FLUID AND GAS DYNAMICS

Euler equation, Bernoulli's equation, Navier strokes equations, moment of momentum , energy equations, Differential equations of energy , Potential flow theory, Velocity potential, Kinetic energy of irrotational flow, Two – dimensional sinks and sources, a doublet flow around bodies; cylinders , spheres and aerofoils, prediction of velocity and pressure distribution .

Introduction to compressible flow; velocity of sound and mach number, isentropic flow, flow with friction and heat transfer, analysis of flows with normal shock waves.

Ref. Books:

1. Raudkivi A.J. and Callander R.A ; Adv. Fluid Mechanics (Edward Arnold Publishers)
2. Biswas G and Som S. K. –Advanced Fluid Mechanics THM Publication.
3. Schlitching: Boundary Layer Theory (Mc-Graw Hill Publication)
4. Yahya: Compressible Fluid flow (Mc-Graw Hill Publication)
5. Shapiro: Compressible Fluid flow (Mc-Graw Hill Publication)
6 Zucrow, M.J. & Hoffmann J.D. Gas Dynamics (Jhon Wiley & Sons)
1. Radhakrishnan: Gas Dynamics (PHI)