Lecture 1

Class overview

STAT 8010 Statistical Methods I
August 21, 2019

Whitney Huang
Clemson University

Agenda

1. Who is the instructor?
2. Syllabus
3. Who you are?

Who is the instructor?

Who am I?

- **Whitney Huang**
  - First year Assistant Professor
  - Born in Wyoming, grew up in Taiwan
  - Got my Ph.D. in 2017 at Purdue University

How to reach me?

- **Email:** wkhuang@clemson.edu
- **Office**: O-221 Martin Hall
- **Office Hours**: 10:30am – 11:30am Tues., Weds., Thurs. and by appointment

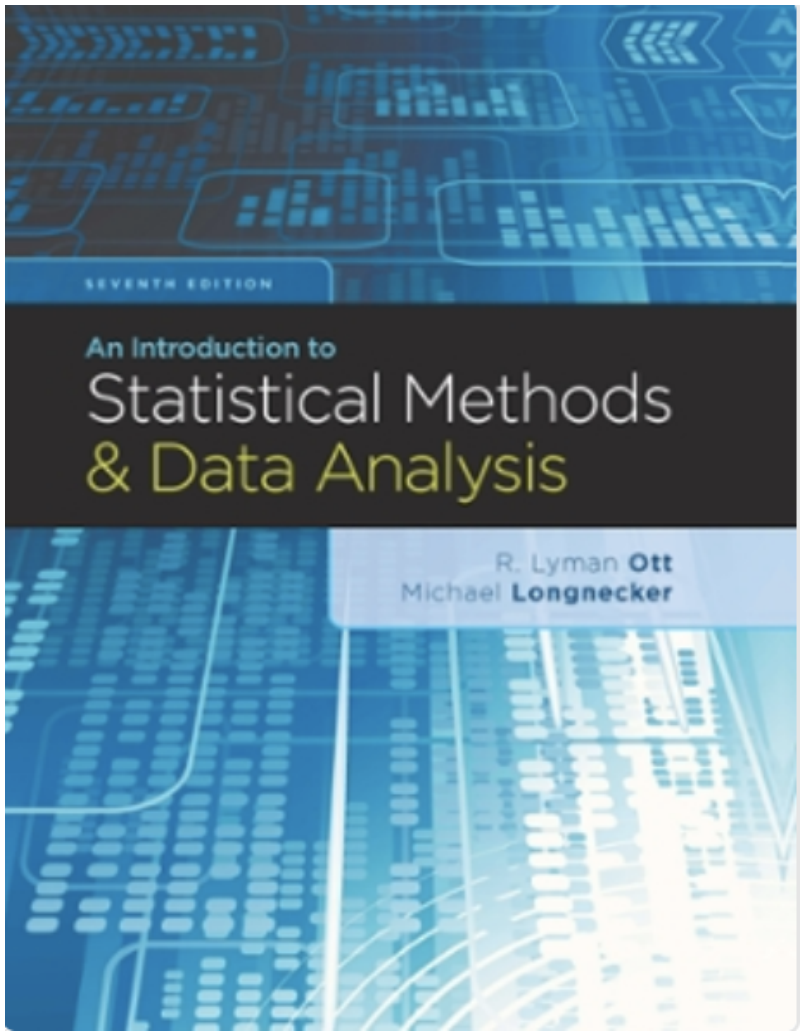
Syllabus

When and where

- We will meet MWF 1:25pm – 2:15pm at M-104 Martin
- We will have 3 exams (including Final), some homework assignments and quizzes
- No classes on Oct. 14 (Fall break) and Nov. 27, 29 (Thanksgiving)

Recommended Textbook

An Introduction to Statistical Methods and Data Analysis, 6th Edition. **Lyman Ott and Micheal T. Longnecker, Duxbury, 2010**; **ISBN-13:** 978-1305269477



Exam Information

There will be two in-class exams. The (tentative) dates for the two exams are:

- **Exam I**: Sept. 25, Wed
- **Exam II**: Oct. 23, Wed

The **Final Exam** will be given on Friday, Dec. 13, 3:00 pm - 5:30 pm.

