SUBJECT NO-AE31103, SUBJECT NAME- HIGH SPEED AERODYNAMICS

LTP- 3-1-0,CRD- 4

SYLLABUS :-

Prerequisites: AE21001

3 - 1 - 0: 4 CreditsGoverning equations for compressible flow; One-dimensional compressible flow, linear and nonlinear wave motion; normal and oblique shocks, nozzles; Linearized subsonic and supersonic flow theory; Applications to aerofoils and wings; Supersonic panel methods; Method of characteristics; Transonic and hypersonic flows.Books:A H Shapiro, Dynamics and Thermodynamics of Compressible Fluid Flow â Volume I and II, Ronald PressH W Liepmann and A Roshko, Elements of Gas Dynamics, John WileyJ D Anderson, Jr., Modern Compressible Aerodynamics, McGraw-Hill InternationalZ U A Warsi, Fluid Dynamics: Theoretical and Computational Approach, Taylor and FrancisP A Thompson, Compressible Fluid Dynamics, McGraw-HillS Goldstein, Modern Developments in Fluid Dynamics â Vol. 1 and 2, Oxford University Press