2nd Year 2nd Semester

Stat-221 Sampling Distribution

100 Marks: 03 Credits
Number of Class: 35-40

Random Variable, Distribution of Random Variable, Properties of Random Variable, Functions of Random Variable, their Conditional Distributions, Concept of Sampling Distribution, Methods of Obtaining Sampling Distribution, Variate Transformations: Square Root, Log, Sin Inverse, Fisher's *Z* Transformation, Laplace Transformation, Exact Sampling Distribution Related to Normal Population, Distribution of Sample Mean, Sample Variance, Sample Covariance. Central and Non-Central Distribution of *t*, Chi square (χ^2), Variance Ratio *F*, Fisher's *Z* Distribution.

Text

1. Hogg, R. V. and Craig, A. T. (2002): *Introduction to Mathematical Statistics*, 5th edition, Pearson Education, Asia.
2. Mood, A. M. and Graybill, F. A. and Boes, D.C. (1974): *Introduction to the Theory of Statistics*, 3rd edition, McGraw-Hill, New York.
3. Rohatgi, V. K. and Saleh, A. K. Md. (2000): *An Introduction to Probability and Statistics*, Second edition, Wiley-Interscience.

References

1. Evans, M., N. Hasting and B. Peacock (2000): *Statistical Distributions*, 3rd edition, Wiley, New York.
2. Hoel, P.G. (1984): *Introduction to Mathematical Statistics*, 5th edition, John Wiley and Sons, New York.
3. Hogg and Tanis (2001): *Probability and Statistical Inference*, 6th edition, Prentice Hall, New Jersey.
4. Lindgreen, B.W. (1976): *Statistical Theory*, 3rd edition, MacMillan, UK.