

**IE 3301-002 / Fall 2011**  
**Engineering Probability**

**Professor:** Victoria (Tory) Chen, 420J Woolf Hall.

**Contact:** E-mail vchen@uta.edu, Phone 817-272-2342, FAX 817-272-3406.

**Office Hours:** MW 4:00–5:30PM, and by appointment.

**Classes:** MWF 11:00–11:50AM in 404 Woolf Hall.

**GTA:** Zirun Zhang; Email: zhang.zirun@gmail.com; Office Hours: TThF 2:00–4:00PM in ELB 308.

**Blackboard help:** Ann Hoang; Email: hoanga@uta.edu.

**Required Text:** *Probability and Statistics for Engineers and Scientists*, 9th edition by Walpole, Myers, Myers and Ye. A student solution manual is available at the bookstore.

**Course Prerequisite:** Math 2425 or concurrent enrollment.

**Course Description:** Topics in engineering that involve random processes. Applications and backgrounds for topics in reliability, inventory systems, and queuing problems, including absolute and conditional probabilities, discrete and continuous random variables, parameter estimation, hypothesis testing, and an introduction to linear regression, experimental design, and analysis of variance.

**Student Learning Objectives:** At the end of this course students should be able to (1) understand the basic concepts of probability theory and hypothesis testing, (2) apply those concepts to solving numerical problems, especially those relating to probability distributions, and (3) collect data and perform descriptive and inferential statistical analyses.

**Key Assignments:** During the semester one or more assignments will be designated as key assignments. To pass this class you must successfully complete all key assignment requirements. Key assignments and their respective grading criteria will be announced in each particular course. Late key assignments will be accepted for completing the class but may not be accepted for the course grade depending on the instructor's policy. In summary, if you do not successfully complete all key assignments, you will receive an incomplete (X) in the class.

**Grading (tentative):**

- 25% Test #1 on Chapters 1–4. Monday, October 3rd.
- 25% Test #2 on Chapters 5, 6, and 8. Monday, October 31st.
- 25% Test #3 on Chapters 9–11. Final exams week. (Not Comprehensive)
- 10% Homework (last homework due Wednesday, December 7th)
- 15% Project (key) (last part due Friday, December 9th).

Letter grades correspond to the following score system:

A = 90–100; B = 80–89; C = 70–79; D = 60–69; F = below 60.

**Project:** For the project, additional handouts will be given with detailed instructions. Each student must submit a typewritten report, written in his/her own words. Any form of copying will be severely penalized.

**Homework:** Homework will be announced during class. Late homework will not be accepted. Only stapled homework is accepted. Each homework assignment will be scored as 0, 1, or 2. To receive full credit for your homework, show all of your work.

**Test Policy:** For each mid-term exam, you may bring in two letter size sheets of paper written on both sides (four sheets for the final). Calculators with simple functions (ONLY +, −, /, ×, √) may be used during tests (no other calculators permitted). Please bring your UTA ID card to all tests.

**Regrading Policy:** If you would like a test or project regraded, you must submit a written statement which clearly explains the reason you would like a regrade. Please note that the *entire* test/project will be regraded.

**Makeup Policy:** A makeup test will be given for completion of a key assignment; however, the test score will only count towards the course grade if the student provides *legitimate written documentation* proving an illness or emergency. If necessary, I may request additional information to verify the validity of your documentation. If you cannot attend a test for any reason, you should make every effort to contact me beforehand.

**Attendance:** Attendance will be taken approximately 4 times during the semester. Students present will earn an attendance point. Each student's accumulated attendance points are added to the raw score of Test #3.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/ses/fao>).

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodation" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity:** At UT Arlington, academic dishonesty is completely unacceptable and will not be tolerated in any form, including (but not limited to) "cheating, plagiarism, collusion, 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" (UT System Regents' Rule 50101, Subsection 2.2). Suspected violations of academic integrity standards will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the students suspension or expulsion from the University.

**Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may contact the Maverick Resource Hotline by calling 817-272-6107, sending a message to [resources@uta.edu](mailto:resources@uta.edu), or visiting [www.uta.edu/resources](http://www.uta.edu/resources).

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions on how to access the SFS system will be sent directly to students through MavMail approximately 10 days before the end of the term. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback data is required by state law; student participation in the SFS program is voluntary.

**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 syllabus*. 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. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Inclement Weather Policy:** If the University is closed this class will not meet. Any scheduled assignments or examinations will be rescheduled to the next class period that the class meets. You can get information by dialing 817-272-8821 or 972-601-2049.