Program : **Diploma in Commercial Practice**	
Course Code : **2141**	Course Title: **Business Statistics**
Semester : **2**	Credits: **3**
Course Category: **Foundation Course**	
Periods per week: **4 (L:2, T:0, P:2)**	Periods per semester: **60**

Course Objectives:

- To enable the students to get a thorough knowledge in the basic concepts of statistics, classification and tabulation of data and also in applying statistical methods, tools and techniques.
- To acquire skills in general statistical principles and statistical tools to interpret and analyze various business problems.

Course Prerequisites:

Topic	Course name
Knowledge of basic calculations	Secondary School

Course Outcomes:

On completion of the course, the student will be able to:

COn.	Description	Duration (Hours)	Cognitive Level
CO1	Explain the basic concepts of statistics, classification, tabulation and presentation of data.	13	Applying
CO2	Apply measures of central value and dispersion.	19	Applying
CO3	Createrelationship between variables by means of correlation and regression.	12	Applying
CO4	Construct and compareindex numbers.	14	Applying
	Series Test	2	

CO – PO Mapping:

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3						
CO2	3	2					
CO3	3	3					
CO4	2	3					

3-Strongly mapped, 2-Moderately mapped, 1-Weakly mapped

Course Outline:

Module outcomes	Description	Duration (Hours)	Cognitive Level
CO1	**Explain the basic concepts of statistics, classification, tabulation and presentation of data.**		
M1.01	Define definition of statistics, functions of statistics.	1	Understanding
M1.02	State importance of statistics, objects of statistics.	1	Understanding
M1.03	Application and state the limitations of statistics.	1	Understanding
M1.04	Explain different types of data, methods of collecting data.	2	Understanding
M1.05	Distinguish between primary data and secondary data.	1	Understanding
M1.06	Explain statistical series, individual, discrete and continuous series.	2	Understanding
M1.07	Define classification, various objects of classification.	2	Applying
M1.08	Explain the different kinds of classification, requisites of a good classification.	1	Understanding
M1.09	State tabulation, rules of tabulation.	1	Understanding
M1.10	Solve problems under graphical representation of data.	1	Applying

Contents:

BASIC CONCEPTS OF STATISTICS

Statistics: Meaning – applications – functions – importance - objects and limitations of statistics.

Data: Types of data - methods of collecting data - difference between primary data and secondary data.

Statistical series: Prepare individual, discrete and continues series.

Tabulation: Meaning - rules of tabulation.

Classification: Objectives - types of classification - requisites of a good classification.

Presentation: Graphical representation of data – Histogram – Frequency polygon - Frequency curve – Ogive - Cumulative frequency curve - More than ogive - Less than ogive.

CO2	**Apply measures of central value and dispersion.**		
M2.01	Explain the meaning and importance of various measures of central value.	1	Understanding
M2.02	State mean, median and mode.	1	Understanding
M2.03	State the requisites of good average, List out the advantages and disadvantages of various measures of central value.	2	Understanding
M2.04	Illustrate problems of Mean, Median and Mode.	7	Applying
M2.05	Solve problems on combined mean and weighted mean.	2	Applying
M2.06	List out the various measures of dispersion, and importance of various measures.	1	Understanding
M2.07	Explain mean deviation and standard deviations.	1	Understanding
M2.08	Solve problems on mean deviation, standard deviation.	4	Applying
	Series test I	1	

Contents:

MEASURES OF CENTRAL VALUE & DISPERSION

Measures of Central Value: Requisites of a good average.

Types of averages: Arithmetic mean, weighted mean, median, mode. Advantages and disadvantages of various measures of central value - mean-median-mode. Problems on mean median and mode, combined mean and weighted mean.

Measures of dispersion: Significance of measuring variation. Methods of studying variation-Mean Deviation meaning-importance, problems on mean deviation.

Standard Deviations: Meaning, problems on standard deviations.

CO3	**Create relationship between variables by means of correlation and regression.**		
M3.01	State the meaning, measurement, significance of the study of correlation.	1	Understanding

M3.02	Explain the types of correlation.	2	Understanding
M3.03	Explain the measurement of correlation.	1	Understanding
M3.04	Solve problems on correlation.	5	Applying
M3.05	State the meaning of Regression analysis, uses of regression analysis.	1	Understanding
M3.06	Illustrate Regression lines, regression equations.	2	Applying

Contents:

CORRELATION AND REGRESSION ANALYSIS

Correlation: Meaning, measurement, significance of the study of correlation. Types of correlation - simple, partial and multiple correlation.

Methods of Correlation: Karl Pearson Correlation coefficient - Rank Correlation coefficient. Problems on correlation - Karl Pearson & Spearman Rank Correlation. Regression analysis – Meaning, definition and uses of regression analysis - Regression lines - regression equations (Simple Problems Only).

CO4	**Construct and compare index numbers.**		
M4.01	Describe the uses & types of index numbers.	1	Understanding
M4.02	Enumerate the various methods of construction of index numbers.	1	Understanding
M4.03	Solve problems using various methods.	5	Applying
M4.04	Solve problem by time reversal test and factor reversal test.	4	Applying
M4.05	Define cost of living index.	1	Remembering
M4.06	Solve problems under family budget method and cost of living index.	2	Applying
	Series Test – II	1	

Contents:

INDEX NUMBERS

Index numbers: Uses of index numbers – types – purpose - methods of construction of index numbers. Problems relating index numbers - price relative method. Test of adequacy of index number - time reversal and factor reversal test. Cost of living index-problems under family budget method and cost of living index.

Text / Reference:

T/R	Book Title/Author
T1	Gupta, S. P. (2020). *Statistical Methods* (43rd Editi). Sultan Chand.
T2	Dr. S.M. Shukla, (2020). *Business Statistics*. Sahitya Bhawan.
T3	Jani PN. (2019). *Business Statistics*. PHI Learning.
T4	Gupta, I. G. S. C. (2018). *Business Statistics* (6th ed.). Himalaya Publishing House.
T5	V.K. Kapoor (2014). *Fundamentals of Statistics for Business and Economics*. Sultan Chand and Sons.
T6	Arora, P.N. & S. Arora (2017), *Statistics for Management*, S. Chand & Company Ltd.

Online Resources:

Sl. No	Website Link
1	https://en.wikipedia.org/wiki/Statistics
2	http://www.geocities.ws/dimu96/statistics.htm
3	http://www.abs.gov.au/websitedbs/a3121120.nsf/home/statistical+language+-+measures+of+central+tendency