THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF MATHEMATICAL SCIENCES

Course #: MATH 4370
Course Title: Probability and Statistics for Computer Scientists
Credit Hrs: 3
Term: Fall 2009
Course Meetings & Location: LART 301 TR 1:30-2:50
Prerequisite Courses: MATH 1312; Calculus II
Course Fee: (if applicable) NA
Instructor: Amy Wagler
Office Location: Bell Hall 311
Contact Info: 744-6847
awagler2@utep.edu
744-6502
E-mail address
Fax #
Emergency Contact
Office Hrs: TF 10:00-12:00; or by appt.
Textbook(s), Materials: Required:
Probability and Statistics for Computer Scientists, Michael Baron, Chapman & Hall/CRC.
Suggested: none

Course Objectives (Learning Outcomes):
Introduces students to probability and statistics applicable to research in computer science. By the end of this course, students should be able to read a word problem, realize the uncertainty that is involved in a situation described, select a suitable probability model, estimate and test its parameters on the basis of real data, compute probabilities of interesting events, and make appropriate conclusions. This course covers theory and applications of probability models, random variables, discrete and continuous probability distributions, joint and conditional distributions, sampling distributions, central limit theorem, hypothesis testing, confidence intervals, and exposure to simple linear regression. Time to failure probability models are considered.

Course Activities/Assignments:
Each class period will have in-class work completed within the period. Additionally, out of class homework assignments are given. A semester long project, mid-terms and a final exam will also assess learning.

Assessment of Course Objectives:
Homework assignments will be graded for completion and accuracy. A grading rubric will be used for the semester project. Daily in-class assignments are graded for completeness only.
Course Schedule: Note that exam dates are approximate and are subject to change

Week 1: Probability
Week 2: Probability
Week 3: Introduction to R; Discrete Random Variables
Week 4: Discrete Random Variables
Week 5: Continuous Random Variables
Week 6: Continuous Random Variables; **Exam 1**
Week 7: Continuous Random Variables
Week 8: Introduction to Statistics
Week 9: Introduction to Statistics
Week 10: Introduction to Statistics; Statistical Inference
Week 11: Statistical Inference; **Exam 2**
Week 12: Statistical Inference
Week 13: Regression
Week 14: Regression

Grading Policy: 5% In-class assignments
25% Project
15% Homework
15% Exam 1
15% Exam 2
25% Final Exam

Make-up Policy: If class is missed for a valid and documented reason, the daily in-class assignments and exams may be made-up for full credit. Check your calendars now for potential conflicts with scheduled class assignments or exams. All other assignments should be turned in on time. If a scheduled homework assignment is late, 10% of the possible credit will be deducted for each day the assignment is not turned in (excluding weekends).

Attendance Policy: No formal attendance policy. However, you should attend class to turn in the in-class assignments and weekly homework.


Civility Statement: This is a class where participation is required. We work problems together as a class and in groups. Participation in the class work is required.

Disability Statement: 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 <dss@utep.edu> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS 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 me as soon as possible.