

PSTAT10 Data Science Principles

Course Syllabus - Summer Session B, 2026

John Robin Inston

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***Disclaimer:** All information in this syllabus is subject to change at any point at the sole discretion of the course instructor. Any modifications to the syllabus will be announced in class and posted to the course Canvas page.*

Course Description

Welcome to PSTAT10 Data Science Principles. In this course you will receive an introduction to the methods of data science and analysis using the programming language R in the interactive development environment RStudio. We will learn the fundamentals of programming for data science, including basic data manipulation, visualization and statistical programming in R. We will study and implement functions in the tidyverse library including the use of tibble objects for dataframe management and ggplot for data visualization. Additionally, students will be introduced to relational database management systems, including database design principles and SQL queries for data manipulation. Throughout the course, students will also receive instruction and tuition on technical document creation using Quarto markdown files.

Prerequisites: Math 2B or 3B with a minimum grade of C or better

Teaching Staff

John Inston - Instructor

- **Pronouns:** He/Him
- **Email:** johninston@ucsb.edu
- **Office Hours:** South Hall, Cubicle 5431 T, Wednesday 1:00 PM - 4:00 PM

NOTE: Due to office renovations, in Week 1 my OH will be held in StatLab (South Hall, Room 5421).

Abhijit Brahme - Teaching Assistant Siyu Chen - Teaching Assistant

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| • Pronouns: He / Him | • Pronouns: She / Her |
| • Email: abhijit-brahme@umail.ucsb.edu | • Email: siyu_chen@umail.ucsb.edu |
| • Office Hours: Thursdays 1:00PM - 3:00PM on Zoom . | • Office Hours: Tuesdays 11:00AM - 12:00PM on Zoom . |

Course Information

Course Material

For your study material you will be provided with the following:

- Lecture slides with complete examples.
- Section documents (solutions released after submission).
- Assignment documents (solutions released after grades published).
- Code summaries and examples.
- R and RStudio installation instructions.
- Assignment submission templates.

All material can be found on Canvas. Please inform myself if you do not have access to the Canvas page for any reason as the course pace is very fast and you do not want to fall behind. Additionally, you can find notes further notes on my [website](#).

Course Textbooks

The study material for this course is self-contained and does not draw from any official course textbook. Some useful additional references include:

- R Manuals: An Introduction to R (<https://rstudio.github.io/r-manuals/r-intro/>)
- Tidyverse Styling Guide (<https://style.tidyverse.org/>)
- Introduction to R for Data Science (<https://r4ds.had.co.nz/introduction.html>)
- Introduction to SQL (https://www.w3schools.com/sql/sql_intro.asp)

Document Submission

All assignments and section documents submitted for review will be constructed using Quarto Markdown (.qmd) files. Templates for both assignments and section documents are available on Canvas. Additionally, your teaching assistant will spend a majority of the first section demonstrating how to use Quarto markdown files to generate pdf files.

You should not submit .qmd files for review and grading. If you are having problems generating your pdf files then please get in touch with either myself or with your teaching assistants.

You can find online documentation on using Quarto to generate pdf documents here: <https://quarto.org/docs/output-formats/pdf-basics.html>.

Course Assessment

The grading structure of the course consists of the following:

1. Section attendance **10%**
2. Section worksheets **20%** (graded on completion)
3. Homework assignments **40%** (graded on correctness)
4. Final exam **30%**

All students receiving at least 90% (80%, 70%) in the class are guaranteed to receive at least an A– (B–, C–). All other cutoffs will be set at the instructor's discretion.

Course Schedule

The course is fast paced and covers a lot of material very quickly. To ensure you stay on top of your studies please make sure you attend all lectures and sections.

Lectures will be held in [Theater and Dance West \(Room 1701\)](#) from 11:00 AM to 12:20 PM on Monday, Tuesday, Wednesday and Thursday.

Section will be held on Monday and Wednesday at the following times and locations:

- 15164 Abhijit Brahme **12:30 PM - 1:20 PM** at **Phelps Hall 1513**
- 15057 Abhijit Brahme **2:00 PM - 2:50 PM** at **Phelps Hall 1513**
- 15065 Siyu Chen **3:30 PM - 4:20 PM** at **Phelps Hall 1513**

All holidays and schedule modifications can be found on the course schedule posted on Canvas, and any changes will be announced in lecture. Students are expected to attend the section corresponding to their enrollment on GOLD. In case of conflicts, to discuss your options for attending different section times please context the TA of the section you wish to attend. If you are unable to attend any section due to extenuating circumstances please contact the course instructor.

Submission Deadlines

Homework assignments will be released every Tuesday at 11:59 PM and will be due for submission the following Wednesday at 11:59 PM.

Section worksheets will be due for submission **2 days after section is held** (so Wednesday at 11:59 PM for Monday's section and Friday at 11:59 PM for Wednesday's section). Section worksheets should be self-explanatory and solutions will be posted after section.

Late Submission Policy

Requests for late submission of section material may be submitted to your teaching assistant prior to the submission deadline and granted at the discretion of the member of staff.

As assignments are graded on correctness, the submission of assignments after the posting of solutions will not be accepted. Please ensure that you **contact the course instructor with suitable evidence in the event of extenuating personal circumstances**.

Student Resources

Disabled Students Program (DSP)

I am committed to facilitating a course that is accessible to all students. Students requiring academic accommodations can find necessary information here: <https://dsp.sa.ucsb.edu/>

Students requiring accommodations are responsible for ensuring that UCSB DSP is aware of their needs in advance of course assessments and any other situations in which accommodations may be necessary.