

THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
Department of Mathematical Sciences

- Course Number: STAT 5386 (CRN 18303)
Course Title: Stochastic Processes
Credit Hours: 3
Term: Fall 2017
Course Meetings/Location: 10:30 am – 11:50 am TR; Classroom Building C203
Prerequisite Courses: STAT 5380 or Instructor approval
Instructors: Ming-Ying Leung
Office Location: Bell Hall 225
Contact Info: Phone: 747-6836
E-mail: mleung@utep.edu
Fax: 747-6502
Website: <http://www.math.utep.edu/Faculty/mleung>
Office Hours: Dr. Leung will post her office hours for each week on her website
Textbook: *Stochastic Processes*, 2nd Edition, by Sheldon Ross
Course Objectives: To introduce the mathematical concepts of stochastic processes as a collection of random variables, and their applications as probabilistic models in sciences and engineering.
Activities/Assignments: Attendance at lectures is required, and active participation in class discussions is highly encouraged. Homework will be assigned throughout the semester. You may work on the exercises with your fellow students, but each student must answer the questions individually. ZERO grades will be obtained for those whose solutions are the exact copies of someone else's. **NO LATE HOMEWORK WILL BE ACCEPTED**
Assessment of Objectives: Homework and exams
Course Schedule: This course will cover Poisson processes, renewal theory, Markov chains, and Markov processes. Applications in queuing theory, analysis of algorithms, and molecular genetics will be discussed.
Chapter 1 Preliminaries in probability
Chapter 2 Poisson process
Chapter 3 Renewal theory
Chapter 4 Markov chains
Chapter 5 Continuous-time Markov chains
Grading Policy: Homework: 50% (Due in class every Thursday except on exam dates)
Exam 1: 15% (In class Thursday, 9/28)
Exam 2: 15% (In class Thursday, 11/2)
Final: 20% (Thursday, 12/14 10 a.m. – 12:45 p.m.)
The final grade is based on a scale of 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, below 60 = F. Attendance and class participation will be used to help decide borderline grades.
Make-up Policy: IF you notify the instructor BEFORE the exam AND have a university excuse for missing the exam, you may take the make-up exam arranged by the instructor.

- Attendance Policy:** Class attendance is required and noted at the beginning of class; more than two unexcused absences will result in an instructor-initiated drop or final grade reduction. .
- Academic Integrity Policy:** Violations of academic integrity, including unauthorized submission of work performed by others, will be pursued vigorously to result in the most severe sanctions. Please refer to UTEP's policy cited in sa.utep.edu/osccr/academic-integrity.
- Civility Statement:** No text messaging in class. Please silence cell phones before coming to class. Students are expected to actively participate in class discussions and group activities. Group work that is not completed in class is to be finished as homework, so use the class time wisely by staying focused on the class topic and avoiding chit-chat.
- Disability Statement:** If a student has or suspects she/he has a disability and needs an accommodation, he/she should contact the Center for Accommodations and Support Services (CASS) at 747-5148, email at cass@utep.edu, or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.
- Military Statement:** If you are a military student with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact as soon as possible.