



National University of Computer & Emerging Sciences
MT-2005 Probability and Statistics
Spring 2025

Course Content for Mid-Term 1 Exam

Contents/Topics	Question set
Statistics and its types. Descriptive statistics: Basic definitions, Variables and their types. Organizing and graphing qualitative data, Organizing and graphing quantitative data, Frequency distribution of grouped and ungrouped data, Bar graph, Pie Chart, Dot plot, Stem-leaf plots, Histograms, Ogive, Frequency Curve and Box plot, Shapes of distribution and Skewness Kurtosis (discuss w.r.t geometry only).	Book: Introductory Statistics by Neil A. Weiss NW Questions Chapter 2 2.52-2.71, 2.18-2.29, Chapter 3 3.113-3.135, 3.62-3.78
Measures of center of ungrouped and grouped data: Mean, median, mode and trimmed mean Measure of Dispersion of ungrouped and grouped data: Range, Variance, Standard Deviation and Coefficient of Variation Measure of position: Quartiles and Interquartile Range(IQR), Percentiles and Percentile Rank	Book: Probability and Statistics for engineers and scientist WP Questions Chapter 2 2.21-2.48, 2.1-2.13, 2.49-2.65, 2.73-2.89.
Experiment, Outcome, Sample space, Set theory ,Venn diagram Counting techniques: Tree diagram, Multiplication rule, Combination, and Permutation. Calculating Probability Probability of an event. Rules of Probability: Additive rules, Multiplication Rule, Conditional Probability.	