

STAT 400/Math 463: Statistics and Probability I

Instructor: Albert Yu

Spring 2021

Course Website: stat400.github.io

E-mail: ayu12@illinois.edu

Compass: <https://compass2g.illinois.edu/> (for announcements)

Office Hours: M·W 4:00 - 5:30pm on Zoom

Discord: See Compass for code

Live Lectures - T.Th 4:00-5:20pm

<https://www.twitch.tv/albertyu12>

Graduate Teaching Assistants

- Jaideep Majajan jaideep3@illinois.edu
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TA Office Hours: **TBD**, will be posted on Course Website

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

- Probability and Statistical Inference, Ninth Edition, by Robert V. Hogg, Elliot A. Tanis, Dale L. Zimmerman.
- Stable internet
- R and RStudio (free)

Course notes will be provided, which, in addition to notes taken by students during class and discussion, are sufficient. The textbook is extremely useful as a reference and source of additional practice problems. It is not necessary for homework. Used copies of the seventh and eighth edition may also be used.

Prerequisites

Calculus III or equivalent. Lack of prerequisites will likely result in poor course performance.

Email Policy

Due to the large size of this course, we will follow a strict email policy. If your question is not private, please consider asking in the **Discord #General Chat** first. **Before you write an email, please consider the following:**

- Is your question answered in the syllabus? If so, don't email.
- Is your question about homework? If so, **you should ask it in class (Twitch), at office hours, or in the appropriate Discord channel**. Please refrain from sending us homework help questions by email.

If you do send an email, **please make sure to follow the following guidelines**. Failure to follow these steps may result in a slower response time, or your email accidentally disappearing into my spam mailbox.

1. Your subject line must begin with the following: **[STAT 400]**
2. Next, put a **useful but short description** of your message.
3. Emails should originate from an @illinois.edu email address or appear as sent on behalf of an @illinois.edu address. Depending on the situation, we may not be able to give you a response otherwise.

Response time

As a general rule, I respond to emails within 24 hours during the work week. Unfortunately, sometimes an email will get caught by my spam filter, or accidentally missed. If I have not responded within 24 hours, please feel free to send a follow-up email or message me in Discord.

Gradescope

Gradescope will be used for all homework and exam submissions in this course. Please create an account and register on [Gradescope](#) using the entry code found in Compass. Students **must** register using their *@illinois.edu* email address.

Homework

There will be twelve homework assignments, each worth **10** points. The lowest two homework scores will be dropped. Your highest **ten** grades will count towards your point total.

General Instructions

- Homework must be turned in by **11:59pm CST** on the date it is due. Please be mindful of differences in time zone.
- All homework will be submitted through Gradescope.
- Homework by e-mail **will not be accepted**. 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.
- **No late homework accepted**

Assessments

There will be homework, 3 midterms, and one comprehensive final. Final grades are assigned based on the following weights:

- Homework - **30%**
- Midterm 1 - **15%**
- Midterm 2 - **15%**
- Midterm 3 - **15%**
- Final Exam - **25%**

Grading Policy

Grades in Stat 400 are based on individual mastery of the material, and not on comparative effort. The typical UIUC grading scale will be used. **There will not be a curve in this class.** The following are the minimum percentages required to obtain a given grade:

This course will assign letter grades to all students. If an optional campus-wide Credit/No Credit system is enabled, students are welcome to select that option. Instructors will not be able to know whether you have selected this option or not. However, please be advised that once

A+	A	A-
97.0	93.0	90.0
B+	B	B-
87.0	83.0	80.0
C+	C	C-
77.0	73.0	70.0

grades come out, the student's choice can not be changed. **UIUC requires a minimum of C-** to pass a course when opting for Credit/No Credit.

Exam Dates (tentative)

- Midterm 1 - Thurs Feb 25
- Midterm 2 - Thurs Mar 18
- Midterm 3 - Thurs Apr 15
- Final Exam: TBD

Exams instructions will be emailed out on Monday prior to the exam. Discussing the exam 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 the last window has closed.

Taking the exams:

All exams will be proctored by course staff on Zoom. More exam instructions will be given as we approach the first exam.

If you have accommodations identified by the Division of Rehabilitation-Education Services (DRES) for exams, please email your Letter of Accommodations (LOA) to me in the first week of classes ayu12@illinois.edu.

If you have any issue during an exam, please inform the proctor immediately. Work with the proctor to resolve the issue at the time before logging off.

Other Course Policies

Grade Disputes

If you feel your homework or exam 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. You may not simply ask for a re-grade, but instead 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 homework or exam for other errors missed during grading.

Attendance Policy

You are expected to attend (watch) 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. Any known or potential extracurricular conflicts should be discussed in person with the instructor during the first week of classes, or as soon as they arise.

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. Homework 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.

Midterm Grade Replacement

If you score higher (%) on the final exam, you may replace **one** of your midterm scores (%) with your final exam (%). If your final exam percentage is lower than all 3 midterms, no changes will be made. Midterm replacements that result in the highest final grade will be automatically made after the final exam.

Missing an Exam

If you miss a midterm for any reason (sickness, birthday, etc), and did not have a prior validly scheduled conflict exam, your missed midterm grade will automatically be replaced by the final exam grade. If you miss the final exam, you may be asked to take a *special* version of the final.

Changes

The instructor reserves the right to make any changes he considers academically advisable. Such changes, if any, will be announced in class.