

STAT 301 : Statistical Analysis I

Schedule : M W F 12:20P - 01:10P, 104 Thomas

Instructor : Byungtae Seo

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Required Text :

Montgomery, Runger, and Hubele(2006), “ Engineering Statistics”, third edition

Prerequisite : Calculus

Homework : Homework assignments are designed to give you an opportunity to assimilate the course material. All homework assignments are due at the beginning of the class period on the date on which they are due.

Evaluation :

Midterm 1 : 20%

Midterm 2 : 20%

Final Exam : 30%

Homework : 30%

Makeup Policy : No homework may turn in after due date unless you have made specific arrangements with me beforehand. No exams may be made up unless you have made specific arrangements with me beforehand or appropriate documentation for an absence is provided.

Academic integrity : The academic integrity policy of the Eberly College of Science will apply to this course. See <http://www.science.psu.edu/Ingegrity/index.html>

Final Grade Percent

A : 92.0-100.0%

A- : 88.0-91.9%

B+ : 85.0-87.9%

B : 82.0-84.9%

B- : 78.0-81.9%

C+ : 75.0-77.9%

C : 70.0-74.9%

D : 60.0-69.9%

F : 0.0-59.9%

Tentative Schedule of Lectures

- 9/ 6 : Data summary and presentation
- 9/ 8 : Random variables and Probability
- 9/11: Continuous and discrete random variable
- 9/13 : Probability Mass Function(p.m.f) and Probability Density Function(p.d.f.)
- 9/15 : Expectation, Variance, Cumulative Distribution
- 9/18 : Normal distribution
- 9/20 : Normal distribution and related distributions
- 9/22 : Bernoulli distribution
- 9/25 : Bernoulli distribution and related distributions
- 9/27 : More than one random variable
- 9/29 : Some important limit theorems
- 10/2 : More about chapter 3
- 10/4 : Review for Midterm I
- 10/6 : No class(study day)
- 10/9 : **Midterm I**
- 10/11 : Point estimation
- 10/13 : Hypothesis test 1
- 10/16 : Hypothesis test 2
- 10/18 : Inference on the mean of a population with known variance 1
- 10/20 : Inference on the mean of a population with known variance 2
- 10/23 : Inference on the mean of a population with known variance 3
- 10/25 : Inference on the mean of a population with unknown variance 1
- 10/27 : Inference on the mean of a population with unknown variance 2
- 10/30 : Inference on the variance of a normal population 1
- 11/ 1 : Inference on the variance of a normal population 2
- 11/ 3 : Inference on a population proportion
- 11/ 6 : More about chapter 4
- 11/ 8 : Review for Midterm II
- 11/10: **Midterm II**
- 11/13 : Inference on the means of two populations with known variance
- 11/15 : Inference on the means of two populations with unknown variance
- 11/17 : Paired t-test
- 11/20 : F-distribution
- 11/21 : Inference on the variances of two populations.
- 11/22-11/24 : Thanksgiving Holiday—No Classes
- 11/27 : ANOVA 1
- 11/29 : ANOVA 2
- 11/30 : ANOVA 3
- 12/ 1 : More about Chapter 5
- 12/ 4 : Introduction to Regression
- 12/ 6 : Simple linear regression 1
- 12/ 8 : Simple linear regression 2
- 12/11 : Simple linear regression 3
- 12/13 : More about simple linear regression
- 12/15 : Review for the final exam