

1.	Title of the course	Regression Analysis
2.	Course number	MA514L
3.	Structure of credits	3-1-0-4
4.	Offered to	PG
5.	New course/modification to	Modification To MA5208/10
6.	To be offered by	Department of Mathematics and Statistics
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	Course Objective(s): To introduce the fundamentals of simple and multiple regression analysis along with the associated techniques for selecting, testing and validating models using data. To demonstrate the techniques of dealing the existence of the inter-associations, abnormal values and influential observations.	
10.	Course Content: Simple and multiple linear regression models, estimation, tests and confidence regions for model parameters; Check for normality assumption; Confidence intervals, and hypotheses tests; Tests for distributional assumptions; Multicollinearity, outliers, analysis of residuals, lack of fit, model selection, the transformation of response variables; Ridge's regression.	
11.	Textbook(s): 1. Draper N R and Smith H, <i>Applied Regression Analysis</i> , John Wiley and Sons (Asia) Pvt. Ltd (2003).	
12.	Reference(s): 1. Bowerman B L and OConnell R T, <i>Linear Statistical Models: An Applied Approach</i> , Brooks/Cole (1990). 2. Montgomery D C, Peck E A and Vining G G, <i>Introduction to Linear Regression Analysis</i> , John Wiley & Sons (2012).	