Detailed Syllabus

Course Code	Course Title	Hours per week L-T-P	Credit C
MA181301B	**Mathematics III-B** (for branches CSE and ECE/ETE)	**2-1-0**	**3**

Module 1: (25 hours)

Probability

Probability space, conditional probability, Bayes' Theorem, independence; Discrete random variables, Independent random variables, Poisson approximation to the binomial distribution, infinite sequences of Bernoulli trials, sums of independent random variables; Expectation of Discrete Random Variables, Moments, Variance of a sum, Joint Distribution.

Continuous Probability Distributions:

Continuous random variables and their properties with special reference to normal distribution.

Test of significance, Chi-square Test, Elements of Markov Chain.

Module 2: (15 hours)

Statistics:

Measures of Central tendency: Moments, skewness and Kurtosis, Correlation and regression – Rank correlation, Curve fitting by the method of least squares- fitting of straight lines.

Textbooks/References:

1. Erwin Kreyszig, Advanced Engineering Mathematics, 9th Edition, John Wiley & Sons, 2006.
2. P. G. Hoel, S. C. Port and C. J. Stone, Introduction to Probability Theory, Universal Book Stall, 2003 (Reprint).
3. S. Ross, A First Course in Probability, 6th Ed., Pearson Education India, 2002.
4. W. Feller, An Introduction to Probability Theory and its Applications, Vol. 1, 3rd Ed., Wiley, 1968.
5. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications, Reprint, 2010.
6. Veerarajan T., Engineering Mathematics (for semester III), Tata McGraw-Hill, New Delhi, 2010.
7. Statistical Methods: An Introductory Text- J.Medhi, New Age International Publishers