APPLIED ENGINEERING STATISTICS, ISE 3293
FUNDAMENTALS OF ENGINEERING STATISTICAL ANALYSIS, ISE/DSA 5013
MWF 10:30a – 11:20a
DH 128
Spring 2018

Instructor: Kash Barker
Email: kashbarker@ou.edu
Office hours: W 1:30p – 2:30p,
R 9:30a – 11:00a,
open door
Office: CEC 116E

Teaching Assistants:
Deniz Berfin Karakoc, denizberfinkarakoc@ou.edu
Nafiseh Ghorbani Renani, nafiseh.ghorbani@ou.edu
Hannah Lobban, hannahrose@ou.edu
Office hours: T 2:30p – 4:00p
R 11:00a – 12:30p
Office hour location: CEC 112

Required Material:

Other course material derived from:

Course description: This course provides fundamental concepts in probability and statistical inference. Probability topics include counting methods, discrete and continuous random variables, and their associated distributions. Statistical inference topics include sampling distributions, point estimation, confidence intervals and hypothesis testing for single- and two-sample experiments. Other topics in nonparametric statistics and regression may be introduced as time permits. The use of Excel to solve class examples will be demonstrated and to solve some homework problems will be expected. Course prerequisites include MATH 2433 or equivalent coursework and knowledge of differentiation and integration. ISE 3293 is a required course for completing a B.S. in Industrial and Systems Engineering, as well as several other undergraduate degrees in the College of Engineering.

Student outcomes: Students will exhibit competence in:
- an ability to apply mathematics science and engineering principles
- an ability to design and conduct experiments, as well as to analyze and interpret data

Grading: All assignments are due at the beginning of class on the date due unless otherwise announced. Late assignments will NOT be accepted. Assignments should be submitted in advance of an anticipated absence. Potentially included in the homework percentage are occasional quizzes (announced or unannounced) at the beginning of class.
Term exam dates will be announced well in advance. Missing any assignment or exam without substantial PRIOR notification will result in a zero grade for that graded item. The final exam is scheduled for Wednesday, May 9, 2018, from 8:00a to 10:00a. Percentages of course grading requirements are as follows.

**3293 students:**
- Homework ................... 15%
- Term exams ................. 60%
- Final exam ................. 25%

**5013 students:**
- Homework ................... 10%
- Term exams ................. 60%
- Final exam ................. 20%
- Grad project ............... 10%

**For students in 5013:** Students enrolled in ISE 5013 will be required to complete an additional project to earn graduate course credit. The project will likely require students to review a statistical analysis method not covered in this course or analyze a data set and write up the analyses and conclusions in a technical report. A project proposal briefing the anticipated project will be due at a date to be determined and is subject to approval by the instructor.

**Guaranteed grading scale:** There is a grade guarantee of 90% = A, 80% = B, 70% = C, 60% = D. Grades may be curved at the *end of the semester*, but grade boundaries will never be more severe than the grade guarantee.

**Professional behavior:** It is assumed that students choosing to attend lectures will participate in the lecture. Students may not choose to participate in other activities (e.g., using cell phones and laptops, reading newspapers, completing homework assignments) during the lecture. *Participation in activities unrelated to ISE 3293/5013 by any student will result in an unannounced quiz for the entire class.*

**Academic honesty:** Cheating, plagiarism, or any act of dishonesty will NOT be tolerated. This policy applies to all parties involved in the incident. Never take credit for anyone else’s intellectual property, be it on an exam or a homework assignment. This includes, but is not limited to, copying from another student’s paper, copying from a paper from a previous semester, using forbidden information on exams, and copying from published writings. Students are responsible for knowing the requirements of the Academic Misconduct Code.

**Reasonable accommodation policy:** Any student in this course who has a disability that may prevent him/her from fully demonstrating his/her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

**Religious holidays:** It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and required class work that may fall on religious holidays. Notification must be provided sufficiently in advance, and every effort should be made to submit required work in advance.

**Students are responsible for any changes/additions to this syllabus announced in class.**