AC – 20/04/2024
Item No. – 7.7 Sem. I (3a)

As Per NEP 2020

University of Mumbai

Syllabus for Basket of OE	
Board of Studies in Business Economics	
UG First Year Programme	
Semester - I	**A Semester- I**
Title of Paper	**Credits 2/ 4**
I) Elementary Statistical Techniques for Economics	**4**
II)	**2**
III)	**2**
From the Academic Year	**2024- 2025**

OPEN ELECTIVE – I

Programme Name: **B.com in Business Economics**

Course Name: **Elementary Statistical Techniques for Economics**

Total Credit: **4**

University Assessment: **100 Marks**

Pre-Requisite: This course introduces the fundamental concepts and tools of statistics necessary for economic analysis. Students will learn the basics of data collection, classification, and tabulation, along with various methods for representing data through charts and diagrams. The course also covers frequency distribution, measures of central tendency, and measures of dispersion, which are crucial for making informed economic decisions. By the end of the course, students will have a strong foundation in elementary statistical techniques relevant to economics.

Course Objectives:

- To understand the basic concepts and terminology related to statistics.
- To grasp the principles of data representation through charts and diagrams.
- To analyse` measures of dispersion and their significance in economics.
- To apply statistical techniques to solve real-world economic problems.

Course Outcome:

CO1: To define and recall fundamental statistical concepts and terminology.

CO2: To understand the principles of data representation through various types of charts and diagrams.

CO3: To utilize statistical tools to interpret and draw conclusions from economic data.

CO4: To analyse economic problems and data sets to select appropriate statistical techniques for analysis.

Modules	Units	Lecture Hours
1: Introduction to Statistics and Data Collection	Meaning and Scope of Statistics: Defining statistics and its role in data analysis and decision-making and exploring the various applications of statistics in economics.	15
	Data Types and Variables: Introduction to data types, including qualitative (categorical) and quantitative (numerical) data and explanation along with examples of variables and attributes in statistical analysis.	
	Data Sources and Collection Methods: Identifying primary and secondary data sources and their distinctions and overview of data collection methods, including surveys, experiments, and observations.	
2: Data Representation and Visualization	Diagrammatic Representation of Data: Objectives and importance.	15
	Types of Charts and Diagrams: Line diagram, bar diagram, pie diagram and pictogram.	
	Practical Application of Charts and Diagrams: Understanding the characteristics of data that influence the choice of chart or diagram. Principles of Effective Visualization: Fundamental principles of effective data visualization, including clarity, accuracy, simplicity, choosing colors, labels, scales, and axes.	
3. Frequency Distribution and Graphical Representation	Introduction to Frequency Distribution: Definitions of key terms, including observations, frequencies, and simple series. Construction and Components of Frequency Distribution: Definitions and explanations of terms such as midpoints, class intervals, and class	15

	boundaries.	
	Graphical Representation of Frequency Distributions: Different methods of graphical representation, including histograms, frequency polygons, and ogives.	
	Cumulative Frequency Distributions and Applications: Exploring cumulative frequency distributions and their utility, constructing cumulative frequency curves and application of cumulative frequency distributions in identifying percentiles and quartiles.	
4. Measures of Central Tendency and Dispersion	Measures of Central Tendency: Introduction to central tendency measures such as the mean, median, and mode, Important properties, and characteristics of mean, median, and mode and real-world applications of central tendency measures in economics.	15
	Measures of Dispersion (Range and Quartiles): Introduction to measures of dispersion and their importance in data analysis, understanding range and quartiles as measures of spread and variability and computation and interpretation of range and quartiles with practical examples.	
	Measures of Dispersion (Mean Deviation and Variance): Mean deviation and variance as measures of data variability, calculating and interpreting mean deviation and variance and standard deviation and its properties.	

Reference Books:

1. Agresti, A., & Finlay, B. (2018). Statistical Methods for the Social Sciences. Pearson.
2. Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J. D., & Cochran, J. J. (2019).

Statistics for Business & Economics. Cengage Learning.

3. Berenson, M. L., Levine, D. M., & Krehbiel, T. C. (2017). Basic Business Statistics. Pearson.
4. Freund, J. E., & Perles, B. M. (2018). Modern Elementary Statistics. Pearson.
5. Lind, D. A., Marchal, W. G., & Wathen, S. A. (2018). Statistical Techniques in Business and Economics. McGraw-Hill Education.
6. McClave, J. T., Sincich, T., & Mendenhall, W. (2019). Statistics. Pearson.
7. Monga, C S. (2000). Mathematics and Statistics for Economics. Vikas Publishing.
8. Newbold, P., Carlson, W., & Thorne, B. (2017). Statistics for Business and Economics. Pearson.

INTERNAL CONTINUOUS ASSESSMENT: 40%

Continuous evaluation pattern		
1	Class Test based on objectives on-line/offline	20 marks
2	Assignment / Project / Presentation	20 marks
3	Book review / Newspaper review (in any language) / Case Study writing	20 marks
	Take best of TWO out of THREE from above	**40 Marks**

SEMESTER END EXAMINATION: 60%

Format of Question Paper		
Time: 2 Hours		**Mark: 60**
Note: 1. Attempt any **Four** questions out of Five. 2. Figures to the right indicate full marks.		
Q1	**Answer the following question (Any 2)**	**15 Marks**
A.		
B.		
C.		
Q2	**Answer the following question (Any 2)**	**15 Marks**
A.		
B.		
C.		
Q3	**Answer the following question (Any 2)**	**15 Marks**
A.		
B.		
C.		
Q4	**Answer the following question (Any 2)**	**15 Marks**
A.		

B.		
C.		
Q5	**Write Short Notes (Any 3) (5 Marks Each)**	**15 Marks**
A.		
B.		
C.		
D.		

Sign of the
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Dr. Ravikant Balkrishna Sangurde
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