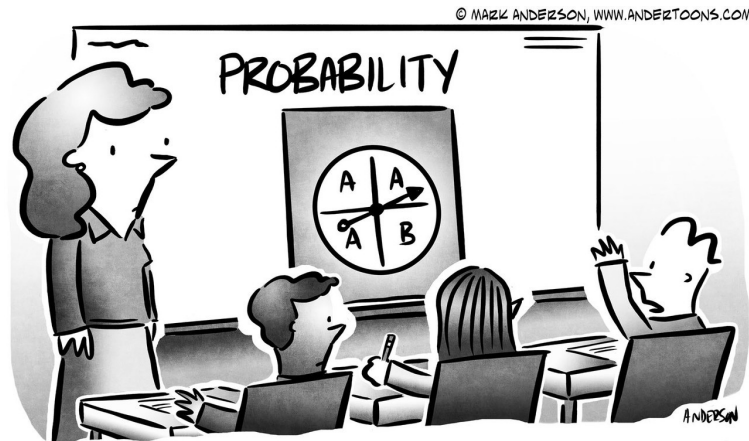


# Math 3070/6070 Introduction to Probability

## Fall 2024



"I know mathematically that A is more likely,  
but I gotta say, I feel like B wants it more."

### Class Information

- Meeting time: Mondays, Wednesdays, and Fridays 9:00 AM - 9:50 AM
- Classroom: Room 305, Tilton Memorial Hall
- Zoom: <https://tulane.zoom.us/j/94114129491>

### Instructor Information

- Instructor: Dr. Xiang Ji
- Office: Gibson Hall 401D
- E-mail: [xji4@tulane.edu](mailto:xji4@tulane.edu)
- Office Hour: Friday 10:00 am - 10:45 am

## TA Information

- Teaching Assistant: Lan Trinh
- Office: TBD
- E-mail: [ttrinh1@tulane.edu](mailto:ttrinh1@tulane.edu)
- Office Hour: TBD

## Course Description

This course will provide a calculus-based introduction to probability theory. Material covered will include fundamental axioms of probability, discrete and continuous random variables, multivariate distributions, expectation, and limit theorems, generally following Chapters 1-5 of the textbook. This course is a critical prerequisite for more advanced work in statistical theory and analysis.

## Corequisite

Students only receive full credit for the course when they co-register either one of the followings:

- MATH 3071/6071-01 Intro to Probability Recitation
- MATH 3071/6071-02 Intro to Probability Recitation

## Recitation Information

### MATH 3071/6071-01 Intro to Probability Recitation

- Meeting time: Thursdays 12:30 PM - 1:45 PM
- Classroom: Gibson 126

### MATH 3071/6071-02 Intro to Probability Recitation

- Meeting time: Tuesdays 2:00 PM - 3:15 PM
- Classroom: F. Edward Hebert Hall 212

## Textbook

Casella, G., and Berger, R. L. (2000). *Statistical Inference*, 2nd edition. Duxbury.

## Topics

- axioms of probability
- discrete random variables
- continuous random variables
- multivariate distributions
- expectation
- limit theorem

## Course Objectives

By the end of this course, you will be able to:

- Proficiently define random variables and their distributions
- Have a solid background to continue with Statistical Inferences

## Tentative Schedule

**No Class Days** There will be no lectures or recitations on the following days based on the Tulane Academic Calendar of Fall 2023.

- Monday, September 2 (Labor Day Holiday)
- Friday, October 4 (Fall Break)
- Monday, November 25 - Sunday, December 1 (Thanksgiving Holiday)

## Grades

The final letter grade will be a weighted sum of **Attendance, Homework, Quiz and Exam**. The distribution of each letter grade is below

Grade	Score range
A	[93, 100]
A-	[90, 93)
B+	[87, 90)
B	[83, 87)
B-	[80, 83)
C+	[77, 80)
C	[73, 77)
C-	[70, 73)
D+	[67, 70)
D	[63, 67)
D-	[60, 63)
F	[0, 60)

**Attendance, 5%** Attendance is mandatory. Students are expected to attend classes either in-person or via zoom. There will be occasional sign-in sheet distributed in class.

**Homework, 20%** Students are required to submit hand-written homework in recitations. Homework assignments are expected every two weeks with 4 - 5 problems at a time.

**Recitations, 10%** Please refer to your TA's measure for Recitation credits.

**Exams, 65%** There will be two midterm exams and a final exam. Midterm exams will be held during class meetings. Students who are unable to attend any scheduled exams must provide advance notification so that a make-up exam may be scheduled. Unexcused absences on exam dates may result in a failing grade for the exam. See the exam schedules in the table below.

