

Semester	Code	Module Title	Credits	C/E/O	GPA/NGPA
7,8	MA4014	Linear Models and Multivariate Statistics	3	E	GPA
Hours/Week		Pre-requisites/Co-requisites	Evaluation (%)		
Lecture	Tute/Lab		CA	WE	
3	0	MA3014	30	70	

Learning Outcomes

After the successful completion of this course students should be able to

- Understand the theory of various types of linear models and multivariate statistical methods
- Compare different statistical models fitted for real time data
- Apply the appropriate multivariate statistical methods to analyze data

Syllabus Outline

Linear Models

- Types of measurement scale, concept of linear models and generalized linear models
- Multiple regression: model selections, diagnostics tests
- One-way analysis of variance
- Binary logistic regression

Multivariate Statistics

- Geometric concept of multivariate data.
- Introduction to data mining and warehousing.
- Properties of multivariate normal distributions.
- Multivariate regression
- Principal component analysis
- Explanatory factor analysis
- Discriminant analysis
- Cluster analysis
- Multivariate analysis of variance.