

SYLLABUS :-

Nature and origin of turbulence; Reynolds averaging, Boussinesq eddy viscosity hypothesis, Prandtl's mixing length theory and von Karman's similarity hypothesis, vorticity dynamics; Statistical theory of turbulence: isotropic and homogeneous turbulence, scales of turbulence, turbulence modeling: turbulent boundary layers, wakes jets and mixing layers, LES and DNS, experimental methods in turbulence, turbulent flow in pipes.