Course Code	**Statistical Data Analytics for Business Research**	L	T	P	C
XXXX		3	1	0	4
Pre-requisite		Nil	Version		

Course Objectives:

1. Enhance the analytical capability of the students using statistics.
2. The students will be able to convert raw data into useful information using descriptive statistics such as measures of central tendency and dispersion.
3. Examine the use of probability and probability theories in decision making
4. Describe the fundamental principles of hypothesis testing, define significance level, perform an appropriate test to identify sampling variation of sample means using parametric and non-parametric tests

Expected Course Outcome:

1. Students shall know how to organize, manage, and present data.
2. Students shall be able to apply probability in business.
3. Students shall be able to apply factor and cluster analysis real time data.
4. Apply various statistical tools in the business scenario

Student Learning Outcomes (SLO):

1. Having an ability to apply mathematics / business problem solving techniques in business applications
2. Having a clear understanding of the subject related concepts and of contemporary issues
6. Having an ability to design a Quantitative / product / service solutions applying all the relevant standards and with realistic constraints, in different managerial contexts.
7. Having computational thinking (Ability to translate vast data in to abstract concepts and to understand database reasoning)
9. Having problem solving ability – solving social issues and business problems.
17. Having an ability to use techniques, skills and modern managerial tools & techniques necessary for business practice

Module:1	**Data preparation for BA**	**Hours**	**SLO**	**CO**
	Measures of central tendency and dispersion and graphical representation for data summarization.	8	1&2	1
Module:2	**Causal and effect models**		**2&6**	**1**
	Simple and multiple correlation, simple and multiple regression,	6		
Module:3	**Predictive analysis**			
	Basic concepts of regression Analysis - Regression and contingency table analysis - Stepwise backward and forward regression analysis and Discriminant analysis: Classification and Predication and Attribute based Perceptual Mapping.	6	6&7	1&4
Module:4	**Model fit**			

	Introduction of Small and Large sample tests- Small Sample Test: Students t test and Z test; Z test for Single Proportion, Difference of Proportion, mean and difference of means Large Sample Test: F-test- chi-square test- goodness of fit - independence of attributes and Non-parametric Tests.	9	2&6	1&3
Module:5	**Classification techniques**			
	Factor Analysis: Data preparation, reduction of dimensionality. Cluster analysis: Classification methods - Deriving cluster and assessing overall fit.	5	7&9	1&3
Module:6	**Contemporary applications & Issues**			
	Application of inferential statistics in business and research – a consolidated overview and an exhaustive problem solving exercise - assisted learning by course teacher and Case Analysis	6	17	4
	Total Lecture hours:	**40**		

Text Book(s)

1. Turban, E., Sharda, R., &Delen, D. (2007). Decision support and business intelligence systems. Pearson Education India.

Reference Books

1. Shmueli, G., Patel, N. R., & Bruce, P. C. (2007). Data mining for business intelligence: concepts, techniques, and applications in Microsoft Office Excel with XLMiner. John Wiley & Sons.
2. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., &Tatham, R. (2006). Multivariate Data Analysis: Pearson Education. New Jersey: Hoboken.
3. Hamilton, J. D. (1994). Time series analysis (Vol. 2). Princeton: Princeton university press
4. Hand, D. J., Mannila, H., & Smyth, P. (2001). Principles of data mining. MIT Press.

Mode of Evaluation : Quizzes, Digital assignments and FAT examination

Course Owner details:

Course Owner	Dr.A.Vasumathi
Emp. ID	10363
Email	
School	VITBS

Recommended by Board of Studies	23.11.2018		
Approved by Academic Council	53	Date	13.12.2018