

Syllabus for the Pre-Ph.D/IMSc IX semester STATISTICS course  
(implemented for academic year 2015-16)

1. Sequential analysis ; unbiased sequential estimation for binomial proportion, optimal bounded sequential procedures, sequential tests between three hypotheses.
2. Empirical likelihood methods; nonparametric maximum likelihood estimators, empirical likelihood based tests of hypotheses.
3. Reliability; basic concepts, classes of life time distributions.
4. Generation of distributions; methods of generation of distributions and their applications.
5. Order restricted statistical inference; basic concepts and algorithms, estimation and testing under restrictions.

References

1. De Goor M H (1970) *Optimal Statistical Decisions* Mg Graw-Hill book company.
2. Owen A B(2001) *Empirical Likelihood*, Chapman and Hall.
3. Robertson T,WrightF T and Dykstra R L (1968) *Order restricted statistical inference*, John Willey and sons.
4. Barlow R E and Proschan F (1975) *Statistical theory of reliability and life testing* , Holt, Tinehartand Winston Inc.
5. [Wetherill, G.B](#) (1995) *Sequential methods in statistics* Chapman & Hall.