Course syllabus

Department of Civil Engineering, Indian Institute of Technology Madras

CE5360 – Soil Exploration and Field Tests

Credit Distribution: C:9 **L:**3 **T:**0 **P:**0 **E:**0 **O:**6 **TH:**0

Course Type: Theory

Description:
To introduce various types of site investigation methods and field tests required in geotechnical engineering practice.

Course Content:
Principles of exploration; Geophysical and sounding methods; Modern methods of boring and sampling; Preservation and transportation of samples; Sampling records, Soil profiles; Various types of field tests; Instrumentation; Investigation below sea/river bed; Offshore investigation; interpretation of exploration data and report preparation.

Text Books : Nil

Reference Books:

1. Clayton, C. R. I., Matthews, M. C. and Simons, N. E. (1995) Site Investigation (Second Edition). Oxford, Blackwell Sciences. 2. Hunt, R. E. (2005) Geotechnical Engineering Investigation Handbook (Second Edition), CRC Press Taylor & Francis Group. 3. Schnaid, F. (2009) In Situ Testing in Geomechanics : The Main Tests. Taylor & Francis. 4. Simons, N., Menzies, B. and Matthews, M. (2002) A Short Course in Geotechnical Site Investigation. Thomas Telford. 5. Dunnicliff, J. (1993) Geotechnical Instrumentation for Monitoring Field Performance. Wiley-Interscience Publication. 6. Lunne, T., Robertson, P. K. and Powell, J. J. M. (1997), Cone Penetration Testing in Geotechnical Practice. Blackie Academic/Routledge Publishing, New York.

Prerequisite: NIL