

CVE 411: HYDRAULIC ENGINEERING I (2 Units)

Review of the fundamental principles of flow. Hydraulic modeling. Steady flow in closed conduits: energy equation, energy and hydraulic grade lines, friction and minor losses, pipes in series and parallel, methods of pipe network analysis. Unsteady flow in closed conduits: causes and effects, surges, water hammer. Flow measurement in closed conduits. Hydraulic machinery: pumps and turbines. Computer software applications