Final Syllabus-FALL 2023
MT-2005

Text book: Probability & Statistics for Engineers & Scientists,
9th Edition , Walpole, Myers, Myers YE

Marks distribution	Final- Contents	Tentative plan
Mids 30 %	**1-Descriptive statistics :** Mean, Median, Mode,Variance,Standard Deviation, Quartiles, Deciles, IQRange, Construction of histograms, Stem-leaf plots,Dot and Box plot ,ogive, Skewnwss	(10-15) %
	2-Axioms of Probability: Additive rules, Conditional Probability, Independence and Multiplicative rules. Bayes' Rules	(5-10) %
	4-Mathematical Expectations: Mean & Variance of a Continuous Random Variable and linear combination , Covarriance, and Correlation coefficient.	(5-10) %
	5-Discreate Probability Distributions : Geometric distribution, Approximation of Binomial to Poisson distribution, **6-Continuous Probability Distributions:** Normal distribution and Area under normal curve, Approximation of Binomial to Normal distribution.	(10-15) %
Post Mids 70%	**9-One and two sample Estimation:** Introduction, confidence interval estimation using z & t distributions for single mean and difference between two means, independent and depenent t-tests (pooled estimate of variance, paired observation)	(15-20) %
	10-Hypothesis Testing: One and two tail test,Testing of hypothesis by critical value and p-value approach for single mean and difference between two means (equal and unequal variances) using z-test and t-test , paired observation	(20-25) %
	11-Regression & Correlation: Scatter plot.linear Regression and Correlation and hypothesis test on correlation (one and two tail) , coefficient of determination. Regression identity SST=SSR+SSE	(15-20) %
	12-Multiple linear Regression : Multiple Regression and Correlation (R) , coefficient of determination , Polynomial regression modal	(15-20) %
	13-Analysis of variance: One way ANOVA table ,F-test	(5-10) %
Statistical tables (z-test , t-test , F-test) will be provided in exam		
Formula sheet of chapters (4,5,9,10,11) will be shared soon .		

Course teacher :
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