

## Math 140 Eight-Week Class Schedule (Feb 10<sup>th</sup> – Apr 2<sup>nd</sup>)

### Spring 2020 / Teachout

Weeks 1-6 (Face-to-face) – Credit for section problems given during class. Exam given during class.

Date	Schedule	Homework
10-Feb	1A & 1B	Finish Problems Section 1A & 1B, Journal 1: Write paragraph summarizing various ways to collect data.
11-Feb	1C & 1D	Finish Problems Section 1C & 1D, Journal 2: Write paragraph summarizing the various types of bias.
12-Feb	1E	Finish Problems Section 1E
13-Feb	1F	Finish Problems Section 1F, Journal 3: Write paragraph summarizing how to analyze a normal data set.
17-Feb	Holiday	
18-Feb	1G	Finish Problems Section 1G, Journal 4: Write paragraph summarizing how to analyze a non-normal data set.
19-Feb	Ch 1 Review	Finish Problems Ch 1 Review, Study for Exam
20-Feb	Exam Ch 1	Affective Domain Assignment 1
24-Feb	2A & 2B	Finish Problems Section 2A & 2B, Journal 5: Write a paragraph on sampling distributions and sampling variability.
25-Feb	2C & 2D	Finish project part 1, Finish Problems Section 2C & 2D, Journal 6: Write a paragraph explaining the central limit theorem.
26-Feb	2E, Project 1 Due Today	Finish Problems Section 2E; Journal 7: Watch and summarize the following video on bootstrapping ( <a href="http://www.lock5stat.com/videos/BootstrapIntro.mp4">http://www.lock5stat.com/videos/BootstrapIntro.mp4</a> )
27-Feb	2F	Finish Problems Section 2F; Journal 8: Write a paragraph on how two-population confidence intervals are created and how they are used to determine how much larger or smaller one population parameter is than another.
2-Mar	Ch 2 Review	Finish Problems Ch 2 Review, Study for Exam
3-Mar	Exam Ch 2	Affective Domain Assignment 2
4-Mar	3A & 3B	Finish Problems Section 3A
5-Mar	3B	Finish Problems Section 3B, Journal 9: Write a paragraph on how to use test statistics and critical values to determine if sample data significantly disagrees with the null hypothesis.
9-Mar	3C	Finish Problems Section 3C, Journal 10: Write a paragraph on how to use P-value and significance levels to determine if the sample data occurred by sampling variability or not.
10-Mar	3D & 3E	Finish Problems Section 3D & 3E, Journal 11: Write a paragraph explaining evidence, claim and how to write a conclusion for a hypothesis test.
11-Mar	3F	Finish Project 2; Finish Problems Section 3F; Journal 12: Write a paragraph summarizing and explaining the steps to doing a hypothesis test.
12-Mar	Ch 3 Review / Project 2 Due Today	Finish Problems Ch 3 Review
16-19-Mar	Classes Cancelled	Class was cancelled the week of March 16-19 Due to Corona Virus. The class will be turned into an online class starting March 23.

Week 7 – Week 8 (Online): Students need to email Exam answers, section problems, and other assignments to [matt.teachout@gmail.com](mailto:matt.teachout@gmail.com) to receive credit. Students may email questions to [matt.teachout@gmail.com](mailto:matt.teachout@gmail.com) or request a video be posted explaining a specific problem. Videos will be posted the Sunday before the start of the week. For example, the videos lectures for week 7 will be posted by March 22<sup>nd</sup>.

Week 7 (March 23<sup>rd</sup> – 29<sup>th</sup>): *Work on the following during the whole week. Do not wait until the last minute. Email the exam and the assigned section problems to [matt.teachout@gmail.com](mailto:matt.teachout@gmail.com) at any time during the week. The deadline to turn in week 7 assignments is Sunday March 29<sup>th</sup> at 12:00 pm (noon) pacific time. The exam and all assignments must be completed and submitted by then.*

- **Exam 3: Write a two-page essay (single spaced) explaining the following key ideas in chapter 3. It must be in your own words and not copied from the book or another student. Email the essay to [matt.teachout@gmail.com](mailto:matt.teachout@gmail.com) by Sunday March 29<sup>th</sup> at 12:00 pm (noon) pacific time.**
  1. Explain how to determine the null and alternative hypothesis, claim and type of test.
  2. Explain how to use test statistics and critical values to determine if sample data disagrees with the null hypothesis.
  3. Explain the basic idea of P-value.
  4. Assuming the null hypothesis is true, explain how to use the P-value and the significance level to determine if the sample data could have occurred by sampling variability or if it is unlikely.
  5. Explain how to determine if we should reject or fail to reject the null hypothesis.
  6. Explain how to write the conclusion to a hypothesis test that addresses claim and evidence.
  7. Explain Type 1 and Type 2 Errors. Why they occur. What steps can we take to limit the chances of making a Type 1 or Type 2 Error?

#### **Chapter 4 Material**

- Watch the following video on Randomized Simulation (Randomization) and take notes. (The notes will not be collected.) <http://www.lock5stat.com/videos/RandomizationIntro.mp4>
- Watch all three parts of the “Intro to Two-population Proportion Hypothesis Tests” video and take notes. (Notes will not be collected.) Video Links: [Part 1](#), [Part 2](#), [Part 3](#)
- Watch both parts of the “Two-population Proportion Hypothesis Tests with Software (Statcato & StatKey)” video and take notes. (Notes will not be collected.) Video Links: [Part 1](#), [Part 2](#)

- Watch both parts of the “Intro to Two-population Mean and Matched Pair Hypothesis Tests” video and take notes. (Notes will not be collected.) Video Links: [Part 1](#), [Part 2](#)
- Watch both parts of the “Two-population Mean and Matched Pair Hypothesis Tests with Software (Statcato & StatKey)” video and take notes. (Notes will not be collected.) Video Links: [Part 1](#), [Part 2](#)
- Do Section 4A Problems #23,24,30,33,34-37 and submit answers to [matt.teachout@gmail.com](mailto:matt.teachout@gmail.com).
- Do Section 4C Problems #22,26,27,31-34 and submit answers to [matt.teachout@gmail.com](mailto:matt.teachout@gmail.com).