Semester	IV	Specialization	Health Care
Course Code	409 HM	Type	Elective
Course Title		Healthcare Data Analytics Part - II	

Course Objectives:

1	**To make the students aware about the clinical research.**

Syllabus:

Unit Number		Number of Sessions
1	Introduction to biostatistics, linear regression, ANOVA and MANOVA, logistic regression.	2 + 4
2	Concept of Reliability and Validity, Define reliability and its relationship with measurement error; Determine the appropriate measure of reliability of measurement of the key variables.	2 + 4
3	Conducting factor analysis,	2 + 4
4	Application of Parametric and non Parametric tests in the Data analysis process.	2 + 4
5	Decision Making: Introduction to different decision criteria, Construct and use decision alternatives, Make decisions with Bayesian updates. The Mayo Clinic case.	6

Note:

Learning Resources:

1	Text Books	1. Vittinghoff E., Glidden, D.V., Shiboski, S.C. and McCulloch, C.E. (2005) Regression Methods in Biostatistics. 2. Carmines, EG and Zeller RA. (1979). Reliability and Validity Assessment. 3. Statistics for Management by K. Subramani Scitech publications(India) Private Ltd.
2	Reference Books	
3	Supplementary Reading Material	1. Kleinbaum DG, Kupper LL, Muller KE, Nizam A. Applied Regression Analysis and Multivariable Methods, 4th Edition. Pacific Grove: Duxbury Press (2007). 2. Fitzmaurice GM, Laird NM, Ware JH (2004) Applied Longitudinal Data Analysis, John Wiley & Sons, Hoboken New Jersey. 3. Edwards, R., Telfair, J., Cecli, H., Lenoci, J. (2000) Reliability and Validity of a SelfEfficacy Instrument Specific to Sickle Cell Disease. Behavior Research and Therapy, 38, 951-963
4	Websites	
5	Journals	