Earth and Earth retaining structures: flexible and rigid retaining wall, gravity, cantilever, counter fort, reinforced earth etc., design and check for stability. Introduction to ground improvement techniques: methods for difficult or problematic ground conditions for soft clays, loose sands, expansive or collapsible soils etc., preloading, vertical drains, stone columns, heavy tamping, grouting etc., Machine foundation and design. Special topic: (Well foundation/Soil nailing/Sheet pile)