BUSINESS STATISTICS AND OPERATION RESEARCH –I

Sem	Subject Code	Category	Lecture		Theory		Practical	Credits
			Hrs	Hrs P/Sem	Hrs P/W	Hrs P/Sem		
III	21CCO3D	Core - VIII	5 hrs per week	75	5 hrs per week	75	-	4

COURSE OBJECTIVES:

- To develop the students ability to deal with numerical and quantitative issues in business.
- To enable the use of statistical techniques wherever relevant.

COURSE OUTCOMES:

On the successful completion of the course, the students will be able to

CO Number	Co Statement	Knowledge Level (K1-K4)
CO1	To understand the concept of statistics	K2
CO2	To provide practical exposure on calculation of measure of Central tendency	K3
CO3	To provide exposure to the concept of variability and measure the spread or dispersion, understand it, and identify its causes to provide a basis for action.	K4
CO4	To understand and examine the data distribution through measures of skewness.	K3
CO5	To acquire knowledge about Linear Programming techniques	K4

Knowledge Level : K1- Remember ; K2 – Understand; K3 Apply ; K4 – Analyze

MAPPING WITH PROGRAMME OUTCOMES:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	M	S	S	M
CO2	M	S	S	S	M	S
CO3	S	M	M	M	M	M
CO4	M	S	S	S	S	M
CO5	S	M	M	M	S	S

S-Strong   M- Medium   L-Low

UNIT- I INTRODUCTION 13 Hours

Statistics – Definitions – Functions of Statistics – Scope and Limitations of Statistics – Collection of Data – Primary and Secondary Data - Methods of Collecting Primary Data - Differences between Primary Data and Secondary Data – Sources of Secondary Data – Classification – Objectives of Classification – Characteristics of a Good Classification- Types of Classification- Tabulation – Objectives of Tabulation – Components of a Good Table – Rules regarding the construction of a Table - Difference Between Classification and Tabulation.

UNIT- II MEASURES OF CENTRAL TENDENCY 15 Hours

Properties of a Good Average – Measures of Central Tendency or Averages – Arithmetic Mean (AM) – Meaning – Computation of AM – Median – Meaning – Computation of Median – Mode - Meaning-Computation of Mode - Geometric Mean - Harmonic Mean - Merits and Demerits of various Measures of Central Tendency.

UNIT- III MEASURE OF DISPERSION 17 Hours

Properties of a Good Measure of Variation – Absolute and Relative Measure of Dispersion – Method of Studying Variation – Range – Quartile Deviation – Mean Deviation – Standard Deviation – Merits and Limitations of Measures of Dispersion.

UNIT- IV MEASURE OF SKEWNESS 15 Hours

Karl Pearson's Coefficient - Meaning and Methods of Karl Pearson's Coefficient of Skewness- Bowley's Coefficient of Skewness- Meaning and Methods of Bowley's Coefficient.

UNIT- V – INTRODUCTION TO OPERATIONS RESEARCH (OR) AND LINEAR PROGRAMMING 15 Hours

The Nature and Meaning of OR – Characteristics of OR – Main Phases of OR – Scope of OR - Linear Programming – Structure and Assumptions of an L.P. Problem – General Mathematical Model of LP Problem – Graphical method of Solution of LP Problems – Minimum and Maximum Method.

DISTRIBUTION OF MARKS:THEORY – 20% ; PROBLEMS – 80%

TEXT BOOKS:

S.no	Author	Title of the book	Publications	Year of publication
1	P.A. Navnithan	Business Statistics and Operations Research	Jai Publishers	2009
2	S.P.Rajagopalan	Business Statistics and Operations Research	Tata Mc Graw Hill	2009
3	K. Alagar	Business Statistics	Tata Mc Graw Hill	2010
4	P.N. Arora Amit AroraS. Arora	Business Statistics	S.Chand Publications	2008

REFERENCE BOOKS:

S.No	Author	Title of the book	Publications	Year Of Publication
1	P.A. Navnithan	Business Statistics and Operations Research	Jai Publishers	2009
2	S.P.Rajagopalan	Business Statistics and Operations Research	Tata Mc Graw Hill	2009
3	K. Alagar	Business Statistics	Tata Mc Graw Hill	2010
4	P.N. Arora Amit Arora S. Arora	Business Statistics	S.Chand	2008
5	Sharpe De Veaux Velleman	Business Statistics	Pearson	2014
6	Robert A. Donnelly	Business Statistics	Pearson	2014
7	Jaggia/ Kelly	Business Statistics communicating with numbers	MC Graw Hill Education	2015
8	Bowerman O'connell Murphree	Business Statistics in practice	MC Graw Hill Education	2016
9	Levine Szabat Stephan	Business Statistics	Pearson	2015
10	David F. Groebner Patrick W. Shannon Phillip C. Fry	Business Statistics	Pearson	2017

TEACHING METHODOLOGY:
- Class room teaching
- Discussions
- PPT Presentations
- Seminar
- Blended Learning

SYLLABUS DESIGNERS:
- Dr.G.Bhavani Assistant Professor of Commerce
- Dr.V.Sudha Assistant Professor of Commerce
- Ms. D. Divya, Assistant Professor of Commerce