

## STATISTICS FOR MANAGEMENT

<b>I Semester: MBA</b>								
<b>Course Code</b>	<b>Category</b>	<b>Hours / Week</b>			<b>Credits</b>	<b>Maximum Marks</b>		
<b>CMBB05</b>	<b>Core</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>CIA</b>	<b>SEE</b>	<b>Total</b>
		4	-	-	4	30	70	100
<b>Contact Classes: 45</b>		<b>Tutorial Classes: Nil</b>		<b>Practical Classes: Nil</b>		<b>Total Classes: 45</b>		
<p><b>OBJECTIVES:</b>  <b>The course should enable the students to:</b></p> <ol style="list-style-type: none"> <li>I. Understand the various statistical techniques and solve problems effectively in the statistics.</li> <li>II. Analyze the different types of skewness and know about the coefficient variations of skewness.</li> <li>III. Know the application of statistical measures of central tendency and also statistical measures of dispersion.</li> <li>IV. Emphasize application of ANOVA, other non-parametric test and analyze the recent trends.</li> <li>V. Apply the time series analysis and also trend analysis of data and also know its importance for solving the problems arising.</li> </ol> <p><b>COURSE OUTCOMES:</b></p> <ol style="list-style-type: none"> <li>1. Recognize the significance, limitations, origin and development of statistics.</li> <li>2. Acquire the knowledge about different managerial applications of statistics in various fields in modern times and analyze the use of computers in statistics.</li> <li>3. Discuss various types of measures of central tendency and measures of dispersion..</li> <li>4. Analyze the different types of coefficient of skewness and the coefficient of variation.</li> <li>5. Understand the tabulation and classification of data to draw effective solutions for solving problems.</li> <li>6. Demonstrate the diagrammatical and graphical representation of data by using different dimensional diagrams.</li> <li>7. Examine the differences between uni-variate, bi variate and multi variate data.</li> <li>8. Apply different types of small sample tests and techniques of ANOVA.</li> <li>9. Analyze correlation analysis and different types of coefficient of correlation.</li> <li>10. Describe the regression analysis, time series analysis and trend analysis of data.</li> </ol>								
<b>UNIT-I</b>		<b>INTRODUCTION TO STATISTICS</b>					<b>Classes:08</b>	
Overview, origin and development and managerial applications of statistics and branches of the study, statistics and computers, limitations of statistics.								
<b>UNIT -II</b>		<b>MEASURES OF CENTRAL TENDENCY</b>					<b>Classes:09</b>	
Mean, median, mode, geometric mean and harmonic mean, dispersion, range ,quartile deviation, mean deviation; co-efficient of variation skewness: Karl pearson co-efficient of skewness, bowleys co-efficient of skewness, kelleys co-efficient of skewness; theory and problems, discussion on direct and indirect methods of solving the problems.								

<b>UNIT -III</b>	<b>TABULATION OF UNIVARIATE</b>	<b>Classes:08</b>
<p>Bi variate and multi variate data, data classification and tabulation, diagrammatic and graphical representation of data.</p> <p>One dimensional, two dimensional and three dimensional diagrams and graphs.</p>		
<b>UNIT -IV</b>	<b>SMALL SAMPLE TESTS</b>	<b>Classes:10</b>
<p>T-Distribution: properties and applications, testing for one and two means, paired t-test; analysis of variance: one way and two way ANOVA(with and without interaction),chi-square distribution: test for a specified population variance, test for goodness of fit, test for independence of attributes; correlation analysis: scatter diagram, positive and negative correlation, limits for coefficient of correlation, Karl Pearson's coefficient of correlation, spearman's rank correlation, concept of multiple and partial correlation.</p>		
<b>UNIT -V</b>	<b>REGRESSION ANALYSIS</b>	<b>Classes: 10</b>
<p>Concept, least square fit of a linear regression, two lines of regression, properties of regression coefficients; Time Series Analysis: Components, models of time series additive, multiplicative and mixed models; Trend analysis: Free hand curve, semi averages, moving averages, least square methods; Index numbers: introduction, characteristics and uses of index numbers, types of index numbers, un weighted price indices, weighted price indices, tests of adequacy and consumer price indexes.</p>		
<b>Text Books:</b>		
<ol style="list-style-type: none"> <li>1. Levin R.I., Rubin S. David, "Statistics for Management", Pearson, 7<sup>th</sup> Edition, 2015.</li> <li>2. Beri, "Business Statistics", TMH, 1<sup>st</sup> Edition, 2015.</li> <li>3. Gupta S.C, "Fundamentals of Statistics", HPH, 6<sup>th</sup> Edition, 2015.</li> </ol>		
<b>Reference Books:</b>		
<ol style="list-style-type: none"> <li>1. Levine , Stephan , krehbiel , Berenson, "Statistics for Managers using Microsoft Excel", PHI, 1<sup>st</sup> Edition, 2015.</li> <li>2. J. K Sharma, "Business Statistics", Pearson Publications, 2<sup>nd</sup> Edition, 2015.</li> </ol>		
<b>Web References:</b>		
<ol style="list-style-type: none"> <li>1. <a href="https://aditya30702.files.wordpress.com/2012/07/statistics-for-managers-using-microsoft-excel- gnv64.pdf">https://aditya30702.files.wordpress.com/2012/07/statistics-for-managers-using-microsoft-excel- gnv64.pdf</a></li> <li>2. <a href="http://www.nprcet.org/mba/document/First%20Semester/BA7102%20STATISTICS%20FOR%20MANAGEMENT%20LT%20P%20C%203%201%200%204%20ODD.pdf">http://www.nprcet.org/mba/document/First%20Semester/BA7102%20STATISTICS%20FOR%20MANAGEMENT%20LT%20P%20C%203%201%200%204%20ODD.pdf</a></li> </ol>		
<b>E-Text Books:</b>		
<ol style="list-style-type: none"> <li>1. <a href="http://bookboon.com/en/statistics-and-mathematics-ebooks">http://bookboon.com/en/statistics-and-mathematics-ebooks</a></li> <li>2. <a href="http://www.ebay.com/bhp/statistics-for-managers-using-microsoft-excel">http://www.ebay.com/bhp/statistics-for-managers-using-microsoft-excel</a></li> </ol>		