Course Name:
Advanced Soil Mechanics (I)

Course Number:
20410

Credit:
3

Course Content (outline):

1. Introduction
2. Physico-Chemical Characteristics of the Soil
3. Principals of Effective Stress
4. Flow in Porous Medium: Steady Flow
5. The Porous Medium: Transient Flow - Consolidation
6. Shear Strength Characteristics of Soils
7. Critical State Concept
8. Shear Behavior of Overconsolidated Clays
9. The Behavior of Sands
10. Monitoring & Instrumentation in Geotechnical Engineering

References:

- "Soil Mechanics & Foundations", M.Budhu, 1st Ed., John Wiley, 2000
- "Advanced Soil Mechanics", B.M.Das, 1st Ed., Mc Graw Hill, 1983
- "The Mechanics of Soils – An Introduction to Critical State Soil Mechanics", J.H.Atkinson & P.L.Bransby, 1st Ed., Mc Graw Hill, 1978
- "Geothechnical Engineering", R.Lancellotta, 1st Ed., Balkema, 1995
- "Soil Mechanics in Engineering Practice", K.Terzaghi, R.B.Peck & G.Mesri, 3rd Ed., John Wiley, 1996
- "Geotechnical Modeling", D.M.Wood, 1st Ed., Spon Press, 2004
- "Instrumentation of Geothechnical Structures", Duncliff, 1998
- Various Proceedings & Technical Papers