

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

NPTEL Video Course - Civil Engineering - Advanced Geotechnical Engineering

Subject Co-ordinator - Dr. B.V.S. Viswanadham

Co-ordinating Institute - IIT - Bombay

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

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

NPTEL Video Course - Civil Engineering - Soil Dynamics

Subject Co-ordinator - Dr. Deepankar Choudhury

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Introduction

Lecture 2 - Degrees of Freedom, SDOF System, Types of Vibrations

Lecture 3 - SDOF System, Types of Vibrations, Free Vibration

Lecture 4 - Problems on Torsional Motion

Lecture 5 - Damped Free Vibrations

Lecture 6 - Damped Free Vibrations, Definition of Critical Damping and problems

Lecture 7 - Decay of Motion

Lecture 8 - Forced Vibrations, Dynamic Magnification Factor

Lecture 9 - Maxwells Diagram of DMF, Discussion on Phase

Lecture 10 - Transmissibility Ratio, Response to Arbitrary, Step and Pulse Excitations

Lecture 11 - Response to Arbitrary, Step and Pulse Excitations, Response to Impact Load

Lecture 12 - Vibration Isolation, Vibrations Measuring Instruments

Lecture 13 - Solutions of Quiz Questions, Multi-Degree of Freedom (MDOF) Systems

Lecture 14 - (MDOF) System

Lecture 15 - 3 Dimensional Wave Propagation, Waves in semi-infinite media, Rayleigh Wave

Lecture 16 - Love Wave, Waves in layered medium, 3D case-Inclined wave, Earthquake Waves

Lecture 17 - Earthquake Waves; P-waves, S-waves, 3 circle method, Estimation of Earthquake Epicentre

Lecture 18 - Stresses in Soil Element, Field Tests, Seismic Reflection Test

Lecture 19 - Seismic Refraction Test, SASW Test, Laboratory & Model Tests

Lecture 20 - Centrifuge Tests Stress Strain Behavior of Cyclically Loaded Soils

Lecture 21 - Estimation of G_{max} , Modulus Reduction Curves, Variation of Damping Ratio, Cyclic Plate load Test

Lecture 22 - Liquefaction, Preliminary sceening, Simplified Procedure for Liquefaction

Lecture 23 - Cyclic Stress Ratio, Evaluation of CRR, Correction Factors, Corrections for SPT

Lecture 24 - Becker Penetrometer Test (BPT), Cone Penetrometer Test (CPT), SPT v BPT, SASW Test

Lecture 25 - Types of Machine Foundations, Methods of Analysis, Design of Machine Foundations as per IS

Lecture 26 - Tschebotarioff's

Lecture 27 - Problem on Tschebotarioff's method contd., Mass-Spring-Dashpot (MSD) Model

Lecture 28 - MSD Model- Yawing mode of Vibration, Use of MSD model for analysis

Lecture 29 - Problems on Use of MSD Model for Analysis, Rocking mode of Vibrations

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- Lecture 30 - Torsional Mode/Yawing Mode, Constant Force type excitation, EHS Theory
- Lecture 31 - EHS Theory, Vibrational Control
- Lecture 32 - Use of EHS Theory for analysis
- Lecture 33 - Use of EHS Theory for analysis II
- Lecture 34 - Liquefaction mitigation methods, Vibro Compaction, Densification Techniques
- Lecture 35 - Soil Improvement methods, Dynamic Compaction, Reinforcement Techniques
- Lecture 36 - Force-based Analysis, Dynamic analysis using MSD model
- Lecture 37 - Behaviour of Subgrade Soil below Rail Track
- Lecture 38 - Quiz

