

San Jose State University, Summer 2021 (6/1 - 7/2)  
**Math 161A: Applied Probability & Statistics I**  
Monday-Friday 9am-10:35am, online via Zoom

**Instructor:** Dr. Guangliang Chen

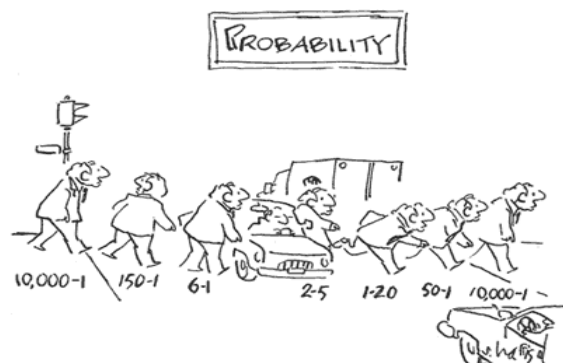
**Email:** [guangliang.chen@sjsu.edu](mailto:guangliang.chen@sjsu.edu)

**Office hours:** M-F 10:35-11:15am (on Zoom)

**Zoom meeting ID:** 825 2475 0755 (for both lectures and office hours). **Registration is required.**

**Piazza:** [piazza.com/sjsu/summer2021/math161a](https://piazza.com/sjsu/summer2021/math161a)

**Webpage:** [www.sjsu.edu/faculty/guangliang.chen/Math161a.html](http://www.sjsu.edu/faculty/guangliang.chen/Math161a.html)



### Catalog description

Descriptive and inferential statistics. Collection and analysis of data, discrete and continuous probability models, random variables, central limit theorem, confidence intervals, hypothesis testing.

- **Prerequisite:** MATH 31 (with a grade of "C-" or better) or instructor consent
- **Textbook:** *Probability and Statistics for Engineering and the Sciences*, 9<sup>th</sup> edition, Devore (2016), Cengage Learning. ISBN: 978-1305251809
- **Calculator:** A scientific calculator is needed for some homework and test questions.

### Learning management system

Course syllabus and lecture slides will be posted on the above-listed [course webpage](#). Assignments and their scores will be posted in [Canvas](#) at <https://sjsu.instructure.com>.

### Class guidelines

- The meetings will start on time, so be sure to arrive on time each day.
- If you miss a meeting, you are responsible for finding out what's said in that class (such as new announcement, deadline change, etc.), and acting accordingly.
- Please turn on your video during each Zoom meeting but keep yourself muted (except when you want to speak up in class).
- Academic dishonesty in any form is not tolerated and will surely be reported to the Office of Student Conduct, per SJSU policy.

### Recording Policy

All lectures will be recorded and shared with the whole class later; however, you should still make every effort to attend all classes. If you prefer to remain anonymous during these recordings, then please speak with the instructor about possible alternatives.

Students are not allowed to record without instructor permission: Students are prohibited from recording class activities (including class lectures, office hours, advising sessions, etc.), distributing class recordings, or posting class recordings. Materials created by the instructor for the course (syllabi, lectures and lecture notes,

presentations, etc.) are copyrighted by the instructor. The university policy (S12-7) is in place to protect the privacy of students in the course, as well as to maintain academic integrity through reducing the instances of cheating. Students who record, distribute, or post these materials will be referred to the Student Conduct and Ethical Development office. Unauthorized recording may violate university and state law.

### **Course requirements**

Homework will be assigned regularly through Canvas. For each assignment, you need to write your work neatly on paper or a tablet and submit it to Canvas for grading.

There will be one or two quizzes each week, assigned via Proctorio to be completed outside of class time. More instructions are given in class.

The course has two exams scheduled for the following dates:

- **Midterm:** June 18, Friday (class time)
- **Final:** July 2, Friday, 9am-11:15am

both of which will be delivered via Proctorio (see <https://proctorio.com/support> for instructions). Both exams are open book and open notes, but you are not allowed to use the internet or communicate with people in any way.

