Code	Subject Title	Cr. Hrs	Semester
MATH-122	Applied Mathematics	3	I
Year	Discipline		
1	Physics		

Basic concepts of statistics, concept of probability, axioms of probability, discrete probability, & continuous probability, frequencies and probabilities, binomial, Poisson, and normal distributions, mode, mean, median, regression and correlation, sampling theory, analysis of variance.

Numerical Analysis, solutions of algebraic and transcendental equations, roots of cubic and biquadratic equations, numerical methods, bisection methods, Newton-Raphson, formula, the secant method, method of false position, numerical solution of simultaneous linear algebraic equations, Gauss elimination method, Cramer's rule, Choleski's factorization method, Jacobi iterative method, numerical integration, rectangular rule, Trapezoidal rule, Simpson's rule, Error analysis.

Books Recommended:

Experimental Measurements: Precision, Error and Truth by N. C. Barford, Addison-Wesley Publishing Company, Inc.

Modern Statistics by Richard Goodman, ARC Books, NY.

Mathematical Methods for Physics and Engineering, F. Riley, M. P. Hobson and S. J. Bence, Cambridge University Press, 1997.

Mathematical Physics by E. Butkov, Addison-Wesley Publishing Company, 1968.

Mathematical Methods for Physicists by G. Arfken and H. J. Weber, Academic Press, 1995.