

Department of Statistics & Operation Research
King Saud University
Summer 1437/1438
Stat 324 – Probability and Statistics for Engineers

Instructor: Khalaf Sultan

Office: 2 B 20 E-mail: ksultan @ksu.edu.sa

Office hours:

Course Outline

Week	Sections	Subjects
W1(15 /10/1438)	1.1, 1.3, 1.4	Introduction to Statistics & Data Analysis
	2.1, 2.2, 2.3, 2.4, 2.5	Sample Space, Events, Counting Sample Points (only Theorem 2.8), Probability of an Event, Additive Rules
W2(22 /10/ 1438)	2.6, 2.7, 2.8	Conditional Probability, Independent Events, Multiplicative Rules, Bayes' Rule
	3.1, 3.2, 3.3	Concept of Random Variable, Discrete Probability Distributions, Continuous Probability Distributions
W3(29/10/1438)	4.1, 4.2, 4.3, 4.4	Mean of a Random Variable, Variance, Means & Variances of a Linear Combination of Random Variables (for independent variables), Chebyshev's Theorem
	5.2, 5.3, 5.4, 5.6	Binomial Distribution, Hypergeometric Distribution, Poisson Distribution
First Mid term Exam Sat (6/11) from 10:30-12:00 am		
W4(7/11/1438)	6.1, 6.2, 6.3 6.4	Normal Distribution, Areas Under the Normal Curve
	6.6, 8.1, 8.2	Random Sampling
W5(14/11/1438)	8.4, 8.5, 8.7	Sampling Distributions, Sampling Distribution of Means, t-Distribution
	9.1, 9.2, 9.4, 9.5	Introduction to Estimation, Statistical Inference, Estimating the Mean, Standard Error
Second Mid term Exam Sat (20/11) from 10:30-12:00 am		
W6(21/11/1438)	9.7, 9.9, 9.10	Estimating a Proportion
	10.1, 10.2	Statistical Hypotheses, Testing a Statistical Hypothesis
W7(28/11/1438)	10.3, 10.5, 10.7	One- and Two-Tailed Tests, Tests Concerning a Single Mean, Tests on a Single Mean when variance is unknown
	10.8, 10.11, 10.12	Test on a Single Proportion
Final Exam Wed (1/12) from 8-11 am		

Textbook

Probability and Statistics for Engineers and Scientists, 7th Edition (or Latest Edition), Prentice Hall, 1998. By: Walpole, R. E.; Myers, R. H. and Myers, S. L.

Preliminary Course Outline:

We will cover Walpole, Chapters 1–6 and Chapters 8–10.

Grading & Exams

Participation + Quizzes + Home works + Attendance +Tutorial Session	Midterm I	Midterm II	Final Exam
The attendance will be considered in BOTH lectures and tutorial session.	30% Ch 1, 2, 3, & 4	30% Ch 5 & 6	40% Ch. 8 & 9 & 10