

Course Contents:

Site investigations, methods of drilling, sampling, in-situ test - SPT, CPT, plate load and dynamic tests, groundwater level, etc. Bearing capacity, general, local and punching shear failures, corrections for size, shape, depth, water table, compressibility, etc., ultimate and allowable stresses, methods based on in situ tests, Settlements of foundations, stress in soils (Boussinesq, Westergaard), Design of foundation, Types of foundations - shallow/deep, isolated, combined, mat, etc., contact pressure distributions, Earth Pressure theories, Coulomb and Rankine approaches, c-f soils, smooth and rough walls, inclined backfill, Deep foundations: pile and well foundations.