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| **Program: Bachelor of Management Studies (2023-24)** | **Semester: II** |
| **Course: Business Statistics** | **Course Code:**  |
| **Teaching Scheme** | **Evaluation Scheme** |
| **Lecture (Hours per week)** | **Practical**  | **Tutori al** | **Credits** | **Continuous Assessment (CA)**  | **Semester End Examinations (SEE)** |
| **02** | **Nil** | **Nil** | **02** | **20** | **30** |
| **Learning Objectives:**1. To provide knowledge regarding important statistical tools and formulas.
2. To understand importance of statistics in real life situations.
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| **Course Outcomes:**1. Compute various measures of central tendency and use them in real life situations.
2. Compute various measures of dispersion and apply it to Business Situations.
3. Understand and apply various concepts of Probability in daily life and in Business Decision making.
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| **Pedagogy:**1. Business Applications of statistical techniques studied would be discussed in class.
2. Short case studies would either be discussed in class or given to students as assignments.
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| **Outline of Syllabus: (per session plan)** |
| **Module** | **Description** | **No of Hours** |
| 1 | **Introduction and Descriptive Statistics** | 15 |
| 2 | **Probability & Probability Distributions** | 15 |
| **Total** | **30** |
| **PRACTICALS** | **-** |

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| **Session Outline:** |
| **Module** | **Module Content** | **Module wise Pedagogy Used** | **Duration of Module** |
| **Module 1** | **Introduction and Descriptive Statistics:**1. **Introduction:** Meaning, Scope and Limitations of Statistics, Basic Statistical Concepts: Population, Sample, variate, Attributes, Parameter, Statistic. Types of data, Sources of data: Primary and secondary, sample and census survey.
2. **Descriptive Statistics:**
3. **Measures of Central Tendency:** Definition of Average, Types of Averages: Arithmetic Mean, Combined and Weighted arithmetic mean, median, and Mode for raw data, Ungrouped frequency distribution, grouped frequency distribution. Quartiles, Deciles and Percentiles.
4. **Measures of Dispersions:** Concept of dispersion- Absolute & Relative, Range, Quartile Deviation, Mean Deviation, Standard Deviation and corresponding coefficients. Combined Standard deviation.
 | Classroom sessions with adaptive methods & computational thinking. | 15(2+6+7) |
| **Module 2** | **Probability & Probability Distributions**1. **Probability Theory**

Concept of random experiment/trial and possible outcomes; Sample Space and Discrete Sample Space; Events their types, Algebra of Events, Mutually Exclusive and Exhaustive Events, Complimentary events.1. Classical definition of Probability, Addition theorem (without proof), conditional probability.
2. Independence of Events: P (A ∩B ) = P(A) P(B), Simple examples
3. Bayes Theorem
4. **Probability Distributions:**

Discrete Probability Distribution: Binomial, Poisson (Properties and applications only, no derivations are expected)Continuous Probability distribution: Normal Distribution. (Properties and applications only, no derivations are expected) | Classroom sessions with computational thinking. | 15(4+5+6) |

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| **Reference Books:**1. Business Mathematics , D. C. Sancheti and V. K. Kapoor , Sultan Chand & Sons, 2006,
2. Mathematics for Business Economics: J. D. Gupta, P. K. Gupta and Man Mohan, Tata Mc‐ Graw Hill Publishing Co. Ltd., 1987
3. Schaum Series STATISTICS , Murray Spiegel, Larry Stephens, Mc Graw Hill
4. Operations Research, Gupta and Kapoor ,S. Chand & Sons Co.
5. Statistical Methods, S.G. Gupta, S. Chand & Sons Co.
6. Business Mathematics & Statistics, B Aggarwal, Ane Book Pvt. Limited
7. Statistics for management, Richard Levin, David S. Rubin, Sanjay Rastogi /Masoos Husain siddiqui. Pearson Publication
8. Mathematics & Statistics, Ajay Goel & Alka Goel., Taxmann’s Publication
9. Quantitative Techniques of Decision Making, Anand Sharma, Himalaya Publishing House
10. Business Statistics Using Excel & SPSS, Nick Lee & Mike, SAGE
11. Business mathematics and statistics, V.R.Nikam, (Chandralok Prakashan)
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## Total Marks allotted: 50 marks

## Details of Continuous Assessment (CA)

40% of the total marks per course.

Marks allotted for CA is **20 marks.**

Breakup of the 20 Marks is as follows:

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| **Continuous Assessment** | **Details** | **Marks** |
| **Component 1 (CA-1)**  | Internal class test (online or offline)* 2 Class tests will be taken for each course
* Marks scored will be computed as the Average of the marks scored by the learner in the 2 Class tests carrying 10 Marks each
 | **10 marks** |
| **Component 2 (CA-2)** | Presentations/Project Work/ Viva-Voce/ Book Review/ Field visit & its presentations/ Entrepreneurship Fair/ Documentary filming/ Assignments/ Group Discussions Etc. | **10 marks** |

## b) Details of Semester End Examination (SEE)

60% of the total marks per course.

Marks allotted for SEE is **30 Marks.**

Duration of examination will be **One Hour.**

 **QUESTION PAPER FORMAT**

 All Questions are compulsory

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| **Question Number** | **Description** | **Marks** | **Total Marks** |
| **Q1.** | **Answer any 2 from the following** (Module I)a.b.c. | 5 Marks\*2 | 10 |
| **Q2.** | **Answer any 2 from the following:** (Module II)a.b.c. | 5 Marks\*2 | 10 |
| **Q3.** | **Answer any 2 from the following:** (Module I&II)a.b.c. | 5 Marks\*2 | 10 |
|  | **TOTAL MARKS** |  | **30** |



Signature Signature

(Program Chairperson & Vice Principal) (Principal)