# STATS 32: Introduction to R for Undergraduates

Autumn 2019-20

| | | | |
|---|---|---|---|
| **Instructor:** | Kenneth Tay | **Time:** | TTh 12:00 – 13:20 |
| **Email:** | kjytay@stanford.edu | **Place:** | 200-203 |

**Course Website:** https://web.stanford.edu/~kjytay/courses/stats32-aut2019/

**Office Hours:** Fridays, 10am-12pm, Sequoia Hall Rm 105

**Textbooks:** There are no required textbooks for this course. However, *R for Data Science* by Hadley Wickham and Garrett Grolemund (O'Reilly Media, 2017, available for free online at http://r4ds.had.co.nz/) is highly recommended as an aid to understanding the course material. Much of the course material is based on this book.

**Course Description:** This short course runs for weeks one through five of the quarter. It is recommended for undergraduate students who want to use R in the humanities or social sciences and for students who want to learn the basics of R programming. The goal of the short course is to familiarize students with R's tools for data analysis. Lectures will be interactive with a focus on learning by example, and assignments will be application-driven. No prior programming experience is needed. Topics covered include basic data structures, File I/O, data transformation and visualization, simple statistical tests, etc, and some useful packages in R. Prerequisite: undergraduate student. Priority given to non-engineering students. Laptops necessary for use in class.

**Course Goals:** Through this class, students will be able to:

- Navigate the R ecosystem at a basic level (RStudio, CRAN, R Markdown, documentation).
- Open, manipulate, plot and save data.
- Perform simple data modeling and statistical analyses in R.

**Grading and Assignments:** This class can be taken for Satisfactory/No Credit only. The only assignment for this class is a final project to demonstrate some mastery of the content. A final project proposal (20%) will be due on Oct 16 (Wed) 11:59pm, and the final project itself (80%) will be due on Nov 2 (Sat) 11:59pm. More details will be given closer to the date.

**Late Work Policy:** For each late day, a multiplicative penalty factor of 0.8 will be applied. Work that is submitted more than 2 days after the due date will receive **0 points**.

**Academic Integrity:** All work that you produce in this class must be your own. You may discuss the final project with classmates, but your code and write-up must be in your own words and reflect your own understanding. It is never acceptable to copy a classmates code or write-up, even if cosmetic changes are made (e.g., changing the names of variables).

**Students with Documented Disabilities:** Students who may need an academic ac- commodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is being made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066, URL: http://oae.stanford.edu).