**CH-202 FLUID MECHANICS-I**

Introduction: Liquids and gases, properties of fluids, Force, mass and weight, Units and Conversions. Fluid Statics: Basic equations, pressure forces on surfaces, Pressure vessels, piping, Buoyancy, pressure measuring devices. Pressure in accelerated rigid body motions. General mass balance for single and multi -component fluids. Bernoulli's equation and its applications; diffusers and sudden expansion: Torricelli's equation, cavitation and unsteady flows. Fluid Friction: Reynolds Experiment; laminar and turbulent flows; Friction factor method, fitting loses, enlargements and contractions, friction in non-circular channels, economic pipe diameter, flow around submerged objects. Momentum: Momentum balances; steady flow applications, relative velocities, starting and stopping flows, angular momentum balances. One dimensional high velocity gas flows, shock waves, choking flow, ideal gas considerations, nozzles and diffusers. Dimensional Analysis: Bukingham --Pi Theorem; Reynold's law of Similitude.