# Stat-317 Statistical Data Analysis VI

## 50 Marks: 02 Credits

## Number of Class: 20-26

### *Group A (Analysis of Variance): 30 Marks*

Analysis of variance in one way, two way and three way classification with equal number of observations per cell with fixed effects, mixed effects and random effects models, variance component analysis in one way, two way and three way classified data, covariance analysis with one concomitant variable, analysis of covariance in one-way and two-way classified data. nested design, analysis of two stage nested design, analysis of three stage nested design.

### *Group B (Statistical Software STATA and R): 20 Marks*

Data Management, calculation of different descriptive statistics, creating different charts, construction of matrices, vectors and their operations, regression, correlation, statistical inference in regression analysis, examination of residuals, model selection, generation of random sample from different distributions, plotting the densities and cumulative densities in both STATA and R.