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**PSC 200**  
**Applied Data Analysis**

Spring 2021  
14:00-14:50 MWF  
Cyberworld!

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**Professor:**  
Kevin A. Clarke  
Zoomland  
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**Teaching Assistants:**  
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**PURPOSE**

This course introduces students to data analysis, statistical inference, and research design relevant to political science research. Topics include variable measurement, descriptive statistics, confidence intervals, hypothesis tests, correlation, and regression analysis.

**PREREQUISITES**

Working knowledge of high school algebra is the only course prerequisite. Note that this course fulfills the Political Science department's techniques of analysis requirement.

**COURSE REQUIREMENTS**

Evaluation is based on problem sets (25% of your grade) and three midterm exams (25% of your grade each). The exams are given as scheduled and are not given early — make any travel plans accordingly. You must take all three exams to pass the course.

The lowest homework grade will be dropped when calculating the final course grade to allow for illness or other such unforeseen events. That said, you are strongly encouraged to complete ALL homework assignments. Late assignments will be penalized one half-grade (e.g., B to B-) for each day they are late. Problem sets more than seven days late will receive a grade of zero. Finally, while you are encouraged to study together and to learn the software together, all assignments are to be completed individually.

## **ACADEMIC INTEGRITY**

Be familiar with the University's policies on academic integrity and disciplinary action (<http://www.rochester.edu/College/CCAS/AdviserHandbook/AcadHonesty.html>). Violators of University regulations on academic integrity will be dealt with severely, which means that your grade will suffer, and I will forward your case to the Chair of the College Board on Academic Honesty.

Remember that the same technology that has made plagiarism easier to accomplish has also made it easier to detect. If you do not cite a source, it is plagiarism. If you do cite it, it is scholarship.

## **TEXT**

David Diez, Christopher Barr, and Mine Cetinkaya-Rundel (2019). *OpenIntro Statistics*, 4th ed.

## **COMPUTING**

Students will learn the R program for statistical analysis. The Friday sessions are devoted solely to computing.

## **COURSE SCHEDULE**

### February 1: Introduction

- None (first day of class)

### February 3-February 10: Data

- Chapter 2

### February 15-February 17: Probability

- Chapter 3

February 22-24: Distributions 1

- Chapter 4

March 1: Distributions 2

- Chapter 4

**March 8-March 10: Review and Exam 1**

- None

March 15-17: Sampling distributions

- Chapter 5

March 22-March 24: Inference

- Chapter 5

March 29-31: Inference (numerical)

- Chapter 7

**April 5-7: Review and Exam 2**

- None

April 12-March 14: Inference (categorical)

- Chapter 6

April 19-21: Linear regression 1

- Chapter 8

April 26-28: Linear regression 2

- Chapter 8

May 3-7: Review and Exam 3

- None