Course: OE
Foundations of Statistics

Semester: II	Credits: 2	Subject Code: OE2 22306	Lectures: 30

Course Outcomes:

At the end of this course, the learner will be able to:
- CO1- Relate basic knowledge of Mathematical and Statistical concepts like counting principles to Business
- CO2- Calculate various measures of dispersion like standard deviation, coefficient of variation and relate them to real life situations
- CO3- Execute inter-disciplinary projects by using Mathematical concepts like Correlation between two variables and regression for prediction
- CO4- Interpret data related to attributes intelligently through numerical means and see its applications.

Unit 1: Probability	15

- Permutations and Combinations: Fundamental Principles of Counting, Factorial Notation, Elementary problems on Permutations and Combinations
- Probability: Random Experiment and Finite Sample Space Events, Types of Events. Mathematical Definition of Probability of an event, Examples on Probability of events

Unit 2: Statistics	15

- Measures of Dispersion: Range, Coefficient of Range , Variance, Standard Deviation (SD), Combined Mean and Combined S.D. for two Groups, Coefficient of Variation
- Correlation and Regression: (for Ungrouped Data only): Correlation, Types of Correlation, Karl Pearson's Coefficient of Correlation for Ungrouped Data, Spearman's Rank Correlation Coefficient without ties
- Theory of Attributes: Attributes, Classes and Class Frequencies (order 2), Consistency of Data(order 2), Association of Attributes(order 2), Yule's Coefficient of Association

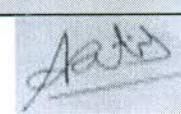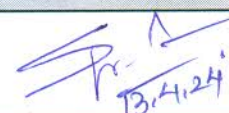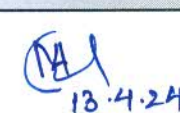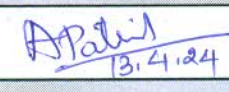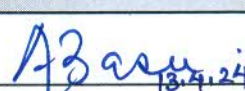| Board of Studies	Department	Name	Signature
Chairperson (HoD)	Mathematics and Statistics	Dr. Deepa Krishamurthy	Deepa 13/4/24

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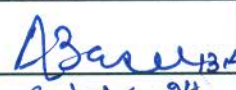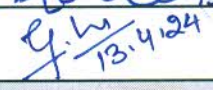
Recommended Text Books:

- Rayarikar A.V and Dixit P. G., *Business Mathematics,* Nirali Prakashan, June 2019
- Bari, *Business Mathematics*, New Literature Publishing Company

Reference Books:

- V. K. Kapoor, *Business Mathematics*. Sultan Chand and Sons: New Delhi; 1991.
- Bari, S.A. *Practical Business Mathematics*. New Literature Publishing: New Delhi
- Gupta, S.P. *Statistical Methods*. Sultan Chand and Sons: New Delhi; 2011.
- Gupta, S.C. *Fundamentals of Statistics*. Himalaya Publishing House: Mumbai; 2004.
- Agrawal, B.L. *Basic Statistics*. New Age International Publishers: New Delhi; 2006.
- Kapoor, V.K. *Operations Research Techniques for Management*. Sultan Chand and Sons: New Delhi; 2011.

Board of Studies	Name	Signature	
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Chairperson (HoD)	Mathematics and Statistics	Dr. Deepa Krishamurthy	*Deepa 13/4/2*