Evaluation

- Grade Distribution:

Homework:	20%
Exam I	25%
Exam II	25%
Final Exam	30%

- Letter Grade:

>= 90.00	A
80.00 $\sim$ 89.99	B
70.00 $\sim$ 79.99	C
<= 69.99	F

Course Objectives

At the end of this course, the student will be able to:

1. Summarize and interpret research data.
2. Apply statistical techniques and knowledge appropriately.
3. Select and implement several basic experimental designs.
4. Draw appropriate conclusions and inferences from data.

An example of software output

```
Call:
lm(formula = maxHeartRate ~ age)

Residuals:
    Min      1Q  Median      3Q     Max
-8.9258 -2.5383  0.3879  3.1867  6.6242

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept) 210.04846    2.86694   73.27  < 2e-16 ***
age          -0.79773    0.06996  -11.40 3.85e-08 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 4.578 on 13 degrees of freedom
Multiple R-squared:  0.9091,    Adjusted R-squared:  0.9021
F-statistic:   130 on 1 and 13 DF,  p-value: 3.848e-08
```

Key Dates

- **August 27**: Last day to register or add a class or declare audit
- **September 3**: Last day to drop a class or withdraw from the University without a W grade
- **October 29**: Last day to drop a class or withdraw from the University without final grades

Academic Integrity Statement

"As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a 'high seminary of learning.' Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree.".

Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form. In instances where academic standards may have been compromised, Clemson University has a responsibility to respond appropriately to charges of violations of academic integrity.

Disability Access Statement

It is university policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities. Students with disabilities requesting accommodations should make an appointment with Disability Services (656-6848), to discuss specific needs within the first month of classes. Students should present a Faculty Accommodation Letter from Student Disability Services when they meet with instructors. Accommodations are not retroactive and new Faculty Accommodation Letters must be presented each semester.

Title IX Statement

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972.

The policy is located at http://www.clemson.edu/campus-life/campus-services/access/non-discrimination-policy.html.

Alesia Smith is Clemson University Title IX Coordinator. She is also the Executive Director of Equity Compliance, Her office is located at 223 Holtzendorff Hall, (864) 656-3181 (voice).

Inclement Weather

Any exam that was scheduled at the time of a class cancellation due to inclement weather will be given at the next class meeting unless contacted by the instructor. Any assignments due at the time of a class cancellation due to inclement weather will be due at the next class meeting unless contacted by the instructor. Any extension or postponement of assignments or exams must be granted by the instructor via email or Canvas within 24 hours of the weather related cancellation.

Tentative Topics and Dates

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Week	Dates	Topic
1	Aug. 21 – Aug. 23	Descriptive Statistics Part I
2	Aug. 26 – Aug. 30	Descriptive Statistics Part II
3	Sept. 2 – Sept. 6	Intro to Probability Part I
4	Sept. 9 – Sept. 13	Intro to Probability Part II
5	Sept. 16 – Sept. 20	Normal Probability Part I
6	Sept. 23 – Sept. 27	Exam I
7	Sept. 30 – Oct. 4	Inference on One Mean
8	Oct. 7 – Oct. 11	Two Sample Inference
9	Oct. 14 – Oct. 18	One Way ANOVA
10	Oct. 21 – Oct. 25	Exam II
11	Oct. 28 – Nov. 1	Multiple Comparisons
12	Nov. 4 – Nov. 8	Randomized Complete Block Designs
13	Nov. 11 – Nov. 15	Inference on Proportions
14	Nov. 18 – Nov. 22	Contingency Table Analysis
15	Nov. 25 – Nov. 29	Correlation and Simple Linear Regression I
16	Dec. 2– Dec. 6	Correlation and Simple Linear Regression II

Tell us a bit about yourself

- Your name
- Degree program
- Anything you want to share

  E.g., Goals for the semester, fun facts, your expectations for this course