LESSON PLAN FOR PROBABILITY AND STATISTICS(ODD-2024)

Book: Probability and Statistics, Ninth edition, Pearson Publication

Author: Walpole, Myers, Myers and Ye

Chapter	Section	Course contents/Topics	Problems from exercise	
			(class/assignment)	
1	3	Measures of Location: The		
		Sample Mean ,variance		
		and Histogram		
	1, 2,3	Sample Space, tree	Ex-2,3 3, 7, 9,11,	
		diagram, Events		
	4, 5	Probability of an Event,	50, 53,54, 58, 59,60 ,68,72	
		Additive Rule		
	6	Conditional Probability,	74, 75,80,81,82,89,91	
2		Independence, and the		
		Product Rule		
	7	Bayes' Rule	95,97,101	
3	1,2	Concept of a Random	9,10, 12, 17,19	
3	1,2	Variable, Discrete	7,10, 12, 17,17	
		Probability Distributions		
-	3	Continuous Probability	7,14,21,29,35,36	
	3	Distributions	7,14,21,27,33,30	
-	4	Joint Probability	38, 40,42,43, 49, 56,66	
	•	Distributions	36, 16, 12, 13, 17, 26,66	
	1	Mean of a Random	4, 7, 10, 12, 20,23,	
	-	Variable	., , , , , , , , , , , , , , , , , , ,	
	2	Variance and Covariance	34,36,50,	
	_	of Random Variables	- 1,- 2,- 2,	
4	3,4	Means and Variances of	57,58,60,75,77,78	
	- /	Linear Combinations of		
		Random Variables,		
		Chebyshev's Theorem		
	2,3	Binomial and Multinomial	2,3, 11, 15, 16, 19, 22,24	
	,	Distributions,		
5		Hypergeometric	29,31,32, 43, 44, 47	
		Distribution		
	4,5	Negative Binomial and	49, 50, 51,53,60,70,84	
	,	Geometric Distributions,		
		Poisson Distribution and		
		the Poisson Process		

6	1 2 3 4 5	Continuous Uniform Distribution Normal Distribution Areas under the Normal Curve Applications of the Normal Distribution Normal Approximation to the Binomial distribution Gamma and Exponential	2, 4,6,7, 8,10,11,12,15,18,22 24, 27, 29, 34 41, 46, 54,55
	O	Distributions	71, 70, 57,55
7	2	Transformations of Variables	2,3, 8,12,
	3	Moments and Moment- Generating Functions	17,19, 20
8	2,3,4,5	Some Important Statistics Sampling Distributions Sampling Distribution of Means and the Central Limit Theorem, Sampling Distribution of S2	3, 5, 7,19,23, 24, 37,40,41, 45,
9	3,4,12	Statistical Inference ,Classical Methods of Estimation, interval estimation Maximum Likelihood	2,3,4,6,7,11,72,73 Exapmle:21,22,23
	1.	Estimation	Exercise:81,85
	1,2,3	Statistical Hypotheses: General Concepts	2, 3
10		Testing a Statistical Hypothesis	

	4,5	Single Sample: Tests Concerning a Single Mean Two Samples: Tests on Two Means(known variance, unknown but equal variance)	20, 21, 23, 29, 30, 35
	10	One- and Two-Sample Tests Concerning Variances	67, 68, 71, 73
	11	Goodness-of-Fit Test	80, 83, 87, 89, 93
	12	Test for Independence (Categorical Data)	
11	1, 2,3	Introduction to Linear Regression	2, 5 43, 45
		The Simple Linear Regression (SLR) Model Least Squares and the	43, 43
		Fitted Model Correlation	