

Course: OE
Basics of Mathematics and Statistics

Semester: I	Credits: 2	Subject Code: OE2 12306	Lectures: 30
--------------------	-------------------	--------------------------------	---------------------

Course Outcomes:

At the end of this course, the learner will be able to:

- CO1- Relate the basic concepts in Finance and Business Mathematics like Interest, shares and dividends etc. and interpret data intelligently through numerical means
- CO2- Discuss applications of Mathematical concepts like progressions in Business
- CO3- Examine modern day concerns pertaining to investments, interests, purchasing, comparison of various schemes, time value of money, loans, installment plans etc.
- CO4- Analyze data through elementary statistical methods like condensation and representation of data and diagrams such as histograms, ogive curves.
- CO5- Calculate various types of averages and variation.

Unit 1: Commercial Arithmetic

15

- Shares and Dividend: Concept of shares, Dividend, Equity shares, Preferential shares, Bonus shares, Face Value, Market value, Dividend, Problems on Dividend.
- Commission & Brokerage.
- Interest: Simple interest, Compound interest (Nominal and effective rate of interest), Equated monthly installments (EMI) Flat interest system.

Unit 2: Statistics and Progressions

15

- Representation of Data: Data Condensation and Representation: Raw data, Attributes, Variables, Classification, Frequency Distribution, Cumulative Frequency Distributions, Histogram and Ogive Curves.
- Measures of Central Tendency: Mean, Median and Mode of grouped and ungrouped data.
- Index Numbers: Concept of Index Number, Price Index Number, quantity index number Laspeyre's, Paasche's and Fisher's Method for finding Index numbers.
- Progressions : Arithmetic Progression (A.P.) Geometric Progression (G.P.) with simple practical applications in real life business environment.

Recommended Text Books:


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



Board of Studies	Department	Name	Signature
Chairperson (HoD)	Mathematics and Statistics	Dr. Deepa Krishnamurthy	<i>Deepa</i> 18/4/24

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	
Chairperson (HoD)	Dr. Deepa Krishnamurthi		
Faculty	Prof. Amrita Basu		
Faculty	Mrs. Geetika Bhati		
Subject Expert (Outside SPPU)	Dr. Avinash Patil		
Subject Expert (Outside SPPU)	Dr. Prashant Malavadkar		
VC Nominee (SPPU)	Dr. Manish Agalave		
Industry Expert	Ms. Amruta Patil		
Alumni	Ms. Janhavi Katkar		



Board of Studies	Department	Name	Signature
Chairperson (HoD)	Mathematics and Statistics	Dr. Deepa Krishnamurthy	