

Module Code	MA4013	Title	Linear Models and Multivariate Statistics			
Credits	03	Hours/Week	Lectures	03	Pre-requisites	MA1023/3013
			Lab/Tutorials	-		

Learning Outcomes

At the end of this module the student should be able to

- Develop statistical models to identify influential factors in a given process.
- Understand the concepts of statistical data mining methods.
- Use MINITAB and SPSS for data analysis.
- Select the appropriate multivariate statistical methods to analyze data.

Outline Syllabus

Linear Models

- Types of measurement scale, multiple regression, one-way analysis of variance. Model diagnostics, partial F-Test, forward selection, Backward elimination and Stepwise techniques.

Multivariate Statistics

- Geometric concept of multivariate data.
- Introduction to data mining and warehousing.
- Multivariate normal distributions.
- Principal component analysis, explanatory factor analysis, discriminant analysis, cluster analysis.
- Multivariate analysis of variance.
- Use of MINITAB and SPSS.