Exams	Date	Time	Weight
Midterm 1	Wednesday, October 2, 2024	9:00-9:50 AM	20%
Midterm 2	Wednesday, November 13, 2024	9:00-9:50 AM	20%
Final start	Saturday, December 7, 2024	Take-home	25%
Final due	Friday, December 13, 2024	Take-home	

## ADA/Accessibility Statement

Tulane University strives to make all learning experiences as accessible as possible. If a student anticipates or experiences academic barriers based on one's disability, please let the instructor and Goldman Center know immediately, so there will be discussions of any possible options privately. The instructor will never ask for medical documentation from students to support potential accommodation needs. Instead, the instructor may request that students register with the Goldman Center for Student Accessibility to establish reasonable accommodations. After registration, make arrangements with the instructor as soon as possible to discuss students' accommodations so that they may be implemented in a timely fashion. Goldman Center contact information: [goldman@tulane.edu](mailto:goldman@tulane.edu); (504) 862-8433; [accessibility.tulane.edu](http://accessibility.tulane.edu).

## Religious Accommodation Policy

Per Tulane's religious accommodation policy, the instructor will make every reasonable effort to ensure that students can observe religious holidays without jeopardizing their ability to fulfil their academic obligations. Excused absences do not relieve the student from the responsibility for any course work required during the period of absence. Students should notify the instructor within the first two weeks of the semester about their intent to observe any holidays that fall on a class day or on the day of the final exam.

## Recordings of Class Sessions

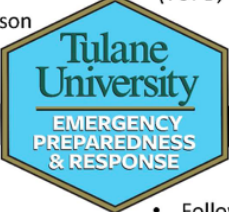
Lectures will be recorded via zoom. The zoom recordings will be available to students internally. Students must not post a class recording elsewhere.

## Title IX

Tulane University recognizes the inherent dignity of all individuals and promotes respect for all people. As such, Tulane is committed to providing an environment free of all forms of discrimination including sexual and gender-based discrimination, harassment, and violence like sexual assault, intimate partner violence, and stalking. If you (or someone you know) has experienced or is experiencing these types of behaviours, know that you are not alone. Resources and support are available: you can learn more at [allin.tulane.edu](http://allin.tulane.edu). Any and all of your communications on these matters will be treated as either "Confidential" or "Private" as explained in the chart below. Please know that if you choose to confide in the instructor, the instructor is mandated by the university to report to the Title IX Coordinator, as Tulane and the instructor want to be sure you are connected with all the support the university can offer. You do not need to respond to outreach

from the university if you do not want. You can also make a report yourself, including an anonymous report, through the form at [tulane.edu/concerns](http://tulane.edu/concerns).

<b>Confidential</b>	<b>Private</b>
<i>Except in extreme circumstances, involving imminent danger to one's self or others, nothing will be shared without your explicit permission.</i>	<i>Conversations are kept as confidential as possible, but information is shared with key staff members so the University can offer resources and accommodations and take action if necessary for safety reasons.</i>
The Counseling Center: (504) 314-2277 The Line (24/7): (504) 264-6074  Student Health Center: (504) 865-5255  Sexual Aggression peer Hotline and Education (SAPHE): (504) 654-9543	Case Management & Victim Support Services: (504) 314-2160 or <a href="mailto:srss@tulane.edu">srss@tulane.edu</a> Tulane University Police (TUPD): Uptown - (504) 865-5911 Downtown - (504) 988-5531 Title IX Coordinator: (504) 314-2160 or <a href="mailto:titleix@tulane.edu">titleix@tulane.edu</a>

<b>EMERGENCY NOTIFICATION SYSTEM: TU ALERT</b>		<b>RAVE GUARDIAN</b>	
<p>In the event of a campus emergency, Tulane University will notify students, faculty, and staff by email, text, and phone call. You were automatically enrolled in this system when you enrolled at the university.</p> <p>Check your contact information annually in Gibson Online to confirm its accuracy.</p>	<ul style="list-style-type: none"> <li>• Download the RAVE Guardian app from the App Store</li> <li>• Communicate with dispatchers silently by selecting "Submit Tip" feature in the app</li> <li>• Use the Safety Timer feature to alert your "guardian" (TUPD, family, friend) when travelling alone at night</li> </ul>	 <p>For more information, visit <a href="http://publicsafety.tulane.edu/rave-guardian">publicsafety.tulane.edu/rave-guardian</a></p>	
<b>ACTIVE SHOOTER / VIOLENT ATTACKER</b>		<b>SEVERE WEATHER</b>	
<ul style="list-style-type: none"> <li>• <b>RUN</b> – run away from or avoid the affected area, if possible</li> <li>• <b>HIDE</b> – go into the nearest room that can be locked, turn out the lights, silence cell phones, and remain hidden until all-clear message is given through TU ALERT</li> <li>• <b>FIGHT</b> – do not attempt this option, except as a last resort</li> </ul> <p>For more information on Active Shooter emergency procedures or to schedule a training, visit <a href="http://emergencyprep.tulane.edu">emergencyprep.tulane.edu</a></p>	<ul style="list-style-type: none"> <li>• Follow all TU Alerts and outdoor warning sirens</li> <li>• Seek shelter indoors until the severe weather threat has passed and an all-clear message is given</li> <li>• Do not attempt to travel outside if weather is severe</li> <li>• Monitor the Tulane Emergency website (<a href="http://tulane.edu/emergency/">tulane.edu/emergency/</a>) for university-wide closures during a severe weather event</li> </ul>		

## Student Code of Conduct

The student Code of Conduct links to [here](#).