

## SEMESTER-VI

### STAT- 300 Basic Statistics (Cr.02)

- Statistics- introduction.  
Definition, Descriptive and inferential statistics, Population, Sample, Data collecting.
- Graphical Representation..  
Simple Bar chart  
Multiple Bar charts  
Rectangle Sub-divided Chart  
Histogram  
Frequency Polygon  
Histogram  
Pi- Chart
- Central Tendencies (A.M, G.M, Median, Mode. H.M. for Ungrouped Data.)
- Quantiles (for ungrouped data).  
Quartiles  
Percentile  
Deciles
- Measures of dispersion (Mean Deviation. Variance. Standard Deviation, Coefficient of Variation).
- Basic Probability Theory.
- Regression: Definitions of Simple linear regression, multiple regression (for two independent variables), and Correlation.
- Estimation: Point estimate, interval estimates, Confidence Interval for Single Mean. Difference of Mean.
- Testing of Hypothesis: t- test for single mean for paired samples and for Independent samples.
- ANOVA, Multiple Comparison Test (LSD and DUCANSAN).
- Chi Square for Association.

### Recommended Books

William Navidi, Statistics for Engineers and Scientists. ISBN- 13: 978-0073376332, John Wiley, New York, USA, (2010).

John Schueneineyer, Larry Drew Statistics for Earth and Environmental Scientists. John Wiley, New York, USA, (2011):