Department of Mathematics
Faculty of Sciences, Jamia Millia Islamia

Multidisciplinary Paper in Mathematics (2024-25) Proposed Course Structure and Syllabus

Semester	Code	Title of the Paper	Credits
I	24MATT101	Basic Statistics	3

24MATT101	Basic Statistics
Unit-I	Introduction to Statistics, measure of Central tendency: mean, median and mode of grouped data, measures of dispersion: mean-deviation, variance, standard deviation, measure of kurtosis, measure of skewness
Unit-II	One dimensional random variable, discrete and continuous random variable, mathematical expectation, moments, properties of moment, moment generating function (MGF), properties of moment generating function, Binomial distribution, Poisson distribution.
Unit-III	Two-dimensional random variables, joint distribution functions, marginal distributions, covariance, linear regression and correlation, rank correlation, least square method of fitting regression lines.

Books Recommended

1. S. C. Gupta and V. K. Kapoor, Fundamentals of Mathematical Statistics, Sultan Chand & Sons Publications, (2014).
2. K. M. Ramachandran and C. P. Tsokos, Mathematical Statistics with Applications, Academic Press (2009).
3. A. K. Sharma, Text book of Elementary Statistics: DPH Mathematical series, (2005).
4. Allan G. Bluman, Elementary Statistics: A Step-by-Step Approach; Mc Graw Hill (2009).