Overview

Grading
Your semester grade will be determined as follows:

<table>
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<tr>
<th>Assignments (10)</th>
<th>One at the end of each class.</th>
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<tr>
<td>Final Exam</td>
<td>On Thursday August 22nd.</td>
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<td>TOTAL</td>
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- Disability Accommodations: Students needing academic accommodations for a disability must first be registered with Disability Accommodations & Success Strategies (DASS) to verify the disability and to establish eligibility for accommodations. Students may call 214-768-1470 or visit [http://www.smu.edu/alec/dass.asp](http://www.smu.edu/alec/dass.asp) to begin the process. Once registered, students should then schedule an appointment with the professor to make appropriate arrangements. (See University Policy No. 2.4; an attachment describes the DASS procedures and relocated office.)

- Religious Observeance: Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

- Excused Absences for University Extracurricular Activities: Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)
Learning objectives: This course satisfies the 2016 UC requirement of Breadth/Technology and Mathematics. A

Learning outcomes: Students will demonstrate an understanding of post-calculus mathematical concepts.

Detailed outline of activities:

Wednesday August 7th: Introduction to probability. Sample spaces, probability rules, independence, conditional probability, Bayes Theorem. Assignment 1.

Thursday August 8th: Random variables and probability distributions, discrete distributions, continuous, joint distributions, basic rules of independence, conditional distributions etc. Assignment 2.

Friday August 9th: Expectation and variance, effect of independence, covariance, correlation, Assignment 3.


Tuesday August 13th: Study Day.

Wednesday August 14th: Continuous random variables, uniform, exponential, normal, gamma, chi-square. Assignment 5.


Friday August 16th: Sampling distributions, especially t distribution, CLT, repeated sampling principle. Assignment 7.


Tuesday August 20th: One and two sample confidence intervals, for means, proportions, motivated by CLT. Assignment 9.

Wednesday August 21st: One and two sample hypothesis tests. Assignment 10.

Thursday August 22nd: Final exam.
Readings:

There is no required textbook for this class. Below I list some resources which you hopefully will find useful. For the most part my notes and problems should be sufficient for this semester.

Online:

   http://www.math.uah.edu/stat/
(The above is a great reference work, which covers material that is at and above the level of this class.)

   http://wiki.stat.ucla.edu/socr/index.php/Probability_and_statistics_EBook
(Somewhat below the level of this class, but still useful.)

Texts:

Kalbfleisch, J. G. Probability and Statistical Inference, Volumes 1 and 2. Springer-Verlag. (May be out of print. Volume 1 is a great introduction to probability; Volume 2 is a somewhat nonstandard treatment of statistics.)

Feller, W. An introduction to probability theory and its applications. Volume 1. Wiley. (A classic, early chapters are especially useful. Most of the rest is above the level of this class.)

Walpole, Myers, Myers and Ye. Probability and Statistics for Engineers and Scientists, 9th edition. Pearson. (Below the level of the class.)