Before each exam, a study guide along with some practice problems will be provided to you; however, there is no guarantee of any level of similarity with those problems. Thus, it is in your best interest to do a thorough review of the material.

### **Grading policy**

Late homework will not be accepted for any reason, but your lowest homework score will be dropped.

You may discuss homework questions with other people or learn from the internet, but you must write independent solutions. Copying at any level will result in a zero score for the homework, and possibly additional disciplinary actions from the University.

If you miss a quiz, you will get zero points and not be able to make up for it. However, your lowest quiz score will be dropped.

No make-up exams will be given if you miss the midterm exam. If you have a legitimate excuse (e.g., illness or other personal emergencies) and can provide some kind of proof, the weight of the exam will be incorporated into the final.

You must always show your steps or reasoning to support your answer. Note that it is your work, in terms of *correctness*, *completeness* and *clarity*, that is graded (correct answers with no supporting work will be given very little credit).

The weights used in this course will be as follows:

- Homework: 15%
- Quizzes: 15%
- Midterm: 30%
- Final: 40%

The following cutoffs will be used to determine your course grades in the end:

- A+: 96%, A: 93%, A-: 90%
- B+: 86%, B: 82%, B-: 78%
- C+: 74%, C: 70%, C-: 66%
- D+: 64%, D: 62%, D-: 60%
- F: < 60%

### **Your responsibilities in learning**

My duty as an instructor is to disseminate knowledge while helping you learn in all possible ways. The ultimate responsibility of learning is upon the student, not on the instructor. That is, you must make every effort to

- **Attend all classes:** Class attendance is strongly associated with course grade. It will be checked throughout the session by the instructor.
- **Participate in-class discussions:** These are good opportunities to learn from different perspectives and gain a deeper understanding of the new concepts.
- **Read the textbook before and after class:** First, reading the textbook before class can prepare you well for the slides-based lecture (which tends to move fast). Second, the textbook contains many detailed explanations and good examples that cannot be covered in limited class time. Reading the textbook often can help you better understand the material.
- **Take time to think through the concepts:** This is a critical step in the learning process. Few people could fully grasp all the new material during lectures, and some further thinking is always needed outside class time.
- **Do your homework:** Chance to check your understanding of new material and practice. Most students will learn a lot better after they do the homework.
- **ASK whenever you don't understand something!!!**

Overall, you are expected to spend 2 hours outside class time per day on this course.

### **Special accommodations**

If you anticipate needing any special accommodation during the semester (e.g., you have a disability registered with SJSU's Accessible Education Center), please let me know as soon as possible.

### **Instructor feedback**

I strive to teach in the best ways to facilitate your learning. To achieve this goal, it is very helpful for me to receive timely feedback from you. You may talk to me in person

or send me an email, or submit your feedback anonymously through <http://goo.gl/forms/f0wUD5aZSK>.

**Disclaimer:**

*The instructor reserves the final right to interpret, and make changes to, all the policies that are stated in this course syllabus.*

## **Math 161A, Summer 2021, Session I Approximate Class Schedule\***

**Week 1 (June 2-5):**

- Introduction
- Basic probability concepts (Sections 2.1-2.5 of textbook)

**Week 2 (June 7-11):**

- Discrete Random variables (3.1-3.6)

**Week 3 (June 14-18):**

- Continuous Random Variables (4.1-4.5)
- Joint distributions (5.1, 5.3, 5.4)
- **Midterm exam (June 18, Friday, 9-10:35am)**

**Week 4 (June 21-25):**

- Random samples and descriptive statistics (1.2-1.4)
- Point estimation (6.1)
- Confidence intervals (7.1, 7.3, 7.4)

**Week 5 (June 28-July 2):**

- Hypothesis testing (8.1 - 8.3),
- **Final exam (July 2, Friday, 9-11:15am)**

*\*Total: 24 scheduled classes (2 of which reserved for exams).*