UNIVERSITY OF MADRAS

B.A. DEGREE PROGRAMME IN ECONOMICS

SYLLABUS WITH EFFECT FROM 2023-2024

FIRST YEAR –SEMESTER- I

Subject Code	Subject Name	Category	L	T	P	S	Credits	Inst. Hours	Marks		
									CIA	External	Total
104C1B	**STATISTICS FOR ECONOMICS –I**	**Core-II**					5	5	25	75	100

Learning Objectives	
C1	To know the nature and scope of statistics and its applications along with sampling.
C2	To teach students Collection, Classification, Analyzing and Presentation of data.
C3	To apply the measures of central tendency
C4	To draw measurement of dispersion and its applications
C5	To know about the symmetric and asymmetric distribution.

UNIT	Contents	No. of Hours
I	**Introduction and Collection of Data** Introduction – Nature and Scope of Statistics – Uses and Limitations of Statistics – Data Collection – Primary and Secondary Data –Tools for collecting Primary Data – Requisites of Good Questionnaire – Sources of Secondary Data- Sampling: Methods- Avantages- disadvantages.	15
II	**Classification and Presentation of Data** Classification and Tabulation of Data– Types - Frequency Distribution — Cumulative Frequency Distribution- Class Interval – Diagrams – Types- Graphical Representation– Histogram – Frequency Polygon - Ogive Curve - Lorenz Curve.	15
III	**Measures of Central Tendency** Measures of Central Tendency- Requisites of a Good Average – Arithmetic Mean, Median, and Mode – Relative Merits and Demerits.	15
IV	**Measures of Dispersion** Absolute and Relative Measures of Dispersion – Range – Quartile Deviation – Mean Deviation – Standard Deviation – Variance - Coefficient of Variation –-Skewness and Kurtosis.	15
V	**Skewness, Moments and Kurtosis** Difference between Dispersion and Skewness. Measures of Skewness: Absolute Measures of Skewness- Relative Measures of Skewness- Karal Pearson's Coefficient of Skewness- Bowley's Correlation Coefficient of Skewness- Kelly's Coefficient of Skewness –Moments: Meaning-Concepts-Constants β_1 and β_2- Measures of Skewness based on Moments-Measures of Kurtosis.	15
	Total	**75**

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Course Outcomes		Programme Outcomes
CO	On completion of this course, students will	
1	Understand the overview of statistics and basic knowledge of statistical tools.	PO1, PO3,PO8
2	Differentiate Types of Data and its Classification	PO1,PO2, PO3,PO8
3	Explain the concept of Averages and its application	PO1, PO2,PO3
4	Know the concept of Dispersion and its application	PO1, PO2,PO3
5	Calculate Correlation and estimate values using Regression	PO3,PO7,PO8
Textbooks		
1	Gupta. S.P (2005) Statistical Methods, Sultan Chand and Sons, New Delhi.	
2	Sancheti. D.C and KapoorV.K(2005) Statistical Theory Method and Application, Sultan Chand and Sons, New Delhi.	
3	Dr.T.K.V.Iyengar, Dr.B.Krishna Gandhi S.Ranganantham, Dr.M.V.S.S.N Prasad, Probability and Statistics, S.Chand and Co, 2020.	
4	Prof S.G.Vekatachalapathy and Dr.H.Premraj (2018) Statistical Methods Margham Publications.	
5	Dominick Salvatore and Derrick Reagle,theory and problems of statistics andeconometrics, McGraw Hill, (2002)	
Reference Books		
1.	SaxenaH.C , (2016) Elementary Statistics, S Chand and Company New Delhi.	
2.	Elhance D.N, (2004), Fundamentals of Statistics KitabMahal, New Delhi	
3.	Manoharan M (2010), “Statistical Methods”, Palani Paramount Publications, Palani.	
4.	R.S.N.Pillai and V. Bagavathi(2010), Statistics, Sultan Chand and Sons, New Delhi	
5.	Dr.S.Sachdeva(2014) Statistics -Lakshmi NarainAgarwal.	
Web Resources		
1.	https://www.cuemath.com/data/statistics/	
2.	https://stattrek.com/statistics/resources	
3.	https://testbook.com/learn/maths-mean-median-mode/	
4.	https://www.statistics.com/	
5.	https://thisisstatistics.org/students/	

Mapping with Programme Outcomes:

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**
CO 1	3	3	3	3	3	3	3	3
CO 2	3	3	3	3	3	3	3	3
CO 3	3	3	3	3	3	3	3	3
CO 4	3	3	3	3	2	3	2	3
CO 5	3	2	2	2	3	3	3	3
Weightage	15	14	14	14	14	15	14	15
Weighted percentage of course contribution to POS	3.00	2.8	2.8	2.8	2.8	3.00	2.8	3.00

S-Strong-3 M-Medium-2 L-Low-1

Level of Correlation between PSO's and CO's

CO /PO	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3
CO5	3	3	3	3	3
Weightage	15	15	15	15	15
Weighted percentage of Course Contribution to PSOs	3	3	3	3	3

Strong-3 M-Medium-2 L-Low-1