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

NPTEL Video Course - Civil Engineering - Structural Dynamics

Subject Co-ordinator - Dr. P. Banerji

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Introduction
- Lecture 2 - Inverse Power Method
- Lecture 3 - Dynamics of SDOF Structure
- Lecture 4 - SDOF Response to Harmonic Loads
- Lecture 5 - Response of SDOF Structure to Harmonic Loading
- Lecture 6 - Response to Harmonic Loading
- Lecture 7 - Response to Harmonic Loading (Continue...)
- Lecture 8 - Transmissibility & Base Isolation
- Lecture 9 - Dynamic Characteristics & Periodic Loading
- Lecture 10 - Pulse Loading
- Lecture 11 - Pulse Load Response Characteristics & Impulse Loading
- Lecture 12 - Frequency Domain Response Analysis
- Lecture 13 - Methods of Analysis for General Loading
- Lecture 14 - Numerical Analysis of Response of Single Degree of Freedom Structure & Time Domain Approaches
- Lecture 15 - Response Analysis of Single Degree of Freedom System for Earthquake Loads
- Lecture 16 - Earthquake Response Analysis for Single Degree of Freedom Structures
- Lecture 17 - Generalized Single Degree of Freedom Systems Equations of Motions
- Lecture 18 - Generalized Single Degree of Freedom Systems Equations of Motions
- Lecture 19 - Generalized Single Degree of Freedom Systems Equations of Motions
- Lecture 20 - Generalized Single Degree of Freedom Systems Equations of Motion & Free Vibrations
- Lecture 21 - Equations of Motion for Multi Degree of Freedom Structures
- Lecture 22 - Equations of Motion for Multi Degree of Freedom Systems
- Lecture 23 - Multi Degree of Freedom Structure Equations of Motions
- Lecture 24 - Multi Degree of Freedom Structure Equations of Motions & Free Vibration
- Lecture 25 - Free Vibration for Multi Degree of Freedom Structures
- Lecture 26 - Free Vibration for Multi Degree of Freedom Structures
- Lecture 27 - Practical Free Vibration Analysis
- Lecture 28 - Dynamic Response of Multi Degree of Freedom Systems
- Lecture 29 - Dynamic Response of Multi Degree of Freedom Structures

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- Lecture 30 - Damping for Multi Degree of Freedom Structures
- Lecture 31 - Earthquake Response of Multi Degree of Freedom Structures
- Lecture 32 - Earthquake Response of Multi Degree of Freedom Structures
- Lecture 33 - Dynamic Analysis of Buildings
- Lecture 34 - Introduction to Dynamics of Continuous Systems
- Lecture 35 - Free Vibration Response of Continuous Systems
- Lecture 36 - Free Vibration & Dynamic Response of Continuous Systems
- Lecture 37 - Dynamic Response of Continuous Systems
- Lecture 38 - Examples for Dynamic Response of Continuous Systems

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

NPTEL Video Course - Civil Engineering - Watershed Management

Subject Co-ordinator - Dr. T.I. Eldho

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Introduction to Watershed Management
- Lecture 2 - Watershed Management & Stakeholder Analysis
- Lecture 3 - Watershed Management Policies
- Lecture 4 - Sustainable Watershed Management
- Lecture 5 - Agricultural Practices & Watershed Management
- Lecture 6 - Soil Erosion & Conservation
- Lecture 7 - Watershed Management in Arid Regions & Strategic Planning
- Lecture 8 - Integrated Water Resources Management
- Lecture 9 - Conjunctive Use of Water Resources
- Lecture 10 - Rainwater Harvesting System
- Lecture 11 - Rainwater Harvesting & Roof Catchment System
- Lecture 12 - Watershed Characteristics
- Lecture 13 - Watershed Delineation & Modeling
- Lecture 14 - Hydrologic Processes
- Lecture 15 - Watershed Modeling
- Lecture 16 - Hydrologic Modeling
- Lecture 17 - Numerical Watershed Modeling
- Lecture 18 - Subsurface & Groundwater Flows
- Lecture 19 - Social & Community Aspects of Watershed Management
- Lecture 20 - Socio-economy, Private Sector Participation & Gender Issues
- Lecture 21 - Integrated Development, Water Legislation & Implementation Issues
- Lecture 22 - GIS & Applications in Watershed Management
- Lecture 23 - Remote Sensing & Applications in Watershed Management
- Lecture 24 - Decision Support Systems & Applications in Watershed Management
- Lecture 25 - Integrated Watershed Modeling Using Numerical Methods, GIS & Remote Sensing
- Lecture 26 - Applications of Knowledge Based Models in Watershed Management
- Lecture 27 - Surface Water Quality & Pollution Issues
- Lecture 28 - Groundwater Pollution Problems & Transport Processes
- Lecture 29 - Water Quality Modeling

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

- Lecture 30 - Environmental Guidelines for Water Quality Management
- Lecture 31 - Storm Water Management
- Lecture 32 - Urban Drainage System
- Lecture 33 - Flood Routing
- Lecture 34 - Flood Control & Management
- Lecture 35 - Drought Assessment
- Lecture 36 - Drought Analysis
- Lecture 37 - Drought Mitigation
- Lecture 38 - Water Conservation
- Lecture 39 - Water Recycling
- Lecture 40 - Water Reclamation & Reuse

