

**Course Syllabus – Fall 2013**  
**CE 3301 (section 001): Stochastic Models for Civil Engineering**

**Instructor:** Mostafa Ghandehari

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**Office Hours:** M, W 3:00-5:30p.m., Tues. 3:00-5:00 p.m and by appointment.

**Course Content:** Basic theory of probability and statistics with practical applications to civil and environmental engineering problems. Emphasis on sampling, distribution functions, tests of significance, and regression modeling.

**Student Learning Outcomes:**

1. Ability to apply knowledge of mathematics, science, and engineering
2. **Ability to design and conduct experiments, as well as to analyze and interpret data**
3. Ability to identify, formulate and solve engineering problems
4. Ability to communicate effectively
5. Ability to use techniques, skills, and modern engineering tools necessary for engineering practices
6. To learn basic theory of probability and statistics with practical applications to civil and environmental engineering, learn sampling, distribution functions, tests of hypothesis, and regression analysis
7. Learn to write clearly by submitting homework and graded work which is written well
8. Learn to speak clearly for students who present projects and learn how to write clearly for students who write their projects

**Requirements:** MATH 2326 or concurrent registration therein.

**Required Textbooks:** Probability, Statistics, and Reliability for Engineers and Scientists, Third edition, 2011, CRC press, by Bilal M. Ayyub and Richard H. McCuen.

**Major assignments and examinations:**

1. *Examinations:* Two midterm examinations. Dates will be given at least a week before exam.
2. *Final Examination:* Final Exam Comprehensive
3. *Other Graded Assignments (Homework / Projects / Labs / Research Papers):* Homework, Term Project & Presentation
4. *Missed Exams, Quizzes and Makeup Work:* Homework must be handed in at the

beginning of the lecture period. No credit is given for late homework. No make up work is allowed.

**Grading Policy:** Homework (10%), Two Midterms (50%), Term Project & Presentation (10%), Final Exam (30%). IN YOUR COURSE PROJECT YOU MUST DESIGN AND CONDUCT EXPERIMENTS AND INTERPRET TEST DATA. YOU MUST PASS YOUR TERM PROJECT WITH A MINIMUM OF 70% IN ORDER TO PASS THE COURSE. AS YOU WORK ON THE PROJECT YOU CAN USE INSTRUCTOR'S SUGGESTIONS TO TURN IN A GOOD QUALITY PROJECT. IF YOU DO NOT ACHIEVE 70% ON THE PROJECT AN INCOMPLETE GRADE WILL BE GIVEN UNTIL THIS REQUIREMENT IS MET.

**Attendance Policy:** Attendance is strongly recommended.

**Drop Policy:** Students need to use UTA website to pay attention to drop dates.

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 - The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability). Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272-3364.

**Academic Integrity:** It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)

**Student Support Services Available:** The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve

academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabi. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week.

**Librarian to Contact:** Science and Engineering Librarian

**E-Culture Policy:** The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email.

All students are assigned an email account and information about activating and using it is available at [www.uta.edu/email](http://www.uta.edu/email). New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Students are responsible for checking their email regularly.

**Grade Grievance Policy:** Grade grievances will be handled according to the policy described in the College of Engineering portion of the Catalog.

**Other Information:**

Students are encouraged to use office hours and appointments from instructor to learn material better and to clear up any question which they may have. Additional references are given below: J.J. Devore, Probability and Statistics for Engineers and the Sciences, 3rd Ed, Brooks/Cole Publishing Co., 1991 I. Miller and J.E. Freund, Probability and Statistics for Engineers, 3rd Ed., Prentice-Hall, Inc. 1985 L.L. Lapin, Probability and Statistics for Modern Engineering, Brooks/Cole Publishing Co. 1983.