

CE 435 - FOUNDATIONS

Course Outline

Spring 2009/BM

Topics to be covered:

Introduction, Handout Notes	(Chapters 1 – 3)*
General principles Soil mechanics	
Site Investigations, Handout Notes	(Chapter 4)
Planning Exploration methods Sampling techniques Laboratory and field tests	
Retaining structures, Handout Notes	(Chapters 22 – 24)
Types of retaining walls Lateral earth pressures Design of Retaining walls (Stability, drainage)	
Stability of Slopes, Handout Notes	
Types of slope movement Method of slices, wedges Computer program XSTABL	
Shallow Foundations, Handout Notes	(Chapters 5 – 8)
Bearing capacity Immediate (elastic) settlements Consolidation settlements Settlements in sands Tolerable settlements	
Deep Foundations, Handout Notes	(Chapters 11 – 15, 17)
Types of piles Load transfer mechanism Pile capacity Load tests Group effects	

* - refers to Chapters in recommended text