

AMS 572 Data Analysis I

Course Information

Pei-Fen Kuan

Applied Math and Stats, Stony Brook University

Course Info

- ▶ Instructor: Pei-Fen Kuan, Ph.D,
(peifen.kuan@stonybrook.edu)
- ▶ TAs: Andreas Lietzau (andreas.lietzau@stonybrook.edu)
Solha Park (solha.park@stonybrook.edu)

Course Info

Office Hours

- ▶ Pei-Fen Kuan (tentative): Tue/Thu 9:30-11:00 AM in person (Math Tower 1-113)
- ▶ Andreas Lietzau (tentative): Mon/Wed 5.00-6.30 PM in person (Harriman 202)
- ▶ Solha Park (tentative): Mon/Wed 1:00-2:30 PM in person (Harriman 202)

Course materials will be posted on Brightspace

Course Info

Textbook

- ▶ Statistics and Data Analysis, by Tamhane and Dunlop, Pearson (required)
- ▶ Applied Statistics and SAS Programming Language, by Jeffrey K. Smith, Pearson (recommended)

We will cover Chapters 5, 6, 7, 8, 9, 10, 12, 14 (Tamhane and Dunlop) in lectures. Chapters 11, 13, 15 will be covered in group projects. Chapters 1-4 will be covered briefly in class (Please read these chapters in details on your own).

Course Info

- ▶ We will demonstrate using R and SAS programming for data analysis in lectures.
- ▶ R can be downloaded from <https://cran.r-project.org/>
- ▶ You can also download the add-on R studio from <https://posit.co/download/rstudio-desktop/>
- ▶ SAS can be downloaded from <https://softweb.cc.stonybrook.edu/>.
- ▶ You can use SAS program from Virtual Sinc Site: <https://it.stonybrook.edu/services/virtual-sinc-site>
- ▶ You are also recommended to learn more SAS from its on-line resources: <http://support.sas.com/documentation/onlinedoc/stat/>

Course Objectives

To introduce students to basic statistical procedures. Survey of elementary statistical procedures such as the t-test and chi-square test. Procedures to verify that assumptions are satisfied. Extensions of simple procedures to more complex situations and introduction to one-way analysis of variance. Basic exploratory data analysis procedures.

Homework

- ▶ Homework Assignments: Given regularly; no late homework will be accepted. Homework will be submitted online via Brightspace.
- ▶ Homework Policy: You may discuss problems with other students in this class, but you must write up your HW completely on your own; if you do work with other student(s), you must declare this on the cover of your own HW, giving names of your collaborators. (Your writings must be independent: Do not look at another write up, either of classmate or of anything you found on internet when writing your own solution. To do otherwise is a case of Academic Dishonesty and is subject to University policy through CASA.)

Homework

- ▶ You will scan your homework and submit online via Brightspace
- ▶ For iOS (Apple) users, there is a scanning function in Notes app
- ▶ Other possible apps are Genius Scan, CamScanner, Abbyy FineScanner, etc.

Grading

- ▶ There will a midterm and a final exam.
- ▶ There will be a group project for this course. At the end of the semester, each group will submit a report and presentation slides on project they worked on. (More information will be provided later).
- ▶ The homework will count for 10% of the grade, the project will count for 30% of the grade, midterm (30%) and final exam (30%) of the grade.

Exam dates

- ▶ Mid-term : October 19, 2023 (Thu) in class
- ▶ Final Exam : December 14, 2023 11:15-1:45 PM (Thu)
(University final examination schedule, we will use 90 mins of the allocated slot) (Venue will be announced later)