

Course No.	Course Title	Theory	Practice	Credit	Prerequisite(s)
STAT 110	General Statistics	3	-	3	-

### Objectives

- To give the students an understanding of statistics.
- To learn some commonly used statistical techniques.
- To apply these techniques in describing and analyzing data.
- To use statistics to solve different kind of problems.
- To recognize sound/good statistical studies.
- To gain an appreciation for analytical skills.

### Course Description

- What is Statistics?
- Collecting data, graphical presentation and tabulation.
- Measures of central tendency: mean, median and mode.
- Measures of dispersion: range, and standard deviation.
- Relative Dispersion and Skewness.
- Elementary probability: random experiment, sample space, event, and computation of probability. Rules of addition and multiplication, conditional probability and independence.
- Random variables, probability distributions, variance and expected value - Some probability distributions (Binomial, Poisson, and Normal).
- Sampling and sampling distribution: Sampling distribution of Sample Mean (in case of large samples), central limit theorem and sampling distribution of proportion.
- Estimation of population mean and proportion.
- Tests of statistical hypotheses: testing of mean, differences between two means, proportion, differences between two proportions in large samples.
- Simple linear regression and Correlation: Pearson's correlation coefficient and Spearman's rank correlation coefficient.

### Textbook:

Bluman, "*Elementary Statistics a Step by Step Approach*", 6<sup>th</sup> Edition (2006)

### Subsidiary:

Larson & Farber, "*Elementary Statistics: Picturing the World*", 3<sup>rd</sup> Edition (2006)