

MTH 402 THEORY OF PARTIAL DIFFERENTIAL EQUATIONS (3 Units)

Theory and solutions of first-order and second order linear equations. Classification, characteristics, cononical forms, Cauchy problems. Elliptic equations; laplace's and posson's formulase, properties of harmonic functions. Hyperbolic equations; wave equations, retarded potential; transmission line equation, Riemann method. Parabolic equation. Diffusion equation, singularity function, boundary and initial – value problem.