

TABLE OF CONTENTS

	MODULE 1: What are Probability Distributions of	1
	Random Variables?	полте
	LESSON 1: How do you solve for the sample space and probability?	5
	Introduction To Statistics Events and Sample Spaces	6 10 13
l	Independent Events and Dependent Events Empirical Probability	16
	LESSON 2: What are discrete and continuous random variables?	23
	Types of Data Organizing and Presenting Data Histogram	24 27 31
y Y	Distribution Shapes	33
	LESSON 3: How do you construct a probability function for discrete random variables?	39
	Discrete Random Variables	39
0	Probability Histogram	44
	LESSON 4: How do you solve for the mean, variance, and standard deviation of discrete	
	random variables?	49
- Ch	vn Summing Refiniques	56-169
0	Measures of Central Tendency Mean of a Discrete Probability Distribution Measures of Variation	50 52 54
	Wariance and Standard Deviation of Probability Distribution	58

ESSON 5: How do you solve for the mean, variance, and standard deviation of a binomial	
distribution?	65
Binomial Experiment Binomial Distribution Other Types of Discrete Distribution Mean, Variance, and Standard Deviation of Binomial Distribution	65 67 70 71
MODULE 2: What are Probability Distributions of Random Variables?	77
LESSON 6: How do you construct a normal distribution?	81
Continuous Probability Distribution Areas Under the Normal Curve Normal Distribution, Means and Standard Deviations	82 85 86
LESSON 7: How do you solve for probabilities of standard normal variable?	95
Standard Normal Distribution Z-Scores and Probability Distribution Applications of the Standard Normal Distribution Solving Specific Data Values Given Probabilities	96 97 100 102
LESSON 8: What are the different types of random sampling?	109
Population and Sample Data Gathering Random Sampling Techniques Statistics for Samples	
Sample Mean, Variance and Standard Deviation	116

LESSON 9: What are the different types of sampling distributions?	123
Sampling Distributions Sampling Error and Properties of the Distribution of Sample Means Other Sampling Distribution of Sample Statistics	123 125 127
LESSON 10: What is the central limit theorem?	131
The Central Limit Theorem Application of the Central Limit Theorem Correction for Finite Population	131 133 135
MODULE 3: What is the confidence interval of a parameter?	139
LESSON 11: How do you compute for confidence interval when σ is known?	143
Types of Estimation Confidence Interval for the Population Mean: σ is Known	144 145
LESSON 12: How do you compute for confidence interval when σ is unknown?	151
Confidence Interval for the Population Mean: σ is Unknown but $n \ge 30$ Confidence Interval for the Population Mean: σ is Unknown and $n < 30$	151 153
LESSON 13: How do you compute for confidence interval from a population proportion?	161
Point Estimation for the Population Proportion Confidence Interval for the Population Proportion	162 162

LESSON 14: How do you compute for the sample size?	169
Sample Size Determination for the Population Mean	168
Sample Size Determination for the Population Proportion	171
LESSON 15: How do you compute for confidence interval for the population variance?	17
Point Estimation for the Population Variance Confidence Interval for the Population Variance	177 178
MODULE 4: What are the tests for Hypothesis?	18
LESSON 16: How do you formulate the null and alternative	
hypothesis?	18
Null and Alternative Hypothesis	189
Formulating the H_o and H_o	190
Type I and Type II error	192
Level of Significance	192
Rejection Region	193
LESSON 17: How do you test the hypothesis using	
the population mean?	199
Z-Test for One Population Mean: σ is known	20
p-value Method	201
Z-Test for One Population Mean: σ is unknown	200
t-Test for Population Mean	20-
LESSON 18: How do you test the hypothesis using	
the population proportion?	211
z-Test for One Population Proportion	211
2-7est for one Population Proportion	211

LESSON 19: How do you construct a scatter plot	
for analyzing correlation?	219
Univariate and Bivariate Data	219
Correlation Analysis	220
Scatter Plot	221
Correlation Coefficient	223
Pearson Correlation Coefficient	224
LESSON 20: How do you construct a line of best fit?	231
Regression Analysis	232
KEY TERMS	239
DEEEDENCES	245