Course Content

1. Basic Concepts (Population, Sample, Variable, Parameter, Data, Types of Data, Descriptive and Inferential Statistics etc.)

2. Frequency Distributions (Frequency Tables, Graphs, Histogram, Boxplot, Stem and Leaf Plot etc.)

3. Central Limit Theorem and Sampling Distributions (Normal Distribution, t Distribution, F distribution, Chi-Square Distribution)

4. Point Estimation and Confidence Interval (Confidence Intervals for One Population Parameters and Two Population Parameters)

5. Tests of Hypotheses

6. Analysis of Chi-Square (Contingency Tables (R×C Crosstabs), Tests for Row-Column Independence, The Chi-square Test of Homogeneity)

7. Analysis of Simple Linear Regression and Correlation

Homeworks in SPSS will be used as a Midterm Exam Score and Final Exam Score.

First two homeworks will be evaluated for Midterm Exam Score with 50% contribution.

Last two homeworks will be evaluated for Final Exam Score with 50% contribution.

Books could be useful:

- Douglas C. Montgomery, Runger, George C. "Applied Statistics and Probability for Engineers", Hoboken, N J: Wiley, 2014.
- John E. Freund's Mathematical Statistics, Englewood Cliffs, N.J.: Prentice-Hall, 1960.
- Sheldon M. Ross, Introduction to Probability and Statistics for Engineers and Scientists, London: Academic, 2009.
- Ross, Sheldon M. "Introductory Statistics", Burlington, M A: Academic Press/Elsevier, 2010, 3rd ed.
- Any book named as "Statistics and Probability for Engineers" could be useful.