

Department of Statistics, Presidency University, Kolkata
Syllabus of Statistics Gen-Ed Courses for Odd semesters, 2015
Syllabus Outline

UG Semester	Papers to be offered	For Students of			Requirement
		Science	Huma-nities	Both	
First Semester	STAT 0131: Basics in Statistics & Probability		Yes		(Candidates should have Mathematics at HS level)
	STAT 0132: Data Analysis	Yes			(Candidates should have Mathematics at HS level)
Third Semester	STAT 0331: Statistics in Applied & Social Sciences			Yes	Pre requisite: STAT 0131 (for Arts) STAT 0232 (for Science)
	STAT 0332: Distributions In Statistics	Yes			Pre requisite: STAT 0232

Syllabus Details

STAT 0131 (Arts) - Basics of Statistics & Probability: What is Statistics? Qualitative & quantitative data; Diagrammatic representation of data; Central tendency, Dispersion, Correlation coefficient; Random experiments, Sample space, mutually exclusive & exhaustive events; Classical definition of probability with examples; Independence of events; Random variables, Probability mass & density functions, Expectation & variance.

STAT 0132 (Science) - Data Analysis: Graphical display of data; Measures of location, dispersion, skewness & kurtosis; Moments; Scatter diagram, Correlation coefficient & linear regression in bi-variate set-up, Framework of multiple linear regression, Multiple and partial correlation coefficients.

STAT 0331 (Arts & Science) - Statistics in Applied & Social Sciences: Index number- Consumer and wholesale price index numbers and their uses; Time series analysis- Different components, determination of trend by mathematical curve fitting and moving average methods; Sample survey methodology- Concept of population and sample, Simple random sampling (SRS) with and without replacement, Stratified sampling.

STAT 0332 (Science) - Distributions in Statistics: Discrete case- Geometric, Binomial & Poisson distributions; Continuous case: Transformation of variables; Uniform, Normal, Beta & Gamma distributions; Sampling distributions of sample mean & variance under normal set-up, chi-square, t & F distributions (statement and use only); Bivariate distribution- marginal & conditional distributions, properties of Bivariate normal distribution (Statement only).