

<b>BUSINESS STATISTICS</b>			
Course Code	20MBA14	CIE Marks	40
Teaching Hours/Week (L:T:P)	3:0:2	SEE Marks	60
Credits	04	Exam Hours	03
<b>Course Objectives:</b> 1. To make the students learn about the applications of statistical tools and Techniques in decision making. 2. To emphasize the need for statistics and decision models in solving business problems. 3. To enhance the knowledge on descriptive and inferential statistics. 4. To develop analytical skills in students in order to comprehend and practice data analysis at different levels. 5. To familiarize the students with analytical package MS Excel.			
<b>Module -1 Introduction to Statistics</b>			<b>9 hours</b>
<b>Introduction to Statistics:</b> Meaning and Definition, functions, scope and limitations, Collection and presentation of data, frequency distribution, measures of central tendency - Mean, Median, Mode, Geometric mean, Harmonic mean. <b>Measures of dispersion:</b> Range – Quartile Deviation – Mean Deviation -Standard Deviation – Variance- Coefficient of Variance - Comparison of various measures of Dispersion.			
<b>Module -2 Correlation and Regression</b>			<b>7 hours</b>
Scatter Diagram, Karl Pearson correlation, Spearman's Rank correlation (one way table only), simple and multiple regressions (problems on simple regression only).			
<b>Module -3 Probability Distribution</b>			<b>9 hours</b>
<b>Probability Distribution:</b> Concept and definition - Rules of probability –Random variables – Concept of probability distribution – Theoretical probability distributions: Binomial, Poisson, Normal and Exponential – Baye's theorem (No derivation) (Problems only on Binomial, Poisson and Normal).			
<b>Module -4 Time Series Analysis</b>			<b>8 hours</b>
<b>Time Series Analysis</b> –Objectives, Variations In Time Series - Methods Of Estimating Trend: Freehand Method - Moving Average Method - Semi-Average Method - Least Square Method. Methods of Estimating Seasonal Index: Method Of Simple Averages - Ratio To Trend Method - Ratio To Moving Average Method.			
<b>Module -5 Hypotheses</b>			<b>7 hours</b>
Types, characteristics, source, formulation of hypotheses, errors in hypotheses. Parametric and Non-Parametric Tests- t-test, z-test, f-test, u-test, K-W Test (problems on all tests). Normality and reliability of hypothesis. Statistical analysis- Bivariate and Multivariate Analysis- ANOVA-one-way, two-way classification (theory only).			
<b>Module-6 Computer lab for Statistics</b>			<b>10 hours</b>
<b>MS Excel:</b> Functions, Formulas, Types of errors in excel, Data analysis using MS-Excel- Mean, Median, Mode, Geometric Mean, Harmonic mean, Standard Deviation, Correlation			
<b>Course Outcomes:</b> At the end of the course the student will be able to: 1. Facilitate objective solutions in business decision making under subjective conditions. 2. Demonstrate different statistical techniques in business/real-life situations. 3. Understand the importance of probability in decision making. 4. Understand the need and application of analytics. 5. Understand and apply various data analysis functions for business problems.			
<b>Practical Component:</b> <ul style="list-style-type: none"> <li>Students are expected to have a basic excel classes.</li> <li>Students need to be encouraged to do a small primary research inside the classroom in groups and to analyze the data using statistical tools like Mean, SD, Correlation(Ex: Motivation, Stress etc)</li> <li>Students can also be encouraged to go out for a live survey in Malls, Showrooms and in other Colleges to collect data's and to analyze it. Ex: Buying behavior, Brand aspects etc)</li> </ul>			
<b>Lab compulsory-minimum 10 hours.</b>			

CO-PO MAPPING					
CO	PO				
	PO1	PO2	PO3	PO4	PO5
CO1	X			X	X
CO2	X	X	X		X
CO3	X		X		X
CO4	X		X		
CO5	X	X	X	X	X

**Question paper pattern:**  
The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 60.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks.
- Each full question will have sub question covering all the topics under a Module.
- The students will have to answer five full questions; selecting four full question from question number one to seven and question number eight is compulsory.
- 40 percent theory and 60 percent problems in the SEE.

Textbooks				
Sl No	Title of the book	Name of the Author/s	Publisher Name	Edition and year
1	Fundamentals of Statistics	S C Gupta	Himalaya Publications	2012
2	Research Methodology	Ranjit Kumar	Sage Publications	2018
3	Parametric and Non Parametric Statistics	Vimala Veeraraghavan and Suhas	Sage Publication	2017

Reference Books				
1	Statistical Methods	Dr. S P Gupta	Sultan Chand Publications	2014
2	Research Methodology	C R Kothari	Viswa Prakasam Publication	2015
3.	Business Research Methods	S.N.Murthy and U.Bhojanna.	Excel Books	3e, 2016