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

Course Number: STAT 5386 (CRN 16458)  
Course Title: Stochastic Processes  
Credit Hours: 3  
Term: Fall 2010  
Course Meetings/Location: MW 1:30 - 2:50 p.m.; Bell Hall 130A  
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 and outside her office, or by appointment.  
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, exam, project  
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: 40% (Due in class every Thursday except on exam dates)  
Exam 1: 20% (In class Thursday, 9/30)  
Exam 2: 20% (In class Thursday, 11/4)  
Take Home Final: 20% (Due Tuesday 12/14 by 7:45 pm.)  
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.
<table>
<thead>
<tr>
<th><strong>Make-up Policy:</strong></th>
<th>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.</th>
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<tbody>
<tr>
<td><strong>Attendance Policy:</strong></td>
<td>Class attendance is required.</td>
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<tr>
<td><strong>Civility Statement:</strong></td>
<td>Please turn off cell phones during classes.</td>
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<tr>
<td><strong>Disability Statement:</strong></td>
<td>If a student has or suspects she/he has a disability and needs an accommodation, he/she should contact the Disabled Student Services Office (DSSO) at 747-5148 or at <a href="mailto:dss@utep.edu">dss@utep.edu</a> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS accommodation letters and instructions.</td>
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<td><strong>Military Statement:</strong></td>
<td>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.</td>
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