Statistics
Stat 290/286, Section 01

Khang Tran

Contact Information

Office: VH 2142
Office hour:
9:30 AM - 10:30 AM and 12:30 PM - 1:30 PM on M, W, F
9:30 AM - 11:30 AM on T, Th
or by appointments
Phone: x4328
Email: ktran@truman.edu
Course webpage: http://ktran.sites.truman.edu/stat290spring15/

Class Time 8:30 AM-9:20 PM on Monday, Wednesday, and Friday

Class Location VH 1228

Required Text Probability and Statistics for Engineering and the Sciences, 8ed, by Jay L. Devore.

Overview In this course, we study some basic techniques in summarizing and analyzing data and drawing conclusions based on the summary and the analysis. In particular, we will cover from Chapter 1 to Chapter 9 from the textbook mentioned above. Some concepts in statistics we will learn are (but not limited to) measures of center and variability, probability, discrete and continuous probability distributions such as binomial distribution, hypergeometric and negative binomial distributions, Poisson distribution, normal distribution, exponential and gamma distributions, joint probability distributions, one and two sample confidence intervals and tests of hypotheses, t-distribution, and χ^2-distribution. We will also learn how to use computer software (Minitab) to solve statistical problems.

Prerequisite A grade of C or better in Math 263 for students in Stat 290. Additionally, a grade of C or better in Stat 190 is required for students in Stat 286.

Objectives: Taken from the common requirements for statistics courses.

- recognize the overall importance and broad application of statistics from its use in research to its use in everyday life
- understand the techniques of random sampling and the production of "good" data
- be able to use basic descriptive statistics and exploratory data analysis (EDA) to select appropriate statistics for both univariate (one variable) and bivariate (two variable) data on qualitative and quantitative scales

- understand distributional characteristics of variables measured on quantitative scales including shape, central tendency, variability, and percentiles
- understand the basic concepts of events, spaces, and the rules of probability
- understand the basic theory behind the three main areas of inferential statistics: Point estimation, confidence intervals, and tests of hypotheses
- be able to use inferential statistics on a variable measured on one or two samples, including: selection of procedures, verification of assumptions, application of procedures, and interpretation of results
- be able to use a statistical package for the creation of graphs and descriptive statistics which allow for the meaningful interpretation of data

Practice Problems After each lecture, I will provide some practice problems on the course webpage http://ktran.sites.truman.edu/stat290spring15/. You do not have to hand in the solutions to these problems. However, I strongly encourage you to do these problems because the problems in the quizzes will be very similar to (or sometime exactly the same as) these problems. I normally use some of these problems as examples during my lectures.

Quizzes We will have a weekly quiz on Wednesday, which covers the lectures we study in the previous week. The first quiz will be on Wednesday 21/01/2015. Each quiz will take 15 minutes at the beginning of the class. The problems in these quizzes will be very similar to the practice problems I post on the course webpage. The solution to each quiz will be posted on the course webpage for your reference.

Exams We will have three in-class exams and a final exam. Normally the dates for the in-class exams will be announced two weeks in advance. The problems in these three exams and the final exam will be similar to the suggested problems.

Grades

Requirement	% of Grade
1. Exam #1	20%
2. Exam #2	20%
3. Exam #3	20%
4. Quizzes	20%
5. Final Exam	20%

Students who score at least 90% will be guaranteed an A. Students who score at least 80% will be guaranteed a B or higher. Students who score at least 70% will be guaranteed a C or higher. Students who score at least 60% will be guaranteed a D or higher. I may lower the real cutoffs for A, B, C, D if I think the problems on the exams or quizzes are difficult (however, according to my experience, I rarely need to do so). If your grade is around the average in the class, you will likely have a B.

Calculators You will need a basic calculator to perform basic computations. Do remember to bring a calculator to the class on Wednesday for the quiz.

Attendance According to my experience, a lot of students learn more from the lectures than from the book. Thus you are expected to attend the class regularly. However I will not take attendance since you know how to be responsible for your study.

How To Study A good way to study in my class is to do the practice problems on the course webpage after each class when you are still remembering the lecture. I will try to post practice problems on the webpage after each lecture as soon as I can. The solutions to these problems will be very similar to the solutions of the problems I provide in the lectures. If you do not know how to solve practice problems, you can either refer to similar problems on the lectures or stop by my office. I am very informal and I love to talk to students. You should feel free to stop by my office to ask questions or simply to chat. My office hours are listed above. If these hours do not work with your schedule, you can make an appointment. I tend to be in Violette Hall from early morning till late evening every day except Saturday and Sunday (however I cannot guarantee this).

Academic Integrity At Truman, we are taking academic integrity seriously. Any form of academic dishonesty will have consequences such as receiving zero, failing the course, notification to the Dean of Student Affairs Office and the Vice President for Academic Affairs. Detailed Truman conduct code and penalties can be found in the General/Graduate Catalog. If you miss a quiz or an exam, you will need an official paper work for a make up one. For example, if you miss the exam due to sickness, you will need to stop by the Student Health Office and obtain a visit receipt. I believe Truman students are honest in general. However there are procedures I have to follow in case of cheating such as giving a zero for the quiz or exam for the first violation and a F for the second violation.

Disability Accommodation If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact me and the Disability Services office (x4478) as soon as possible.

Special notes for students in Stat 286 If you register for Stat 286, Statistics Bridge Course, you will only need to do the weekly quizzes and study up to the second exams. After the second exam, you will not need to attend the course. Your grade will be determined by the quizzes (40%) and the two exams (30% each). You will likely stop at Chapter 5 in the textbook. With Stat 190 and Stat 286, you will fulfill the requirement for Stat 290 in your major. However the combination of Stat 190 and Stat 286 will not count as a General Honors Course.