Overview of the course: Stochastic processes are used to model systems that evolve over time in some way that involves randomness. Stochastic processes have become important in fields such as Biology, Engineering, and Economics. This course, which is a continuation of Math 180B, provides an introduction to stochastic processes. The course will focus on continuous-time Markov chains, renewal theory, queueing theory, and Brownian motion.

Textbook: No textbook for the course is strictly required. However, most students will find it helpful to have an additional reference to consult besides their lecture notes. One good reference is An Introduction to Stochastic Modeling by Mark Pinsky and Samuel Karlin. The books Essentials of Stochastic Processes by Richard Durrett and Introduction to Stochastic Processes with R by Robert Dobrow are available online through the UCSD library web site.

Exams: There will be two midterm exams and a final exam. The midterm exams will be held in class on Monday, April 29, and Friday, May 24. The final exam will be held at 3:00 PM on Wednesday, June 12. You will not be permitted to use notes or your book, but you will be provided with a list of formulas.

Homework: Homework assignments will be due each week, usually on Fridays. To submit your work, you should upload your homework in .pdf format to Gradescope by 9:00 PM on the due date. You should write your homework solutions neatly and carefully and provide full justification for your answers.

Grading: Homework will count for 35 percent of the final grade. Each midterm will count for 15 percent, and the final exam will count for 35 percent. All ten homework scores will count towards your homework grade; no homework scores will be dropped. Consequently, any missed assignments will most likely have a negative impact on your final course grade. Your letter grade for the course will be based on your performance relative to other students in the class. The numerical averages that correspond to particular letter grades are not set in advance.

Regrade Requests: Regrade requests will be handled through Gradescope. You should submit any regrade request within three days of the time when the graded work is made available to you. Please understand that while we will correct errors in the grading, we will not modify the grading rubric or negotiate over partial credit after graded papers are returned to students.

Lateness policy: To make allowances for technical difficulties with Gradescope, homework assignments will be accepted up to 30 minutes late for a three-point penalty. Otherwise, late homework will not be accepted. Other accommodations will be made only under unusual circumstances that are beyond the student’s control, such as serious illness or a family emergency. Likewise, make-up exams will be given only under unusual circumstances that are beyond the student’s control. In such cases, you must notify the instructor as soon as possible. Please understand that accepting late work in less extreme cases is unfair to other students.
**Office Hours:** The instructor and TAs will hold regular office hours. You are encouraged to come to office hours if you have questions about the course material. You may ask about homework problems during office hours, in which case the instructor or TA will try to determine the source of your difficulties and guide you on the right path. However, because the purpose of homework is to provide you with practice at solving problems yourself, please do not expect the instructor or TA to provide answers or solutions to homework problems during office hours.

**Time commitment:** According to university policy, “The value of a course in units shall be reckoned at the rate of one unit for three hours’ work per week per term on the part of a student.” (See [http://www.ucsd.edu/catalog/front/UgrdDegReq.html](http://www.ucsd.edu/catalog/front/UgrdDegReq.html)) Math 180C is a four-unit course, so you should expect to spend about 12 hours per week on the course.

**Academic integrity:** It is essential that all students adhere to the UCSD Policy on Integrity of Scholarship. Cases of academic dishonesty will be reported to the Academic Integrity Office, and students found to be responsible for a policy violation will be subject to academic and administrative sanctions. Students are expected to obey the following rules:

- **Exams:** Notes will not be permitted on exams. You are allowed to use a calculator, but you may not share a calculator with other students. All devices that could be used for communication or internet access, such as cell phones, must be put away and out of view during the exam. You must stop working immediately when time is called.

- **Homework Assignments:** You may consult other students in the class, the instructor, or the TAs (but no one else) while formulating ideas on homework problems. However, you must write your final homework solutions independently based on your own understanding. This means that you may not show another student your solution or answer to a problem, and you may not copy or paraphrase the work of another student or use another student’s solution as the basis for your own. Here are some more specific guidelines:
  - Two students who both think they have solved a problem may discuss the general method they used but should not compare answers.
  - A student who has solved a problem may provide a small verbal hint about the general method they used to a student who has tried and failed to solve the problem, but must refrain from providing the answer or showing anyone else their solution in writing.
  - Two students who have both tried and failed to solve a problem may discuss the problem together. If they succeed in coming up with a solution, they must each individually write down a solution to the problem at a later time, without referring to anything that was written during their meeting.

Finally, if you consult any written sources other than your class notes and the textbooks by Durrett, Pinsky and Karlin, and Dobrow, or if you discuss homework problems with other students, you must acknowledge this help on your homework and indicate on which problems you received help.

- **Online Sources:** Although you may search for general course topics on the internet, you may not seek help on homework problems online. In particular, you may not make use of web sites that help students with homework problems or provide online tutoring.

- **Course Materials:** Some old Math 180C exams will be provided in TritonEd. However, you may not acquire other materials, such as homework solutions, from previous Math 180C courses. You may not post your homework or exam solutions, or any solutions provided by your instructor, online or show such materials to future Math 180C students.

To ensure that you become familiar with the academic integrity policy, you are required to complete an academic integrity quiz in TritonEd by 9:00 PM on Friday, April 5.