

DSST289: Introduction to Data Science — Taylor Arnold — Fall 2022

Website: <https://statsmaths.github.io/dsst289-s22>

Topics: Methods for collecting, manipulating, visualizing, exploring, and presenting data.

Format: The semester is broken into three, four-week units. The first unit focuses on data visualization and the second unit focuses on data collection. In the final unit we will explore applications to spatial and temporal datasets. The last week of the semester is dedicated to a final project. Class meetings are hands-on and interactive. Please bring a computer, pencil, and something to write on to each class. Class materials can be found on the course website.

Homework: All class meetings, other than exam days, have a reading posted on our website. A few questions or activities are included at the end of each reading. These should be completed before class, with self-reported completion recorded through the preclass form found at the top of the course website. Please bring the written responses to class. Homework is graded based on the percentage of assignments that were successfully submitted.

Exams: There are three midterm exams. Dates are given on the course website. There will be a take-home open-book, component that will be distributed on a Monday, and an in-class, closed-book component given on Wednesday. Answers to the take-home component should be printed out and handed in at the same time as the in-class exam. An list of topics for the in-class exam will be posted on the course website.

Final Project: A final project will be due during the last week of class. The project will focus on finding or creating a new dataset and applying the techniques learned throughout the class to the analysis of it. The project will take the form of a digital poster session and a one-page reflection. Detailed instructions will be posted following fall break.

Attendance: While regular attendance is expected, I understand that personal issues occasionally arise. Also, please do not come to class if you are feeling ill. Mark on each pre-class form whether you attended the *prior* class. In the result of a negative response, briefly explain why you were out of class. Excessive absences (roughly, 5 or more) without a clear rationale will result in a warning followed by a possible reduction in your final grade. If you are unable to take the in-class exams on the given date, it will be replaced with an oral exam.

Getting Help: We will usually have a lot of time in class to answer questions about the course material. If questions arise outside of class, please also feel free to send these by email. I am of course happy to schedule an office hours meeting for any extended questions or personal concerns. Because I know everyone has a busy schedule, I offer office hours primarily by appointment. Just send an email with your availability at least 1 day before you'd like to meet. However, note that I generally avoid answering conceptual questions about the homework questions before they are due; just do your best and we will discuss in class.

Final Grades: The three exam, final project, and homework grades are averaged (i.e., each contributes 20%). A letter grade is assigned as follows: A (93–100), A- (90–92), B+ (87–89), B (83–86), B- (80–82), C+ (77–79), C (73–76), C- (70–72), and F (0–69).