STA 6166, Fall 2020
Statistical Methods in Research I
Section 15GH (UF Course # 19155)
MWF 3rd Period (9:35-10:25) Online

Instructor: Dr. Larry Winner
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Office Hours: TBA (Will be posted on UF Canvas)

TA: Michael Kim   Office Hours: TBA

Course Objective: Train graduate students in the sciences to plan and conduct experiments and data analysis.

Course Notes: Introduction to Applied Statistical Methods on UF Canvas

Optional Textbook: Ott and Longnecker, 2015. *An Introduction to Statistical Methods & Data Analysis, 7th Ed.*, Cengage. (6th Edition also)

Other Materials: Datasets, assignments, and overheads available on UF Canvas.

Web Site: http://www.stat.ufl.edu/~winner/

Homework and Exams:

1. **Homework Assignments:** There will be approximately 5 assignments. You will have at least one week to hand them in from the time they are posted on the website. Assignments will total 100 points.

2. **Exams:** There will be 3 "in-class" exams. Each will be worth 100 points.

3. **Grading:** Grades will be based on the total of 400 points from homework and exams. Grades are not negotiable (unless a mis-calculation is made in totaling points).

4. **Exams are Closed Book**. You may write formulas/notes on back of tables that will be available on class website.

5. **Missed Exams**: Any exams that will be missed must be confirmed as soon as possible, **before** the time of the exam. Documentation of conferences must be provided.

6. **Late Homework**: Will not be accepted and will receive a grade of 0. All homework must be uploaded to UF Canvas.

Prerequisites and Computing:

1. STA 6166 has a pre-requisite of an introductory statistical course. The course begins with (very brief) introductory material and then covers a wide range of topics.

2. You will need a computer for homework assignments. In this course we will make use of the R programming language.

Tentative Schedule (May go through earlier topics more quickly):

Topics	Sections
Introduction, Data Collection/Summaries, Populations/Samples	Chapter 1
Descriptive Statistics	Chapter 2
Probability, Random Variables, Sampling and Sampling Distributions, Estimating a Mean	Chapter 3
Statistical Tests for a Mean and Median	Chapter 4
Comparing Two Population Means and Medians	Chapter 5
Inference on Variances	Chapter 6
1-Way ANOVA: Assumptions, Rank-Based Tests, Post-hoc tests	Section 7.1
Randomized Complete Block Design	Section 7.2
Categorical Data Analysis	Chapter 8
Simple Linear Regression	Section 9.1
Introduction to Multiple Regression	Section 9.2

Exam Dates:

- **Exam 1: October 2**

- **Exam 2: November 4**

- **Exam 3: December 9**

R can be downloaded for free from the website:

http://cran.r-project.org/bin/windows/base/

Notes:
- Homework projects will be posted on class website and will be taken up and graded. Projects must be uploaded to UF Canvas.
- Exams are 1-hour. Each student will have their own data for the questions.
- Homework will count 25% of your course grade, each exam will be 25%
- Grades are not negotiable.
- You may request problems to be worked out in upcoming class via e-mail. I will not give detailed solutions via e-mail.

Course Grade Cut-offs:

A	A-	B+	B	B-	C+	C	C-	D	E
93	88	84	70	60					

Attendance/Exam/Assignment Policies: While attendance is not taken, students are expected to attend lectures and participate in class. Make-up exams will only be considered with documented medical event or conference attendance (graduate students). Early exams will be given under no circumstances. Assignments are to be handed in during class on the date the assignment is due in paper format. Electronic submission of assignments will not be accepted. Turn off cell phones during classes.

Academic Accommodations: If you have a documented disability and wish to discuss academic accommodations with me, please contact me as soon as possible.

Zoom Disclaimer: Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voice recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials by students or any other party is prohibited.

University Grading Points:

A	A-	B+	B	B-	C+	C	C-	D	E
4	3.67	3.33	3	2.67	2.33	2	1.67	1	0

Online Course Evaluations: The University has an online course evaluation system. Late in each semester (after final withdrawal date), students can go to the GATORRATER portal and evaluate courses. The website is located at: https://evaluations.ufl.edu/evals/Default.aspx.

University Policies:

Academic Dishonesty: All members of the University Community share the responsibility to challenge and make known acts of apparent academic dishonesty. Acts of academic dishonesty will not be tolerated and will be referred to the Student Honor Council.

Campus Resources:

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/

Academic Resources: http://www.ufl.edu/academics/resources/

Disability Resource Center: https://www.dso.ufl.edu/drc/

Student Health Care Center: http://shcc.ufl.edu/