

STAT 400/Math 463: Statistics and Probability I

Professor: Albert Yu

Fall 2024

E-mail: ayu12@illinois.edu

LMS: **Canvas**

Stats Help Desk: T/W/Th. 5:00 - 7:00pm. English Building - Room 104

Professor Office Hours: T/Th 1:30 - 3:00 pm 703 S. Wright St. 2nd floor common area

Course Discord Server: <https://discord.gg/a2PXuGmvj8>

Assignment Submission: **Gradescope**

Graduate Teaching Assistants

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Course Description

This course offers a basic semester-long introduction to mathematical statistics. Topics covered: probability, random variables, discrete and continuous distributions, expectation, distribution functions, central limit theorem, point estimation, confidence intervals, and hypothesis testing. Prepares students for STAT 410.

Required Materials

- Mathematical Statistics with Applications 7th edition, by Wackerly, Mendenhall, Scheaffer (*useful source of practice problems*)
- R and RStudio (free)
- Scientific or graphing calculator

Course Schedule of Topics

A detailed calendar of topics can be found in the Syllabus module in Canvas.

Course Notes

- Course notes and lecture capture **will** be provided.
- Course notes are NOT a valid substitute for reading the textbook.
- Watching lecture videos at 2x speed is not a valid substitute for coming to lecture.
- **All students are expected to read corresponding lecture sections in the textbook.**

Prerequisites

Algebra, Calculus I, and basic Calculus II.

Email Policy

Due to the large size of this course, we will follow a strict email policy. If your question is related to content or assignment, please ask in class or Discord. If sending an email:

- The subject line should begin with "[STAT 400]", e.g. *STAT 400 - Conflict Exam*, and include a short description.
- You are welcome to address me as either *Professor*, *Dr. Yu*, or *Albert*.
- Emails must originate from an @illinois.edu email address.
- **We do not answer homework questions by email.** Please ask all homework questions at the help desk or the appropriate Discord channel.

Response time

I generally respond to emails within 24 hours during the work week. If I have not responded (to a valid email), please feel free to follow-up with me. It may have been accidentally re-routed by my spam filters.

Do not send me private messages in Canvas or Discord. I do not get notifications and will likely not see your message.

Discord Policy

Please be respectful in our course server and refrain from using profane or inappropriate language. Questions and peer discussion are highly encouraged. Before asking a question, please **read the channel and/or use the search function first to avoid asking duplicate questions**. Questions that have already been answered multiple times may be deleted by the course staff.

Gradescope

Gradescope will be used for all assignment submissions in this course, and to check exam scores. You will be automatically enrolled in our STAT400 Gradescope using your @illinois.edu email address. Please create an account if you do not yet have one.

Discussion Assignments

There will be *approximately* 10 assignments, each worth **10** points. The lowest two scores will be dropped.

General Instructions

- Assignments must be turned in by **11:59pm CST** on the date it is due. Please be mindful of differences in time zone.
- All assignments will be submitted through Gradescope. **It does not accept late work.**
- Assignments by e-mail **will not be graded**. Due to the drop policy, no exceptions will be made for travel, regular illness, etc. Please plan accordingly! If you experience an extended illness due to COVID-19, and are able to obtain a doctor's note, exceptions may be made. If enough work is missed, you may be required to petition for an "Incomplete" grade and finish the course in a future semester.

Assessments

Final grades will be assigned based on discussion assignments, and **3** out of 4 in-person exams. The lowest exam score is automatically dropped so the final weights will add up to 100%.

- Discussion Assignments (Homework) - **25%**
- Exams - **75%** (highest 3 exam scores: 25% each)
 - Exam 1 - Thurs Sept 26
 - Exam 2 - Thurs Oct 24
 - Exam 3 - **TUES** Nov 19
 - Exam 4 - Finals week (time TBD). Non-cumulative.

Note: In the unlikely event of a date change, students will be notified at least one week in advance.

Exams will be administered from **7:00 - 9:00pm** in a different classroom based on your last name. Instructions and exam information will be sent out one week prior to each exam. Discussing the contents with other students is a violation of the UIUC Academic Integrity policy. Please refrain from asking any questions or making comments about each exam until solutions are posted.

Conflict exams will be administered from 2:00 - 4:00pm the following day. If you need to take the conflict exam, you must submit and have a conflict exam request approved prior to arriving.

Exam 4 meeting time will be updated and posted in the Syllabus Module in Canvas once the room reservation has been approved.

Grading Policy

Grades in Stat 400 are based on individual mastery of the material using the UIUC grading scale. **Do not expect a curve in this class.** I can not give extra credit on an individual basis. Minimum percentages required to obtain a given grade:

A+	A	A-
97.00	93.00	90.00
B+	B	B-
87.0	83.0	80.0
C+	C	C-
77.0	73.0	70.0

Other Course Policies

Grade Disputes

If you feel your assignment or quiz was graded incorrectly, you have **one week** from the date it was returned to discuss it with the course staff. It is your responsibility to look over graded work. After one week, grading is final except for exceptional circumstances. For regrades, please find the "regrade request" button in Gradescope and submit your petition there. For a regrade to be considered, you must justify to the staff why the grading was done incorrectly. Also, by disputing any grading, you agree to allow the course staff to review the entire assessment for other errors missed during grading.

Attendance Policy

You are expected to attend all lectures and discussions. Failure to do so may not have a direct effect on your course grade, but will likely have a significant indirect effect.

Academic Integrity

The official University of Illinois policy related to academic integrity can be found in Article 1, Part 4 of the Student Code. **Section 1-402 in particular outlines behavior which is considered an infraction of academic integrity.** These sections of the Student Code will be upheld in this course. Any violations will be dealt with in a swift, fair and strict manner. Assignments are meant to be learning experiences. You may discuss the exercises with other students, but you must write-up the solutions on your own. **In short, do not cheat, it is not worth the risk. You are more likely to get caught than you believe.**

Disability Accommodations

To obtain disability-related academic adjustments or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 217-333-4603, e-mail disability@illinois.edu or go to the **DRES** website.

Discussion

Discussion attendance is highly encouraged. There is currently no plan to award extra credit for attendance.

Changes

If necessary, the instructor reserves the right to make any changes he considers academically advisable. Any changes will be announced in class and Canvas.