Details of course:-

Course Title	Course Structure			Pre-Requisite
	L	T	P	
Applied Mathematics (BT 201)	3	1	0	

Course Objective: Learning mathematical tools applicable in Biotechnology

Course Outcome (CO):

1 Analyse and measure the central tendency, dispersion. Moments, Skewness, and Kurtosis, Multiplication rule of probability along with Baye's rule.
2 Illustrate the Mathematical expectation and Statistical parameters as well as the Moment generating function.
3 Identify the Probability Distributions and its type.
4 Analyse the Solution of Algebraic and Transcendental Equations of Bisection method.
5 Organize the System of Linear Algebraic Equations such as Gauss elimination method, Crout's method.

S.No.	Content	Contact Hours
Unit 1	Descriptive Statistics & Probability: Graphical methods for data. representation. Measure of central tendency. Measure of dispersion. Moments, Skewness, and Kurtosis. Mathematical and Statistical concepts. Axiomatic concepts. Addition rule of probability. Conditional probability. Multiplication rule of probability. Baye's rule.	8
Unit 2	Random variable and Expectation: random variable and distribution function. Jointly distributed random variables. Mathematical expectation. Statistical parameters. Moment generating function.	8
Unit 3	Probability Distributions: Binomial distribution. Geometric distribution. Poisson distribution. Normal distribution. Normal distribution as limiting case of Binomial distribution. Exponential distribution.	10
Unit 4	Solution of Algebraic and Transcendental Equations: Bisection method, Regula Falsi method, Secant methods, Newton-Raphson method, Fixed-point iteration method.	8
Unit 5	System of Linear Algebraic Equations: Gauss elimination method, Crout's method, Gauss-Seidel and Gauss Jacobi methods.	8
	Total	42