Course Name:
Site Investigation and Field Monitoring

Course Number:
20405

Credit:
3

Course Content (outline):

1. Importance of Case Studies and Experience Recording in Geotechnical Engineering
2. Origins of Rocks and Soils, Natural Processes on Earth and Landforms
3. Terrain Analysis Based on Aerial Photogrammetry and Satellite Imagery
4. Geophysical Studies
5. Site Investigation Planning
6. Drilling Technology and Sampling in Geotechnics
7. In-Situ Tests and Interpreting of their Results: SPT, CPT, PLT, VST, PMT, SBPM, DMT, SPLT
8. Measuring In-Situ Stresses in Soils and Rocks
9. Measuring Pore Water Pressure, Soil Permeability, and Water Table
10. Geotechnical Instrumentation for Field Monitoring (Stress, Strain, Load, Displacement)
11. Identification and Measuring Soil Contaminants

References:

- Hvorslev, M.J., (1949), "Sub-surface Exploration and Sampling of Soils for Civil Engineering Purposes", Waterways Experimental Station, Vicksburg
- Lunne, T., Robertson, P.K., Powell, J.J., (1997), Cone Penetration Testing in Geotechnical Practice, E & FN spon