

# STA 141A – Fundamentals of Statistical Data Science

(Syllabus – as of Sep 24, 2025)

Instructor: Akira Horiguchi (📠 PDSB 0003, ✉ [ahoriguchi@ucdavis.edu](mailto:ahoriguchi@ucdavis.edu)) – contact for lecture related and general questions

TAs: For office hours details, see course website.

- Kwan Ho Lee (✉ [ksjlee@ucdavis.edu](mailto:ksjlee@ucdavis.edu)) – contact for general and discussion questions and homework grading
- Pascal (Mingqian) Zhang (✉ [pazhang@ucdavis.edu](mailto:pazhang@ucdavis.edu)) – contact for general questions and homework grading

## Presence times

- Lecture: MWF 9:00 – 9:50 AM (📍 TLC 1215)
- Discussions: T 12:10 – 1:00 PM and T 1:10 – 2:00 PM (📍 Wellman 115)

Prerequisites: STA 10 or STA 13 or STA 32 or STA 100; STA 106 or STA 108

## Questions

- Please ask all questions related to the lecture content that you think are not to be assigned to the discussion session during or after the lecture. If you have questions that could not be answered during the lecture, visit my office hours (preferred).
- **This course will use Piazza. If not in person, please ask your non-sensitive questions on Piazza, from which other students can see responses from the Instructor or TA.** Emailing the Instructor or TA should be reserved only for sensitive or unanswered questions.
- All questions concerning discussion material are to be asked in the discussion session if possible. For further questions regarding the discussion content which could not be clarified during the discussion session, with other students, or in Piazza, get in touch the TA Kwon Ho Lee.

## Notes about lecture

- Unannotated slides are uploaded before the lecture.
- Annotated slides and R code are uploaded up to one day after the lecture.
- Lecture attendance is optional (except for exams).

## Homework

- The purpose of the homework is for you to learn to apply the material from class. **Homework assignments will be graded for completion**, which means it will be your responsibility to check the correctness of your own homework. Solutions for each homework assignment will be uploaded after the assignment's deadline.

## Discussion

- The discussion session is exclusively there to deepen the lecture content. There will be no further assessment in the discussion session. Mainly the contents of the exercises and lectures are discussed, but also other topics that can be important as a basis or also as an outlook on further lecture content.
- We are interested in your ability to accurately communicate mathematical and statistical content. So please take the opportunity to communicate your own ideas and questions and also be prepared to present your solutions to the group.

## Grading

Grade:	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-
for scoring $\geq$ :	95.0%	85.0%	80.0%	75.0%	65.0%	60.0%	55.0%	45.0%	40.0%	35.0%	25.0%	20.0%

### • Grading scheme

- Homework (graded for completion): 5%
  - Two midterm exams:  $2 \times 30\% = 60\%$  (written in class).
  - Final project: 35%
- To be fair to everyone in the class, single student's grades cannot be raised. Please avoid asking about raising scores.
  - **Grade disputes and adjustments:** Students have 72 hours after receiving a grade on any assignment to contest it. Grading is consistent and we will provide detailed rubrics. If you think you deserve a different grade, prepare a strong argument and submit it by email to the TAs.

## Midterm exams

- For each midterm exam, except for a (black or dark grey) pen/pencil, a non-graphing calculator and one hand-written sheet of paper (both-sided), no other materials are necessary.
- Further information about the materials that can be taken for the midterm exams and the final exam, as well as other information concerning these exams will be given in the lecture and also in the announcement section in canvas.

## Final project

- The final project consists of a case study which showcases the methods learned in this course.
- Each project report has to be compiled by groups of four students.
- Contribution of each group member must be clearly indicated on the first page of the report. Contact the TAs regarding any issues with the group.
- The grade for the project report will consider the individuals contribution, the overall presentation and meaningfulness of the study. A detailed rubric will be published later.
- On the date specified in the course website, each group must submit a project proposal report. The proposal should outline the research idea, methods intended to be used, and responsibilities.

## Code of conduct

- Students must adhere to the UC Davis code of conduct ([🔗 ossja.ucdavis.edu/code-academic-conduct](https://ossja.ucdavis.edu/code-academic-conduct)). Violations of the code of conduct include (but are not limited to) communicating and collaborating during midterm exams, copying, attempting to copy and letting someone copy a graded assignment, doing someone else's homework/exam, having someone else doing one's homework/exam, sharing homework/exams, and submitting work that is not yours. The fact that the violation did not benefit you directly, does not mean that it is less important.
- One of the responsibilities delegated to faculty by the UC Davis Code of Academic Conduct is to report suspected academic misconduct to the Office of Student Support and Judicial Affairs (OSSJA). Thus, any violation will be reported, and students found guilty will get an F, no matter the extent and type of their violation. Please, do not do it.

**Course materials:** My lectures and course materials, including lecture notes and discussions etc., are protected by U.S. copyright law and by University policy. I and the TAs are the exclusive owner of the copyright in those materials created. You may take notes, make copies of course materials for your own use, and share those materials with other students enrolled in or auditing this course. However, you may not reproduce, distribute or display (post/upload) lecture notes or course materials in any other way – whether or not a fee is charged – without my express prior written consent. You also may not allow others to do so. If you do so, you may be subject to student conduct proceedings under the UC Davis Code of Academic Conduct. Similarly, you own the copyright in your original papers and exam essays. If I am interested in posting your answers or papers on the course web site, I will ask for your permission.

**Changes to syllabus:** The syllabus may be updated based on the instructor's discretion. Changes may, for instance, result due to students' progress in the course or changes in instructional priorities.

**Acknowledgment:** The course material is developed based on the recommended textbook, on online resources as cited in the relevant materials, and on the content taught in STA141A past quarters by Akira Horiguchi, Sebastian Kuehnert, and Peter Kramlinger, where ideas from Emanuela Furfaro (University of Washington, Seattle) and Debashis Paul (University of California, Davis) were incorporated.