

PSC 400

SYRACUSE UNIVERSITY

DATA ANALYTICS

FOR POLITICAL

SCIENCE

INTRODUCTION

WHAT IS THIS CLASS ABOUT?

- **Learn how to conduct data analysis yourself**
- **Finding data, data cleaning and data manipulation, data visualization, and data analysis**

CLASS WEBSITE

- **<http://simonweschle.com/psc400>**
- **Refresh using**
 - **Windows: ctrl + F5**
 - **Mac/Apple: Apple + R or command + R**

APPROACH

- **Work through assigned reading *before* class**
- **Class**
- **After class: review reading if necessary**
- **Short review exercises (approx. weekly)**
- **Problem sets (every other week)**
- **Your own data analysis project (over course of semester)**

ASSIGNMENTS/GRADES

- **Class Participation**
- **Programming Review Exercises**
 - (roughly) weekly, graded P/F
- **Problem Sets**
 - 5-6 total, every 2 weeks
- **Data Analysis Memos**
 - 2-3 pages, 5-6 total, every 2 weeks
- **Data Analysis Paper**
 - Due May 6

DATA ANALYSIS PAPER

- **Answer your own research question**
 - **Memos: your research question, your data, data cleaning, descriptive statistics, bivariate relations, (first) regression results**
 - **Final paper: set out your research question, explain the data and statistical methods you use to investigate it, and describe what, based on your data analysis, the answer is**

CLASS TOPICS

- **Getting Started with R**
- **Causality with randomized experiments**
- **Single Variables**
- **Finding and Cleaning Data**
- **Bivariate Relationships**
- **Multivariate Regression**
- **Spatial Data, Network Data, Text as Data, Website Scraping**
 - **will choose some of those topics based on student interest**
- **Data Analysis Paper Workshop**

TEXTBOOK

- **Elena Llaudet and Kosuke Imai: Data Analysis for Social Science, A Friendly and Practical Introduction. Princeton University Press**
- **Other readings on Webpage/Blackboard**

STUDENT HOURS

- **Tuesday 1:00-3:00**
 - **332 Eggers or Zoom (info on syllabus)**
 - **Or by appointment (email me)**
 - **Your chance to talk to me about course material, college in general, or just to chat**
 - ***Please* talk to me as early as possible about any issues or questions**
 - **If I know what's going on, I can almost always help in some way (or I know someone who can help)**
 - **It's much more difficult to do something after the fact**

R AND RSTUDIO

The screenshot displays the RStudio application window. The title bar reads "RStudio" and the top right corner shows "Project: (None)". The interface is divided into several panes:

- Console:** Shows the R version 3.6.3 (2020-02-29) -- "Holding the Windssock" and copyright information. It also displays the R license text and some system information like "Natural language support but running in an English locale". The prompt is currently ">".
- Environment:** Shows the "Global Environment" which is currently empty.
- Files:** Shows a file browser view of the "Home" directory. The file list includes folders like Desktop, Documents, Downloads, Dropbox, Library, Movies, Music, Pictures, and Public, along with a file named ".Rhistory" (1.1 KB, modified Jan 26, 2021, 4:01 PM).

```
R version 3.6.3 (2020-02-29) -- "Holding the Windssock"
Copyright (C) 2020 The R Foundation for Statistical Computing
Platform: x86_64-apple-darwin15.6.0 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>
```

Name	Size	Modified
.r		
.Rhistory	1.1 KB	Jan 26, 2021, 4:01 PM
Desktop		
Documents		
Downloads		
Dropbox		
Library		
Movies		
Music		
Pictures		
Public		