

STAT 330: Introduction to Mathematical Statistics (September 8 - December 7, 2020)

Lecture

- Mon 10:30 - 12:20; Wed 10:30 - 11:20 (Remote Learning)
 - An outline of each lecture will be posted in the course's [webpage](#) and [canvas-page](#) before the meeting time.
 - A live lecture will be delivered during the scheduled time for each lecture via [Bb Collaborate Ultra](#).
 - The live lecture will be recorded and then posted in the course's [webpage](#) and [canvas-page](#) throughout the whole following week.
- Instructor: X. Joan Hu (<http://www.sfu.ca/~joanh/>), SSC K10555 (SFU - Burnaby Campus), 778-782-6714, joanh@stat.sfu.ca
- Office Hour: Wed 11:30 - 12:20 via [Zoom](#) or by appointment

Tutorial (starting from the week of Sep 14, 2020)

- Schedule: STAT 330-D101: Mon 8:30AM - 9:20AM; D102: Mon 9:30AM - 10:20AM; D103: Wed 9:30AM - 10:20AM
 - Each tutorial will take place during the scheduled time via [Bb Collaborate Ultra](#).
- Teaching Assistant: Molly Cen (mca173@sfu.ca) for tutorial; Mandy Yao (mya107@sfu.ca) for marking

Textbook

- "*Introduction to Mathematical Statistics*" (8th Edn) by Hogg, McKean and Craig. Publisher: PEARSON

Topics to Be Covered (following the chapter numbers of the textbook)

1. Introduction
2. Probability and Distributions (Chp 1-3)
 - 2.1 Probability
 - 2.2 Random Variables and Distributions
 - 2.3 Multivariate Distributions
 - 2.4 Some Important Distributions
3. Essential Topics in Mathematical Statistics (Chp 4-6)

- 3.1 Elementary Statistical Inferences
- 3.2 Consistency and Limiting Distributions
- 3.3 Maximum Likelihood Methods
- 4. Further Topics, Selected from Chp 7-11

Computing

R (<http://www.r-project.org/>) is used in the lectures and tutorials.

Evaluation

- Homework (20%) (six assignments; 5% per assignment and only the four highest scores are counted): each assignment is
 - to be assigned in even-numbered weeks by emailing to the class list and posting in the course's [webpage](#) and [canvas-page](#).
 - to be collected on Wednesdays of the following weeks by 17:30 via the course's [canvas-page](#). (*Late homework is not accepted. If the delay is because of a medical reason, please provide the medical document to evidence it and hand in the homework at a later time to obtain the credit.*)
 - to be returned by the tutorials of the following odd-numbered weeks: key answers to the homework questions will be posted in the course's webpage and canvas-page in that week.
- Midterm (40%) (two midterms, 20% per test):
 - The test questions will be available in Week 5 for Midterm 1 or Week 10 for Midterm 2, during Wednesday 18:00 (PDT/PST) to Friday 18:00 (PDT/PST).
 - You have 2 hours (120 minutes) for each of the midterms: the clock starts right after you open the question sheets.
 - Open-book and calculators are allowed.
 - Midterm 1 covers Chp 1-3; Midterm 2, Chp 1-6.
 - There will be no makeups for midterms.
(The medical document is required to evidence a missing midterm due to illness. The credit will then be recovered by re-weighting the marks at the final exam.)
- Final Exam (40%):
 - Time TBA.
 - You have 4 hours (240 minutes) for the exam: the clock starts right after you open the question sheets.
 - Final exam covers all the material studied in the whole term.
 - Time to Review the Final Exam Papers: 10:00 - 13: 00 (PST) Fri Jan 8 2021

- Calculation Options

- 4 *HWs* + 2 *Midterms* + *FinalExam*,
- 4 *HWs* + 1 *Midterm* + *FinalExam* * 1.5, or
- 2 *Midterms* + *FinalExam* * 1.5.

The highest of the scores obtained by the three options will be used as the final one.

Links to Course Pages

Course webpage: <http://www.sfu.ca/~joanh/stat330web>

Course canvas-page: <https://canvas.sfu.ca/courses/56956>