

Prof. Ryan D. Edwards  
 Email: [ryedwards@mills.edu](mailto:ryedwards@mills.edu)  
 Twitter: @RyanDEdwards  
 Office hours: Tue/Thu 11am-noon  
 Location: 235 GSB

Mills College  
 Department of Economics  
 Lokey School of Business  
 and Public Policy (GSB)

## ECON 081 / MGMT 281 / PPOL 201

### Introduction to Statistics

#### Spring 2017

CRN	Meeting time	Location	Final exam
10007 [081-01]	Tue/Thu 1pm–2:15pm	117 GSB	TBD

**COURSE OVERVIEW.** Statistical analysis is the backbone of applied scientific thought, and it also features prominently in business and policy, both historically and today. In Econ 081, we will develop the statistical intuition and analytical techniques that will help you achieve goals in your future coursework, in your independent work, and in your future careers.

**CORE CURRICULUM / GEN ED REQUIREMENTS.** Econ 081 meets the following Gen Ed requirement: Quan. & Comp. Reasoning; and it also meets the following Core Curriculum requirement: Quantitative Literacy.

**LEARNING GOALS.** The complete list of [course goals](#) is listed online. An abbreviated summary list appears here. Econ 081 aims to accomplish the following broad learning goals:

- Identify relevant statistical information associated with a problem
- Summarize quantitative and qualitative data accurately, responsibly, and effectively
- Apply statistical analysis tools to answer the problem
- Develop critical thinking skills

**PREREQUISITES.** None.

**MATH.** Basic knowledge of algebra is important. Background in calculus or statistics is helpful.

**COMPUTERS.** During the first class meeting, we will assess your computer skills, expectations, and access. Statistics can be heavily theoretical, heavily applied, and everything in between. We will adjust Econ 081 as we go so that it has an optimal and feasible mix of applied work.

**STUDENTS WITH DISABILITIES** and other special needs will be fully accommodated. Please see [Student Access and Support Services](#) in the Cowell Building. For athletes, students planning to travel, and others with similar needs: please check the course schedule and notify me via email about any potential conflicts with your own schedules.

**ACADEMIC INTEGRITY.** Students are expected to act in a manner consistent with the Mills College Community Standards and Honor Code as described in the Student Handbook available at <https://www.mills.edu/handbook.pdf>. Students engaging in academic dishonesty will receive an immediate F in the course and a referral to the Dean of Students.

**REQUIRED TEXTS.** We will use the free online *SticiGui* textbook written by Philip Stark at UC Berkeley. *SticiGui* is available at

<http://www.stat.berkeley.edu/~stark/SticiGui/index.htm>

Like all textbooks, *SticiGui* reflects the approaches its authors find best. You may find parts of the textbook to be unintuitive or unclear. The first thing you should do is ask questions of the instructor and of other students, either in person or online via [piazza.com](http://piazza.com) (see below). You could also consult other statistics textbooks or the Internet. Wikipedia pages on concepts may help a lot, but try to verify your understanding with the instructor and/or other students. Another textbook that is most similar to *SticiGui* is the venerated textbook [Statistics by Freedman, Pisani, and Purves](#). David Freedman taught at Berkeley for many years before his death in 2008, just after he finished work on the 4<sup>th</sup> edition. This textbook is not required but might be helpful.

**COURSE REQUIREMENTS.** Your overall course grade in Econ 081 will be determined in the following way:

- |                               |     |
|-------------------------------|-----|
| 1. Class participation:       | 15% |
| 2. Weekly online problem sets | 15% |
| 3. Midterm exam               | 30% |
| 4. Final exam                 | 40% |

For students feeling concerned about their overall course grades, you can earn up to an additional 10% in **extra credit** by turning in a one-page essay that identifies and discusses an example of poorly used statistics in the news media (on the Internet or elsewhere), and proposes a fix and the appropriate conclusions, and how they contrast with the written conclusions. The deadline is the last class meeting.

**CLASS PARTICIPATION.** To earn full participation credit, students are required to (1) **attend class** and (2) be prepared to discuss **assigned readings** and topics. You can miss two classes unexcused and still receive full credit.

**WEEKLY PROBLEM SETS** will be available online on Blackboard. You can work together, but students are on their honor to submit only their own work.

**WEB SITES.** We will be using Blackboard to distribute course materials, submit assignments, and check grades: <http://mills.blackboard.com>

**PIAZZA, an optional Q&A Forum.** [Piazza.com](http://piazza.com) is a free online forum for students in a class to interact with each other and with GSIs and professors outside of the classroom environment. Per its founder and CEO, Piazza was started so that every student can have the opportunity to learn from classmates outside of class. To access the class Piazza site, navigate to <http://piazza.com>

Econ 081 Syllabus Spring 2017  
 Last updated: 1/12/17 14:47

Week	Monday	Tuesday	Thursday
1			19-Jan Class 1: Introduction
2	23-Jan	24-Jan Class 2: Statistics (Chap. 3)	26-Jan Class 3: Statistics (Chap. 3)
3	30-Jan Problem Set 1	31-Jan Class 4: Measures of Location and Spread (Chap. 4)	2-Feb Class 5: Multivariate Data and Scatterplots (Chap. 5)
4	6-Feb Problem Set 2	7-Feb Class 6: Association (Chap. 6)	9-Feb Class 7: In-Class Exam Warmup
5	13-Feb Problem Set 3	14-Feb Class 8: Correlation and Association (Chap. 7)	16-Feb Class 9: Computing the Correlation Coefficient (Chap. 8)
6	20-Feb Problem Set 4	21-Feb Class 10: Regression (Chap. 9)	23-Feb Class 11: Regression (Chap. 9)
7	27-Feb Problem Set 5	28-Feb Class 12: Spreadsheet Fun!	2-Mar Class 13: Regression Diagnostics (Chap. 10)
8	6-Mar Problem Set 6	7-Mar Class 14: Errors in Regression (Chap. 11) "Regression to the mean"	9-Mar Class 15: Wrap-up of Chaps 3-11
9	13-Mar Problem Set 7	14-Mar Class 16: In-class review, with open Q&A	16-Mar Class 17: MIDTERM EXAM
10	20-Mar SPRING BREAK	21-Mar SPRING BREAK, no class	23-Mar SPRING BREAK, no class
11	27-Mar	28-Mar Class 18: Introduction to 2nd half "Lady Tasting Tea"	30-Mar Class 19: The Long Run & the Expected Value (Chap. 21) Standard Error (Chap. 22)
12	3-Apr	4-Apr Class 20: The Long Run & the Expected Value (Chap. 21) Standard Error (Chap. 22)	6-Apr Class 21: Normal Curve & Central Limit Th. (Chap. 23)
13	10-Apr Problem Set 8	11-Apr Class 22: Sampling (Chap. 24)	13-Apr Class 23: Estimating Parameters (Chap. 25)
14	17-Apr Problem Set 9	18-Apr Class 24: Confidence Intervals (Chap. 26)	20-Apr Class 25: Hypothesis Testing (Chap. 27)
15	24-Apr Problem Set 10	25-Apr Class 26: Does Treatment Have an Effect? (Chap. 28) The z Test and the t Test (Chap. 30)	27-Apr Class 27: Guided Review, Hands-on with Pets
16	1-May	2-May Class 28: In-class review, with open Q&A	4-May READING DAY
		WEDNESDAY, May 10 Exam time block: 2-5 Current plan: Take-home exam	