

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Civil Engineering - NOC:Unsaturated Soil Mechanics

Subject Co-ordinator - Dr. Tadikonda Venkata Bharat

Co-ordinating Institute - IIT - Guwahati

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Fundamental Aspects of Unsaturated Soil Mechanics and its Basic Principles
- Lecture 2 - Phases of Unsaturated Soils-I
- Lecture 3 - Phases of Unsaturated Soils-II
- Lecture 4 - Equilibrium between Air and Water Phases
- Lecture 5 - Capillary Phenomenon in Unsaturated Soils - I
- Lecture 6 - Capillary Phenomenon in Unsaturated Soils - II
- Lecture 7 - Summary
- Lecture 8 - Concept of Water Retention and Soil Water Characteristics - I
- Lecture 9 - Concept of Water Retention and Soil Water Characteristics - II
- Lecture 10 - Hydraulic conductivity functions and determination of state variables
- Lecture 11 - Suction Measurement/Control Techniques - I
- Lecture 12 - Suction Measurement/Control Techniques - II
- Lecture 13 - Summary
- Lecture 14 - HCF Determination
- Lecture 15 - SWCC and HCF Models
- Lecture 16 - HCF Modelling
- Lecture 17 - Fitting of SWCC and HCF modelling
- Lecture 18 - Pedo-transfer Functions (PTF)
- Lecture 19 - Steady-State Flow Through Soils
- Lecture 20 - Steady-State and Transient Flow
- Lecture 21 - Analytical Methods for Transient Flow - I
- Lecture 22 - Analytical Methods for Transient Flow - II
- Lecture 23 - Shear Strength of Unsaturated Soils
- Lecture 24 - Suction-Controlled Direct Shear Test
- Lecture 25 - Suction-Controlled Triaxial Test
- Lecture 26 - Extended M-C Criterion - I
- Lecture 27 - Extended M-C Criterion - II
- Lecture 28 - Extended M-C Criterion - III
- Lecture 29 - Concept of Suction Stress - I

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- Lecture 30 - Concept of Suction Stress - II
- Lecture 31 - Concept of Suction Stress - III
- Lecture 32 - Summary
- Lecture 33 - Swelling Behaviour of Soils
- Lecture 34 - Estimation of Swelling Pressure in the Laboratory and Behaviour of Collapsible soil
- Lecture 35 - Volume Change Behaviour of Bentonite and Kaolin Clay
- Lecture 36 - Demonstration of Various Experiments Related to Unsaturated Soil Mechanics