

STAT 4202 Syllabus

Introduction to Mathematical Statistics II

Instructor: Dr. Lo-Bin Chang

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Office: CH 304G

Class Times: MWF 3:00PM-3:55PM

Class Location: Sullivant Hall 220

Office Hours: W 3:55PM-5:30PM

TA: Sasan, Prateek (email: sasan.1@osu.edu)

Ghosh, Amartya (email: ghosh.147@osu.edu)

Main Text: *John E. Freund's Mathematical Statistics with Applications (8th edition)* by Irwin Miller and Marylees Miller

Tentative Topics:

Chapter 10: Point Estimation (3 weeks)

Chapter 11: Interval Estimation (2 weeks)

Chapter 12: Hypothesis Testing (2 weeks)

Chapter 13: Hypothesis Testing Involving Means, Variances, and Proportions (3 weeks)

Chapter 14: Regression and Correlation (2 weeks)

Chapter 16: Nonparametric Tests (2 weeks)

Prerequisites: Stat 4201 (420), Math 4530 (530) or 5530 H (531 H).

Website: Homework and other relevant material will be posted on Carmen. Please check the website regularly.

Grading: The final course grade will be based on the following weighting of assessment components:

Homework (15%)

Midterm I (25%)

Midterm II (25%)

Final Exam (35%)

Homework assignments: Homework assignments will be posted on the course website almost every week. Homework will be collected by your TA, but only one or two problems will be graded. You are encouraged to discuss homework problems with other students, but you must write your own solutions. Directly copying solutions from other students or sources is academic misconduct.

Exams: All exams will be closed-book. The final exam will be cumulative, but will emphasize more on the recent material. All exams will be in the same room Sullivant Hall 220. The schedule is as follows:

Midterm I: 3:00pm~3:55pm, Wednesday February 13

Midterm II: 3:00pm~3:55pm, Monday March 25

Final Exam: 4:00pm~5:45pm, Friday April 26

If you plan to have a conflict with an exam, please get a permission from the instructor prior to any action (e.g., book a flight or hotel, accept an invitation). If you cannot take an exam due to a valid excuse (e.g., illness), please notify the instructor by email before the exam and provide appropriate documents (e.g., doctor's notes). If you miss a midterm exam with a permission or a valid excuse, we will add the weight of the midterm to the weight of the final exam to compute your final grade. If you miss the final exam with a permission or a valid excuse, we will arrange a makeup exam for you.

Note: The above schedules might be slightly different from the actual course activities. Please be aware of the possibility of date change of Exam 1 or Exam 2.

Academic Misconduct: You are expected to produce independent work for homework assignments and exams. Academic misconduct for any sort will not be tolerated. If students are caught indulging in dishonest activities during the exams, they will be reported immediately, without any exception. Please review OSU's policies at <http://studentaffairs.osu.edu/csc/>.

Special Accommodation: Students with disabilities (including mental health, chronic or temporary medical conditions) may be eligible for reasonable accommodations. All accommodations are coordinated through the Office of Student Life Disability Services located in 098 Baker Hall, 113 W. 12th Avenue; telephone 614- 292-3307, slds@osu.edu; slds.osu.edu. Please contact the Office of Student Life Disability Services as early in the semester as possible.

Remark: Since we cover the fundamental topics in statistics with rigorous mathematical treatments and various applications, the course fulfills along with the latest faculty agreed upon General Education Goals and Expected Learning Outcomes of Data Analysis:
Goals: Students develop skills in drawing conclusions and critically evaluating results based on data.

Expected Learning Outcomes:

1. Students understand basic concepts of statistics and probability.
2. Students comprehend methods needed to analyze and critically evaluate statistical arguments.
3. Students recognize the importance of statistical ideas.