

# Site Characterisation & Instrumentation \* - Web course

## COURSE OUTLINE

The objectives this course to provide a comprehensive approach on site characterization and instrumentation in geotechnical engineering.

Details of different geotechnical testing used in the site characterization with case study for seismic and geo environmental characterization will be presented. This course also covers the basic an advanced instrumentation used for seismic and geo environmental site characterization monitoring.

## COURSE DETAIL

Module No.	Course Content	No. of hours
1	<b>Introduction to Site Characterization:</b> Application and Advantages.	2
2	<b>Concept of Site characterization:</b> Terminologies and definitions.	2
3	<b>Site Characterization Methods:</b> Site characterization for Geotechnical, Geo environmental and Earthquake Geotechnical Engineering.	3
4	<b>Site investigation for Site Characterization:</b> Different in-situ testing; Advantage and Disadvantage-Selecting Suitable in-situ test.	6
5	<b>Sample requirements:</b> Sampling methods and Equipment for Laboratory Experiments; Handling, preservation and transportation of samples. Sample preparation.	5
6	Laboratory tests for Site Characterizations.	6
7	Analysis and interpretation of results - importance; comparing with in-situ testing.	4



NP-TEL

# NPTEL

<http://nptel.iitm.ac.in>

## Civil Engineering

### Additional Reading:

1. <http://www.tuc.nrao.edu/alma/site/>
2. <http://www.geoforum.com/knowledge/texts/>

### Hyperlinks:

1. <http://www.nwmo.ca/dgrprojectdocuments>

### Coordinators:

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8	Introduction Instrumentation; Problems and phases ; Performance based design parameters.	3
9	Case studies of Different Site Characterization methods; for Geotechnical, Geo environmental and Earthquake Geotechnical Engineering ; Comparison for different methods for same sites.	5
10	Instrumentation Case studies for Geotechnical Engineering Problems.	4
<b>TOTAL</b>		<b>40</b>

**References:**

1. Geotechnical and Geophysical Site Characterization, An-Bin Huang, Paul W Mayne, CRC Press, 2008,ISBN 0415469368, 9780415469364.
2. Head, K.H., Manual of Soil Laboratory Testing. Vols. 1 to 3, 1981.
3. Compendium of Indian Standards on Soil Engineering Parts 1 and II 1987 - 1988.