



Geotechnical Engineering I

SWAYAM Prabha Course Code - C2

| | |
|-------------------------|---|
| PROFESSOR'S NAME | Prof. Devendra Narain Singh |
| DEPARTMENT | Civil Department |
| INSTITUTE | Indian Institute of Technology, Bombay |
| Course Outline | <p>This course deals with the fundamental aspects of the soils, starting from their origin, formation and depositional history and their applications in various Civil Engineering and R&D projects. The discussion shall cover the basic classification and characterization of soils, their compaction characteristics, seepage through them, their compressibility and consolidation characteristics, with an emphasis on how to apply these concepts to the real-life problems. This being a core course, professionals and scholars from various subjects (viz., Civil, Chemical, Mining, Geology, Oil and Gas exploration, Agriculture engineering) would benefit a lot from the discussion that takes place during this journey, a lot. The expected outcome of the course is to familiarize students with soils and to showcase their response and behaviour when they get exposed to external stimuli.</p> <p>The instructor being an active researcher and consultant to various projects of national and international importance, shares 'crucial concepts' that are much needed for successful execution and implementation of projects. Furthermore, the instructor wishes to try his best to discuss and emphasize upon the deviations that have occurred from the 'classical subject', due to extensive research that is going on across the globe in this context. The conventional 'black-board' teaching adopted by the instructor throughout the course makes it easy for the learner to follow the basic concepts and theories related to the application of soils as an engineering material, in a better manner.</p> |

COURSE DETAILS

| S. No | Module ID/ Lecture ID | Lecture Title/Topic |
|--------------|------------------------------|--------------------------------|
| 1 | L1 | Introduction |
| 2 | L2 | Origin and Definition of Soils |
| 3 | L3 | Classification of Soils- I |
| 4 | L4 | Classification of Soils- II |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

References if Any: