

Course Content for Mid-Term II Exam

Contents/Topics	Question set
Rules of Probability: Additive rules, Multiplication Rule, Conditional Probability, Bayes' Rules	Book: Probability and Statistics for engineers and scientist Chapter 2 Q No 2.59 - 2.90, 2.95, 2.96, 2.98, 2.99 - 2.102
Random Variables Concept of random variable and their types Discrete Probability Distribution PMF, CDF, joint probability distribution, marginal distribution, Conditional distribution (Bivariate), Statistical Independence Continuous Probability Distributions PDF and CDF, Joint Probability Distribution, marginal distribution, Conditional distribution (Bivariate)	Chapter 3 Q No 3.5, 3.6, 3.9, 3.13, 3.18, 3.21, 3.26, 3.28, 3.37, 3.38, 3.40 - 3.44, 3.49, 3.50, 3.54, 3.55 Chapter 4 Q No 4.1-4.4, 4.6, 4.10-4.14, 4.32, 4.33-4.36, 4.39, 4.49-4.52
Mathematical Expectations: Mean, Variance, Covariance, and Correlation of a Random Variable	