CE625A: Masonary Structures   **3-0-0-0 [9]**

Course Contents:

Properties of constituents: units - burnt clay, concrete blocks, mortar, grout, reinforcement; Masonry bonds and properties: patterns, shrinkage, differential movement, masonry properties - compression strength ; Stresses in masonry walls: vertical loads, vertical loads and moments – eccentricity & kern distance, lateral loads - in-plane, out-of-plane; Behaviour of masonry walls and piers: axial and flexure, axial- shear and flexure, Behaviour of Masonry Buildings: unreinforced masonry buildings - importance of bands and corner & vertical reinforcement, reinforced masonry buildings - cyclic loading & ductility of masonry walls; Behaviour of masonry infills in RC frames: strut action; Structural design of masonry in buildings: methods of design – WSD, USD, seismic design - seismic loads, code provisions, infills, connectors, ties; Seismic evaluation and strengthening of masonry buildings: methods - in-situ, non-destructive testing; Construction practices and new materials.