

Political Behavior Lab: Reproducible Research in Social Science

TUTORIAL INFORMATION	<i>Term:</i> Fall 2018 <i>Level:</i> Intermediate to Advanced Lab <i>Meet:</i> Fridays, 2:30-4 <i>Room:</i> Political Behavior Lab <i>Syllabus Revision:</i> August 24, 2020	<i>Instructor:</i> Jack Reilly <i>Office:</i> Social Sciences 205 <i>E-mail:</i> jreilly@ncf.edu <i>Office Hours:</i> Tuesdays, 11-12; Wednesdays, 2-3 <i>Appointments:</i> jackreilly.youcanbook.me
DESCRIPTION	This tutorial introduces students to the conduct of reproducible, open, collaborative, and ethical plain text research in social science and the conduct of research in the Political Behavior Lab. Throughout the course of the semester, students will learn the principles of conducting reproducible quantitative social science research, including human readable coding in Stata and/or R, version control, bibliographic management, methods of documentation, principles of research with human subjects (IRB), data storage, and workflow management. A variety of relevant technical and software tools will be introduced and used, including but not limited to L ^A T _E X, Bibtex, markdown, Git (and the use of GitHub), Stata, R, and a variety of helper programs to tie things together.	
PREREQUISITES	<i>Required:</i> Introductory to intermediate work in social science; introductory statistics or equivalent (including <i>Quantitative Political Analysis I</i> or <i>Dealing with Data 1</i>). <i>Co-Requisite:</i> A second-level statistics course (such as <i>Quantitative Political Analysis II</i> , <i>Advanced Statistics for Psychology</i> , <i>Dealing with Data II</i> , <i>Econometrics</i> , <i>Visualization</i> , etc).	

Materials

BOOKS	Required <ul style="list-style-type: none">• Healy, Kieran. <i>The Plain Person's Guide to Plain Text Social Science</i>. (http://plain-text.co) Optional <ul style="list-style-type: none">• Secondary readings as assigned throughout the lab.
SOFTWARE & COMPUTING	The political behavior lab contains all software you will need for work in the lab. However, you might find it useful to load many packages on your personal laptop or computer as well. I recommend starting with L ^A T _E X, Stata, R, bibliographic management software for bibtex, git (set up to use with github), a text editor you like, and google file stream to access the lab google team drive. <ul style="list-style-type: none">• L^AT_EX<ul style="list-style-type: none">– Macs: https://www.tug.org/mactex/– Windows: https://www.tug.org/texlive/ or https://miktex.org– Other: https://www.latex-project.org/get/• R: https://www.r-project.org• Stata: https://www.stata.com

- Bibliographies & BibTeX
 - Macs: <https://bibdesk.sourceforge.io>
 - Other: <http://www.jabref.org>
- Git
 - Git comes preinstalled with Macs (as well as most distributions of other *nix OSes.) Please see GitHub’s setup here for instructions for your computer: <https://help.github.com/articles/set-up-git/>
 - Setup is a little complicated. You may wish to pause on this until we cover usage of git in the lab.

Tutorial Requirements

OVERVIEW	Satisfactory completion of the tutorial is earned through: <ol style="list-style-type: none"> 1. IRB Certification 2. Research Report (a topic assigned by me) 3. Data Blog Post (538 style, chosen by you) 4. Participation and work on lab projects
IRB CERTIFICATION	Students who have not certified for the IRB will need to complete certification by the third lab meeting. You may access information about the IRB through the NCF portal (click on the “Mentor by Axiom” for more information).
RESEARCH REPORT	Using all of the tools addressed through the lab, each student will write a report on a lab-related topic of the professor’s choosing. Each report should be conducted in an open science fashion: all results should be reproducible, code should be version tracked and stored on github, and results should be communicated clearly.
DATA BLOG POST	After the research report, each student will write a short data article on a topic of their choosing. Basics of the article should match the report (namely, it should be reproducible, using mostly open tools). The topic of the article is up to the student, and may or may not tie in with broader lab projects. Blog posts may be published on the lab website.
LAB PROJECTS	This is the primary work of the tutorial. The political behavior lab has a number of ongoing projects. Each student, in consultation with the professor and fellow lab students, will work on one of these projects, with benchmarks established collaboratively as the project moves forward and matures.

Schedule

OVERVIEW	In the first mod, each lab meeting will cover a different lab tool or skill mentioned above. (In rough order, subject to change: IRB, markdown, L ^A T _E X, BibTeX, git, GitHub. Statistics packages are covered through your co-requisite statistics class.) As we move through the semester, lab meetings will cover fewer new techniques and tools and spend more time discussing and working on lab projects.
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