



Course Weekly Outline

Week No.	Theoretical	Experimental
1	Combined Footing Design; Introduction, Rectangular Combined Footing	
2	Trapezoidal Combined Footing, Strap (or Cantilever) Footing	
3	Mat Foundation Design; Introduction, Types of Mat Foundations, Bearing Capacity of Mat Foundations, Mat Settlements, Design of Mat Foundations	
4	Pile Foundations: Single Pile Analysis; Introduction, Classification of Piles, Static Pile Capacity, Point Bearing Capacity, Point Bearing from Field Tests, SPT, CPT,	
5	Skin Friction Capacity, Pile Loading Test-Axial Compression (ASTM-D1143), Pile Capacity – Dynamic Analysis	
6	Pile Foundations: Groups; Introduction, The Carrying Capacity of Pile Groups, Efficiency of Pile Groups, Settlement of Pile Groups, Pile Caps, Negative Skin Friction	
7	Pile Foundations: Groups; Introduction, The Carrying Capacity of Pile Groups, Efficiency of Pile Groups, Settlement of Pile Groups, Pile Caps, Negative Skin Friction	
8	Lateral Earth Pressure; Introduction,	
9	Coulomb Earth Pressure Theory, Rankine Earth Pressures	
10	Retaining Walls; Introduction,	
11	Stability of Retaining Walls, Base Key.	
12	Sheet Pile Walls; Introduction,	

13	Types of sheetpiling, Safety Factor, Cantilever Sheetpiling,	
14	Anchored Sheetpiling: Free-Earth Support, Capacity of Deadman, Location of Deadman.	
15	Applications of PDE	