

Department of Commerce- Finance (Unaided)

ESSENTIAL STATISTICS FOR BUSINESS ANALYTICS

Course Code	COM1MN109				
Course Title	ESSENTIAL STATISTICS FOR BUSINESS ANALYTICS				
Type of Course	Minor				
Semester	I				
Academic Level	100-199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Understanding of basic statistics and business mathematics				
Course Summary	This course contains fundamental statistical concepts and techniques that are crucial for analyzing and interpreting data in a business context.				

Course Outcome (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Develop an understanding of fundamental statistical concepts such as sampling, sample estimation, hypothesis testing, and regression analysis	U	C	Internal Examinations/Review Questions/Quizzes/Assignment/Seminar/External Examinations
CO2	Analyze business data using statistical techniques	An	P	Examinations/Quizzes/Assignment/Practicum
CO3	Critically evaluate data and make informed decisions based on statistical analysis.	Ap	P	Assignment Project
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)				
# - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

Module	Unit	content	Hours
		Introduction to Sampling	12

I	1	Introduction to Sampling and Sampling Theory	1
	2	Sampling Distribution - Using probabilistic Sampling Techniques	2
	3	Estimating Sampling Errors and Confidence Intervals – Sampling Error and Non- Sampling Error	4
	4	Central Limit Theorem	2
	5	Sampling Techniques	3
II		Hypothesis testing	12
	6	Introduction to Hypothesis testing -Null Hypothesis - Alternate Hypothesis	1
	7	Testing Hypothesis for larger samples-Test for Single Proportion - Test for Difference of Proportions	2
	8	Testing Hypothesis for Small Samples - T-test	3
	9	Calculating Analysis of Variance- Two-Way Factorial ANOVA - Multivariate Analysis of Variance	3
	10	Performing Chi-Square Test - Testing the Goodness of Fit	3
III		Correlation and Regression	11
	11	Correlation – Meaning & Types -Spearman’s Rank correlation, Karl Pearson’s co efficient of correlation	4
	12	Analysis of Bi Variate Data	2
	13	Regression – Meaning - Regression lines - Properties of Regression lines and regression coefficient	5
IV		Time Series Analysis	10
	14	Objectives and uses of Time series analysis	2
	15	Components of Time series	1
	16	Measuring trend using free hand curve method and method of semi averages	3
	17	Measurement of Trend by Moving averages method	2
	18	Least squares method	2
V		Open Ended Module (Practical Exercises)	30
		Practical problems on descriptive statistics.	
		Case Study on Sampling Techniques	
		Hypothesis Testing with Excel	
		Practical problems on T test, ANNOVA, Chi-square	

References

1. Statistics for Big Data for Dummies; Alan Anderson, David Semmelroth; ISBN 9788126558223
2. Data Mining and Business Intelligence (Includes Practicals); S.K. Shinde,

Uddagiri Chandrasekhar; 789351197188

3. Applied Business Statistics, 7ed, ISV (Author- Ken Black)
4. Statistical Analysis with Excel For Dummies, 4th Edition; Joseph Schmuller; ISBN:
978- 1-119- 27116-1