

# STAT 400/Math 463: Statistics and Probability I

Instructor: Albert Yu

Fall 2022

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LMS: **Canvas**

Office Hours: Mon/Tues, 3:00 - 4:00pm **Zoom Link**

Discord: **Invitation Hyperlink**

Homework Submission: **Gradescope** G2P855 (entry code)

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## Graduate Teaching Assistants

- Christopher Cebra [ccebra2@illinois.edu](mailto:ccebra2@illinois.edu)
- Yifan Chen [yifanc10@illinois.edu](mailto:yifanc10@illinois.edu)
- Shishuang He [sh26@illinois.edu](mailto:sh26@illinois.edu)
- Mengchen Wang [mw33@illinois.edu](mailto:mw33@illinois.edu)
- Rentian Yao [rentian2@illinois.edu](mailto:rentian2@illinois.edu)

Zoom links and updated office hours and CA Help Desk hours will be posted on the Canvas homepage.

## 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, 10th edition, by Robert V. Hogg, Elliot A. Tanis, Dale L. Zimmerman. (any edition is fine)
- R and RStudio (free)

Course notes will be provided. However, they are not a valid substitute for lecture or reading the textbook. The textbook is extremely useful as a reference and source of additional practice problems, but is not necessary for homework.

## Prerequisites

Calculus I and II or equivalent. Lack of prerequisites may 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 class or in Discord first. Before you write an email, please consider the following:

- Is your question answered in the syllabus?
- Is your question about homework? Please ask all homework questions in the appropriate Discord channel, or during the CA Help Desk. You may also ask questions in class or at office hours. **We will not be able to answer homework questions by email.**

If you do send an email, **please make sure to follow the following guidelines** to avoid our spam filters.

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. 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 follow-up with me.

## Gradescope

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

## Homework

There will be *approximately* 11 homework assignments, each worth **10** points. The lowest two homework scores will be dropped.

## 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 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.
- **No late homework accepted.**

## Assessments

Final grades will be assigned based on homework, **3** in-class exams, and one comprehensive final using the following weights:

- Homework - **20%**
- Exam 1 - **20%**
- Exam 2 - **20%**
- Exam 3 - **20%**
- Final Exam - **20%** (*can be used to replace **one** midterm exam*)
- Discussion - (Bonus) **+3%**

## 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:

<b>A+</b>	<b>A</b>	<b>A-</b>
97.00	93.00	90.00
<b>B+</b>	<b>B</b>	<b>B-</b>
87.0	83.0	80.0
<b>C+</b>	<b>C</b>	<b>C-</b>
77.0	73.0	70.0

## **In-Class Exam Dates (tentative)**

- Exam 1 - Thursday, Sept 22
- Exam 2 - Thursday, Oct 20
- Exam 3 - Thursday, Nov 10
- Final Exam: Friday, Dec 9. (see UIUC exam calendar for your scheduled time)

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 weekend.

## **Taking the exams:**

All exams will be proctored by course staff in person. 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](mailto:ayu12@illinois.edu).

## 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. For homework 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 homework or exam 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. 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.**

### Chegg

Don't.

### 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](mailto:disability@illinois.edu) or go to the [DRES](#) website.

### Midterm Grade Replacement

If you score a higher (%) on the final exam, it will automatically replace your lowest midterm score (%). You will not need to contact me. The final exam is **mandatory** regardless of performance on midterm exams.

### Missing an Exam

If you miss an exam for any reason (sickness, birthday, etc), and did not have a prior validly scheduled conflict exam, your missed exam grade will automatically be replaced by the final exam grade. Only one missed exam may be replaced by the final exam. Additional missing exams will receive a score of 0.

### Changes

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