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

NPTEL Video Course - Civil Engineering - Fluid Mechanics

Subject Co-ordinator - Dr. T.I. Eldho

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Fluid Mechanics
Lecture 2 - Fundamental Concepts of Fluid Flow & Fluid Statics
Lecture 3 - Fluid Statics
Lecture 4 - Fluid Statics
Lecture 5 - Fluid Statics
Lecture 6 - Kinematics of Fluid Flow
Lecture 7 - Kinematics of Fluid Flow
Lecture 8 - Kinematics of Fluid Flow
Lecture 9 - Kinematics of Fluid Flow
Lecture 10 - Kinematics of Fluid Flow
Lecture 11 - Kinematics & Dynamics of Fluid Flow
Lecture 12 - Dynamics of Fluid Flow
Lecture 13 - Dynamics of Fluid Flow
Lecture 14 - Dynamics of Fluid Flow
Lecture 15 - Dynamics of Fluid Flow
Lecture 16 - Dynamics of Fluid Flow
Lecture 17 - Laminar and Turbulent Flows
Lecture 18 - Laminar and Turbulent Flows
Lecture 19 - Laminar and Turbulent Flows
Lecture 20 - Laminar and Turbulent Flows
Lecture 21 - Laminar and Turbulent Flows
Lecture 22 - Laminar and Turbulent Flows
Lecture 23 - Dimensional Analysis
Lecture 24 - Dimensional Analysis
Lecture 25 - Dimensional Analysis
Lecture 26 - Navier-Stokes Equations and Applications
Lecture 27 - Navier-Stokes Equations and Applications
Lecture 28 - Navier-Stokes Equations and Applications
Lecture 29 - Navier-Stokes Equations and Applications

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

- Lecture 30 - Boundary Layer Theory and Applications
- Lecture 31 - Boundary Layer Theory and Applications
- Lecture 32 - Boundary Layer Theory and Applications
- Lecture 33 - Boundary Layer Theory and Applications
- Lecture 34 - Boundary Layer Theory and Applications
- Lecture 35 - Boundary Layer Theory and Applications
- Lecture 36 - Pipe Flow Systems
- Lecture 37 - Pipe Flow Systems
- Lecture 38 - Pipe Flow Systems
- Lecture 39 - Pipe Flow Systems
- Lecture 40 - Pipe Flow Systems
- Lecture 41 - Pipe Flow Systems
- Lecture 42 - Pipe Flow Systems

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

NPTEL Video Course - Civil Engineering - Soil Mechanics

Subject Co-ordinator - Dr. B.V.S. Viswanadham

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Soil Mechanics
Lecture 2 - Soil Mechanics
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Lecture 6 - Soil Mechanics
Lecture 7 - Soil Mechanics
Lecture 8 - Soil Mechanics
Lecture 9 - Soil Mechanics
Lecture 10 - Soil Mechanics
Lecture 11 - Compaction of Soils - I
Lecture 12 - Soil Mechanics
Lecture 13 - Soil Mechanics
Lecture 14 - Compaction of Soils - IV
Lecture 15 - Compaction of Soils - V
Lecture 16 - Compaction of Soils - VI
Lecture 17 - Effective Stress - I
Lecture 18 - Effective Stress - II
Lecture 19 - Effective Stress - III
Lecture 20 - Flow of water through soils - I
Lecture 21 - Flow of water through soils - II
Lecture 22 - Flow of water through soils - III
Lecture 23 - Flow of water through soils - IV
Lecture 24 - Flow of water through soils - V
Lecture 25 - Flow of water through soils - VI
Lecture 26 - Flow of water through soils - VII
Lecture 27 - Flow of water through soils - VIII
Lecture 28 - Soil Mechanics
Lecture 29 - Soil Mechanics

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Lecture 57 - Soil Mechanics

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

NPTEL Video Course - Civil Engineering - Structural Analysis II

Subject Co-ordinator - Dr. P. Banerji

Co-ordinating Institute - IIT - Bombay

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

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

NPTEL Video Course - Civil Engineering - Geotechnical Earthquake Engineering

Subject Co-ordinator - Dr. Deepankar Choudhury

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Introduction to Geotechnical Earthquake Engineering - Part I
- Lecture 2 - Introduction to Geotechnical Earthquake Engineering - Part II
- Lecture 3 - Basics of Vibration Theory
- Lecture 4 - Engineering Seismology - Part - I
- Lecture 5 - Engineering Seismology - Part - II
- Lecture 6 - Engineering Seismology - Part - III
- Lecture 7 - Engineering Seismology - Part - IV
- Lecture 8 - Engineering Seismology - Part - V
- Lecture 9 - Engineering Seismology - Part - VI
- Lecture 10 - Strong Ground Motion - Part I
- Lecture 11 - Strong Ground Motion - Part II
- Lecture 12 - Strong Ground Motion - Part III
- Lecture 13 - Strong Ground Motion - Part IV
- Lecture 14 - Strong Ground Motion - Part V
- Lecture 15 - Strong Ground Motion - Part VI
- Lecture 16 - Strong Ground Motion - Part VII
- Lecture 17 - Wave Propagation - Part I
- Lecture 18 - Wave Propagation - Part II
- Lecture 19 - Wave Propagation - Part III
- Lecture 20 - Wave Propagation - Part IV
- Lecture 21 - Dynamic Soil Properties - Part I
- Lecture 22 - Dynamic Soil Properties - Part II
- Lecture 23 - Seismic Hazard Analysis - Part I
- Lecture 24 - Seismic Hazard Analysis - Part II
- Lecture 25 - Seismic Hazard Analysis - Part III
- Lecture 26 - Seismic Hazard Analysis - Part IV
- Lecture 27 - Seismic Hazard Analysis - Part V
- Lecture 28 - Seismic Hazard Analysis - Part VI
- Lecture 29 - Seismic Hazard Analysis - Part VII

