

Course: OE
Foundations of Statistics

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

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- 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

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- 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






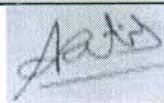

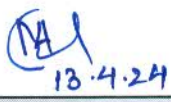
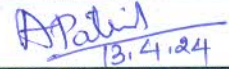
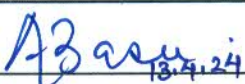
Board of Studies	Department	Name	Signature
Chairperson (HoD)	Mathematics and Statistics	Dr. Deepa Krishnamurthy	<i>Dr. Deepa</i> 13/4/24

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.

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Faculty	Mrs. Geetika Bhati		
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VC Nominee (SPPU)	Dr. Manish Agalave		
Industry Expert	Ms. Amruta Patil		
Alumni	Ms. Janhavi Katkar		

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