

COURSE OUTLINE

CE 205 In. Probability and Statistics for Engineers

Lecturer: Selçuk Soyupak

Text book

Walpole,R.E., Myers,R.H., Myers,S.L. and Keying,Y. Probability and Statistics for Engineers and Scientists (Eighth Edition), Prentice Hall, Pearson Educational International, 2007.

Supplementary Text Book

Mendenhall, W., and Sincich, T. Statistics for Engineering and The Sciences, (Fifth Edition), Prentice Hall, Pearson Educational International, 2007.

Description

CE 205 is an introductory statistics course focusing on probability ,statistical reasoning and data. Mathematical theory is kept to a minimum. Students have access to a computer lab and so are able to work with a variety of data sets. Homework labs require use of the statistics part of the spreadsheet EXCEL or the package MINITAB.

Course Schedule

The material is divided into seven parts: Introduction to Statistics; Data Analysis and Data Descriptions, Probability, Some Discrete Probability Distributions, Some Continuous Probability Distributions, Estimations Using Confidence Intervals, Tests of Hypotheses, Simple Linear Regression and Correlation .

This is a guideline only. Your instructor may emphasise different topics and spend more time on them.

Week (Date is the first day of the week)	Topic
15/9	Introduction
22/9	Statistics in Engineering , Data Analysis and Descriptions
6/10	Probability
13/10	Probability, Some Discrete Probability Distributions
20/10	Discrete Probability Distributions
27/10	Some Continuous Probability Distributions
3/11	Midterm Exam I (University will announce exact time for the exam)
10/11	Some Continuous Probability Distributions
17/11	Estimations Using Confidence Intervals
24/11	Estimations Using Confidence Intervals, Tests of Hypothesis
1/12	Midterm Exam II
15/12	Tests of Hypotheses
22/12	Simple Linear Regression and Correlation
29/12	Simple Linear Regression and Correlation
	Review Week 5-1-2009
	6/11 Laboratory Exams
	25/12 Laboratory Exams

Final exam date to be announced by University Administration.

Laboratory Schedule

Week	Chapter	Hours	Summary
25/9	8	1	Introduction to MINITAB
9/10	8	1	Numerical summaries- Stem and leaf plots-Time Series Plots
16/10	8	1	Frequency distributions and histograms
23/10	8	1	Box plots- Probability plots
30/10	5	1	Binomial distributions
6/11	-	1	Lab Exam-I
13/11	5	1	Hyper-geometric distribution
20/11	5	1	Poisson distribution
27/11	6	1	Normal distribution
4/12	8	1	t-Distribution, χ^2 Distribution- F Distribution
18/12	11	1	Simple linear regression and correlation
25/12	-	1	Lab Exam-II

Grading Policy

Mid-term Exam I	15 %
Mid-term Exam I	15 %
Lab exam I	12.5 %
Lab exam II	12.5 %
Homework assignments	5 %
Final Exam	40 %

Total	100%

HOMEWORK ASSIGNMENTS

There will be some homework assignments in this class. Solving assignment problems is an excellent way to master the textual and lecture material of this course. We suggest that you work other exercises in the text as well as solving the assigned problems. Whenever you solve an assignment problem, show your work. This means, in addition to giving the answer, you should briefly recap the formula or method used in the problem.

Although material for each assignment is usually done in class prior to the due date, sometimes it may be necessary for you to read ahead to complete your homework. The assignments should be submitted as hard copies.

Format of Assignments:

1. Questions must be submitted in the same order as listed on the assignment sheet.
 2. The first page should include your name the course name and section number, and your lecturer's name in the top right hand corner.
 3. ID number should be placed on the second page, All pages must be stapled together (paper clips, folded corners, etc. are not acceptable).
 4. Use a ruler when constructing graphs and tables, and label axes of the graph.
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