Quantitative Tools workshops in week 2. These are two hour sessions
designed to introduce students either to R or Stata and assume no prior knowledge. Timings will be announced during the first week of class.

If you want to use a different programming language let the Instructor and Assistant Instructor know. This is will not affect your ability to complete lab assignments.

Note: in order to complete the in-class labs in the quantitative portion you will want to bring a laptop. Failure to bring your computer or have access to the designated programming language will reflect in your grade as you will not be able to adequately complete the lab assignment. If you cannot bring a computer to class (because you don't have one, or only have a desktop, or other reason) please let Dr. Lowe know via e-mail as soon as possible.

Installing R

R can be downloaded by following the instructions on a nearby mirror site for your operating system. There's one at http://cran.wustl.edu.

If you use R, we recommend installing and using RStudio to do so. RStudio is from https://www.rstudio.com/products/rstudio/download/

Both of these are free. The current version of R is 3.2.3.

Installing Stata

There are two ways to get Stata on your computer.

1. Purchase your own copy of Stata from
   http://www.stata.com/order/new/edu/gradplans/campus-gradplan/
   Note that Small Stata can handle a maximum of 1200 observations. Whether this is sufficient for you depends on the dataset you will use for your junior paper. Otherwise, try Stata/IC. The software needs to be purchased and installed before the first class.

2. Get Stata for free from the university’s Nobel cluster. This will require using Unix. More information is at
   http://dss.princeton.edu/online_help/stats_packages/stata/stata_unix.htm
   http://helpdesk.princeton.edu/kb/display.plx?ID=9780
   http://www.princeton.edu/~jcjb/docs/xstata/
   Do not expect to access Stata in the first class without having registered and set it up first.

Computing Help

The quantitative instructor and preceptors are available to help, both during office hours and by individual appointment. Stata users can also consult Dr. Raymond Hicks (020 Bendheim Hall). In addition, you can make use of data services consulting at the Firestone Library.

If you feel you are falling behind with the quantitative parts of the course for practical computing or programming reasons, please contact to one of the instructors or preceptors as soon as possible. We’re here to help.
Quantitative Data

The quantitative part of the course has three homeworks. If you are planning a quantitative analysis for your JP then you are encouraged to do the homeworks using the data you expect to write about. If you are not planning any quantitative component, data will be provided.

If you are planning a quantitative component, the homework due dates are designed to reflect the times at which you should have: chosen and organised your JP data (homework 1), plotted or tabulated your independent and dependent variables (homework 2), and run a first analysis (homework 3).

Readings and Resources

There is no textbook for the course. Instead, each week’s description has suggested readings.

In the quantitative weeks there is also optional review material; for each week’s topics we have listed the sections of the textbook you used in POL 345, ORF 245, ECO 202, and WWS 200. These are abbreviated as

- David Moore, George McCabe, and Bruce Craig. 2010. *Introduction to the practice of statistics*. 7th. W. H. Freeman [MMC]
Weekly Schedule

Feb 3rd  INTRODUCTION

In this session Prof. Christina Davis will explain the objectives of the Methods Lab, Dr. Edward Freeland from the Princeton Survey Research Center will speak about running surveys, and we will provide an introduction to research design via KKV.

Suggested Reading:

Feb 5th  QUANTITATIVE TOOLS WORKSHOP: R

An optional workshop for getting up to speed with the R language, with Dr. Lowe.

Feb 9th  QUANTITATIVE TOOLS WORKSHOP: STATA

An optional workshop for getting up to speed with the Stata language, with Dr. Raymond Hicks (020 Bendheim Hall).

Feb 10th  QUALITATIVE SESSION 1: SOURCES AND FRAMING

We will discuss how to framing puzzles, develop research questions, and find sources. We will also provide an introduction to Process Tracing.

Suggested Reading:

Deadline: CITI Certificate uploaded to Blackboard

Feb 17th  QUANTITATIVE SESSION 1: MEASUREMENT

In this session we will describe measurement, how to operationalize difficult concepts, and the consequences of measurement choices. We consider how to summarize your data in tables and graphs. We'll concentrate on making informative displays.

Suggested Reading:
- Nathan Yau. 2011. Visualize this. Indianapolis, IN: Wiley
- For R users: Hadley Wickham. 2009. ggplot2: Elegant graphics for data analysis. Springer

Review:

• FPP ch. 3, 4, 7 or DBCR sec. 1.2, 1.6, 1.7 or MMC ch. 1, 2.

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**Feb 24th**

**Qualitative Session 2: Interviews**

This week *Dr. Sophie Meunier* will speak to us about how to conduct interviews.

Suggested Reading:


Deadline: *Quantitative Homework 1 due*

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**Mar 2nd**

**Qualitative Session 3: Case Studies**

This week we look at case study research and review the relationships between causal events, causal mechanisms, and Process Tracing.

Suggested Reading:

• TBA

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**Mar 9th**

**Quantitative Session 2: Making Regression Make Sense**

This week we review causal inference, and the purposes of randomization and control. We look at the two faces of the linear regression model: as a convenient model of relationships between variables, but also as a way to 'control' for other factors in causal inference. We'll spend some time making sure we can correctly interpret and communicate the results, and consider what happens when it doesn't behave as we'd hoped.

Suggested Reading:


Review:

• FPP ch. 4, 8, 9, 10, 11, 12, 17, 21, 26, 29; DBCR ch. 4, 5, 7; MMC 5, 6, 10, 11.

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**Mar 13th**

Deadline: Qualitative homework 1 due 12:30

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Quantitative Session 3: Non-linearity and contextual effects

Policy relationships are not always linear and often sensitive to context so in this session we show how to make sure our regression models reflect these facts, and show how to communicate these more complex relationships to others.

Suggested Reading:


Review:

- FPP ch. 10, 11; DBCR ch. 7; MMC ch. 11.

Deadline: Quantitative Homework 2 due

Mixed Session 1

In the next two sessions we introduce mixed method research designs that mix qualitative with quantitative work and show them at work on a concrete policy problem.

Suggested Reading:

- TBA

Deadline: Quantitative Homework 3 due

Mixed Session 2

Deadline: Qualitative homework 2 due 12:30
References


Moore, David, George McCabe, and Bruce Craig. 2010. Introduction to the practice of statistics. 7th. W. H. Freeman.
