LESSON PLAN FOR PROBABILITY AND STATISTICS				
Chapter	**Course contents/ Topics**	**Lecture /hours**	**section**	**Problems from exercise (class/ assignment)**
1	Sampling Procedures; Collection of Data	1	2	1,2,4,8,11
	Measures of Location: The Sample Mean and Median	1	3	
	Measures of Variability, Discrete and Continuous Data	1	4,5	
2	Sample Space, Events	1	1, 2	3, 7, 11, 9, 14
	Probability of an Event, Additive Rule	1	4, 5	72, 68, 50, 53, 58, 59, 65
	Conditional Probability, Independence, and the Product Rule	1	6	75, 91, 94, 80, 74,77, 89
	Bayes' Rule	1	7	95- 98, 104, 108
3	Concept of a Random Variable, Discrete Probability Distributions	1	1,2	7, 12, 35, 3, 4, 10, 11, 14, 29, 30
	Continuous Probability Distributions	1	3	
	Joint Probability Distributions	2	4	38, 42, 44, 49, 50, 56, 60, 62, 66, 76
4	Mean of a Random Variable	1	1	4, 7, 10, 12, 15, 20,23, 26
	Variance and Covariance of Random Variables	1	2	34,35,50
	Means and Variances of Linear Combinations of Random Variables, Chebyshev's Theorem	2	3,4	57,58,60,64,67, 74, 75, 77, 78
5	Binomial and Multinomial Distributions	2	2	9, 11, 15, 16, 19, 22
	Hypergeometric Distribution	1	3	31,32, 43, 44, 47
	Negative Binomial and Geometric Distributions, Poisson Distribution and the Poisson Process	2	4,5	49, 50, 51, 70, 60, 69

6	Continuous Uniform Distribution Normal Distribution Areas under the Normal Curve Applications of the Normal Distribution Normal Approximation to the Binomial	3	1 2 3 4 5	2, 4, 22, 7, 8, 10, 15 24, 26, 29, 34
	Gamma and Exponential Distributions	1	6	41, 47, 54
7	Transformations of Variables	2	2	8, 10, 12, 2,3,4,5, 17,19, 20
	Moments and Moment- Generating Functions	2	3	
8	Some Important Statistics Sampling Distributions	1	2 3	2,3, 10, 5, 7,12 19, 24, 30, 17,20,23,26
	Sampling Distribution of Means and the Central Limit Theorem	1	4	
	Sampling Distribution of s^2	1	5	38,40, 46, 47, 37,41,45,49,50
9	Statistical Inference	1	2	5, 6, 12,2, 4, 7
	Classical Methods of Estimation	1	3,4	
	Maximum Likelihood Estimation (Optional)	2	14	85,86, 82, 87
10	Statistical Hypotheses: General Concepts Testing a Statistical Hypothesis	2	1,2	3, 12, 15, 2, 4, 9, 14, 17
	Single Sample: Tests Concerning a Single Mean Two Samples: Tests on Two Means Choice of Sample Size for testing Means	3	4,5,6	21, 30, 20, 35, 23, 29, 42, 47
	Two Samples: Tests on Two Proportions	1	9	
	One- and Two- Sample Tests Concerning Variances	1	10	67, 68, 71, 73, 77

	Goodness- of - Fit Test	1	11	80, 83, 87, 89, 93, 95
	Test for Independence (Categorical Data)	1	12	
11	Introduction to Linear Regression	1	1	2, 5, 7, 12, 13
	The Simple Linear Regression (SLR) Model		2	
	Least Squares and the Fitted Model		3	
	Correlation	1	12	43, 45, 47

Examples related to each articles are compulsory

Red letters to be solved in the class and black letters to be given as homework.

Book: Probability and Statistics, Ninth edition, Pearson Publication

Author: Walpole, Myers, Myers and Ye

Co- ordinator