SYLLABUS FOR STAT636

Prerequisites: Stat 651, 652, a Course in linear algebra.

Class Outline:

We will cover chapters 1-7 of our course notes, and possibly a chapter 8 if time allows.

Topics includes are:
Chapter 1: Introduction, Matrix Algebra, Basic Statistics and an Introduction to Testing.
Chapter 3: MANOVA, MANCOVA, Nonparametric Methods, Density Estimation, Spatial Statistics.
Chapter 4: Principal Components, Sample estimates of PC’s, Inferences for PC’s, Choosing the number of PCs, Unstable Regression Methods.
Chapter 5: Factor Analysis, Principal FA, Maximum Likelihood FA, Choosing the number of Factors.
Chapter 6: Canonical Correlations, Examples and interpretations.
Chapter 7: Discrimination and Classification, Fisher’s LDF, CART, Estimation of Misclassification probabilities, Cross Validation, Bagging Predictors.
Chapter 8: Cluster Analysis, Parametric Methods, Nonparametric Methods, Dendograms, Data Depth