

## Detailed Syllabus

<b>Curriculum Designed for: B.A. HON'S</b>		<b>Grant-In-Aid</b>
<b>Semester: II</b>	<b>Course No.: 124</b>	<b>Course Code: MDC-STA(BS)</b> <b>Course Title: Business Statistics</b>
<b>Credits: 4</b>		<b>Course Category: - Multidisciplinary Course</b>

### Course Objectives:

Number	Objective
Objective 1:	To develop understanding of various measures of central tendency and their importance in summarizing data.
Objective 2:	To enable students to compute and interpret different measures of dispersion for analyzing variability in data.
Objective 3:	To provide knowledge of skewness and kurtosis for understanding the shape and nature of statistical distributions.
Objective 4:	To familiarize students with the concepts of population, sample, and different sampling methods used in research.
Objective 5:	To enhance the ability to select appropriate statistical tools for data analysis and interpretation.
Objective 6:	To develop analytical, research-oriented, and problem-solving skills through practical numerical examples in statistics.

### Course Outcomes: On successful completion of the course, the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO1	REMEMBERING	Recall the formulas, definitions, and concepts of central tendency, dispersion, skewness, kurtosis, and sampling methods.
CO2	UNDERSTANDING	Explain the significance and applications of measures of central tendency, dispersion, skewness, kurtosis, and sampling techniques.
CO3	APPLYING	Apply appropriate statistical methods to compute central tendency, dispersion, skewness, and sampling procedures for given data.
CO4	ANALYSING	Analyze datasets using measures of dispersion, skewness, kurtosis, and sampling methods to identify variability and distribution patterns.
CO5	EVALUATING	Evaluate the suitability of different statistical measures and sampling techniques for effective interpretation and decision-making.
CO6	CREATING	Construct and solve practical statistical problems involving central tendency, dispersion, skewness, kurtosis, and sampling in research situations.

**Course Contents:**

Unit No.	Unit Contents	Sessions Allotted
1	<b>Measures of Central Tendency</b> <ul style="list-style-type: none"> <li>Arithmetic Mean (Simple and Weighted)</li> <li>Median and Mode</li> <li>Quartiles, Deciles and Percentiles</li> <li>Merits and Demerits</li> <li>Examples to compute above mentioned measures of central tendency for all the different types of data.</li> </ul>	15 Hours
2	<b>Measures of Dispersion</b> <ul style="list-style-type: none"> <li>Meaning of Dispersion and its Importance in Statistics</li> <li>Range, Quartile Deviation, Mean Deviation</li> <li>Variance and Standard Deviation, Combined Standard Deviation</li> <li>Coefficient of Variation</li> <li>Examples to compute above mentioned various measures of dispersion for all the different types of data.</li> </ul>	15 Hours
3	<b>Skewness and Kurtosis</b> <ul style="list-style-type: none"> <li>Meaning and types of Skewness</li> <li>Karl Pearson's and Bowley's coefficient of Skewness</li> <li>Meaning and types of Types of Kurtosis</li> <li>Examples based on these topics</li> </ul>	15 Hours
4	<b>Sampling Methods</b> <ul style="list-style-type: none"> <li>Meaning of Population and Sample</li> <li>Meaning of Sampling, Difference between Population survey and Sample Survey</li> <li>Uses of sampling, Characteristics of good sample</li> <li>Simple Random Sampling, Stratified Random Sampling</li> <li>Sampling Errors</li> <li>Examples on the covered topics</li> </ul>	15 Hours

**REFERENCES BOOKS:**

- Gupta, S.P. – *Statistical Methods*
- Gupta, S.C. & Kapoor, V.K. – *Fundamentals of Applied Statistics*
- Elhance, D.N. – *Fundamentals of Statistics*
- Spiegel, M.R. – *Statistics*
- Nagar, A.L. & Das, R.K. – *Basic Statistics*

**1. Textual Resources (E-Books & Study Material)**

Sr. No.	Resource	Description	Link
1	Statistics LibreTexts	Detailed content on mean, variance, skewness, kurtosis, and sampling	<a href="https://stats.libretexts.org/">https://stats.libretexts.org/</a>
2	Saylor Academy – Introductory Statistics	Structured course material with practice on statistical measures and sampling	<a href="https://learn.saylor.org/course/ma121">https://learn.saylor.org/course/ma121</a>
3	ePG Pathshala (UGC)	Academic modules on descriptive statistics and sampling methods	<a href="https://epgp.inflibnet.ac.in/">https://epgp.inflibnet.ac.in/</a>
4	Schaum's Outline (Open Access Sections)	Practice-oriented solved problems on descriptive statistics (where freely available)	<a href="https://archive.org">https://archive.org</a>

## 2. Video Learning Resources

<b>Sr. No.</b>	<b>Resource</b>	<b>Description</b>	<b>Link</b>
1	SWAYAM Platform	Government-supported structured courses in statistics	<a href="https://swayam.gov.in">https://swayam.gov.in</a>
2	Khan Academy	Beginner-friendly videos on mean, median, standard deviation, and sampling	<a href="https://www.khanacademy.org/math/statistics-probability">https://www.khanacademy.org/math/statistics-probability</a>

## 3. Audio Resources (Supplementary Learning)

<b>Sr. No.</b>	<b>Resource</b>	<b>Description</b>	<b>Link</b>
1	Statistics & Data Science Podcasts (Spotify / Apple Podcasts)	Conceptual discussions on statistical measures and applications	<a href="https://open.spotify.com/">https://open.spotify.com/</a> / <a href="https://podcasts.apple.com">https://podcasts.apple.com</a>