

SYLLABUS :-

Introduction, different terminologies, flow regimes for single and two component vertical and horizontal flow, flow regime mappings. Conservation equations based on homogeneous flow, drift flux model, separated flow model (multi-fluid model), flooding, fluidization, two phase transportation. Brief discussion on critical flow condition. Introduction to Lockhart-Martinelli and other important correlations for pressure drop, correlations for void fraction. Detailed discussion on bubbly, slug and annular flow. Description and classification of boiling. pool boiling curve. Rohsenow correlation for nucleate boiling. Zuber's theory for critical heat flux. Bromley theory for film boiling. Chaus correlation for flow boiling. Experimental methods for boiling and two phase flow.