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- Lecture 30 - Seismic Hazard Analysis - Part VIII
- Lecture 31 - Site Response Analysis - Part I
- Lecture 32 - Site Response Analysis - Part II
- Lecture 33 - Site Response Analysis - Part III
- Lecture 34 - Seismic Analysis and Design of Various Geotechnical Structures - Part I
- Lecture 35 - Seismic Analysis and Design of Various Geotechnical Structures - Part II
- Lecture 36 - Seismic Analysis and Design of Various Geotechnical Structures - Part III
- Lecture 37 - Seismic Analysis and Design of Various Geotechnical Structures - Part IV
- Lecture 38 - Seismic Analysis and Design of Various Geotechnical Structures - Part V
- Lecture 39 - Seismic Analysis and Design of Various Geotechnical Structures - Part VI
- Lecture 40 - Seismic Analysis and Design of Various Geotechnical Structures - Part VII
- Lecture 41 - Seismic Analysis and Design of Various Geotechnical Structures - Part VIII
- Lecture 42 - Quiz
- Lecture 43 - Seismic Analysis and Design of Various Geotechnical Structures - Part IX

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

NPTEL Video Course - Civil Engineering - Geosynthetics Engineering: In Theory and Practice

Subject Co-ordinator - Prof. J.N. Mandal

Co-ordinating Institute - IIT - Bombay

- Lecture 1 - Introduction
- Lecture 2 - Introduction to Reinforced Earth
- Lecture 3 - Introduction to Reinforced Earth
- Lecture 4 - Introduction to Reinforced Earth
- Lecture 5 - Introduction to Reinforced Earth
- Lecture 6 - An Overview of Geosynthetics - Part I
- Lecture 7 - An Overview of Geosynthetics - Part II
- Lecture 8 - An Overview of Geosynthetics - Part III
- Lecture 9 - An Overview of Gosynthetics
- Lecture 10 - Geosynthetic Properties and Test Methods
- Lecture 11 - Geosynthetic Properties and Test Methods
- Lecture 12 - Geosynthetic Properties and Test Methods
- Lecture 13 - Geosynthetic Properties and Test Methods
- Lecture 14 - Geosynthetic Properties and Test Methods
- Lecture 15 - Geosynthetic in Filtration, Drainage and Erosion Control
- Lecture 16 - Geosynthetic in Filtration, Drainage and Erosion Control
- Lecture 17 - Geosynthetic in Filtration, Drainage and Erosion Control
- Lecture 18 - Geosynthetic in Filtration, Drainage and Erosion Control
- Lecture 19 - Geosynthetic in Filtration, Drainage and Erosion Control
- Lecture 20 - Geosynthetic in pavements
- Lecture 21 - Geosynthetic in pavements
- Lecture 22 - Geosynthetic in pavements
- Lecture 23 - Geosynthetic in pavements
- Lecture 24 - Geosynthetic in pavements
- Lecture 25 - Geosynthetic in pavements
- Lecture 26 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 27 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 28 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 29 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 30 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 31 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 32 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 33 - Geosynthetics for Reinforced Soil Retaining Walls

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- Lecture 34 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 35 - Geosynthetics for Reinforced Soil Retaining Walls
- Lecture 36 - Geosynthetic for Steep Slopes
- Lecture 37 - Geosynthetic for Steep Slopes
- Lecture 38 - Geosynthetic for Steep Slopes
- Lecture 39 - Geosynthetic for Steep Slopes
- Lecture 40 - Geosynthetic for Embankments on Soft Foundations
- Lecture 41 - Geosynthetic for Embankments on Soft Foundations
- Lecture 42 - Geosynthetic for Embankments on Soft Foundations
- Lecture 43 - Geosynthetic for Ground Improvement
- Lecture 44 - Geosynthetic for Ground Improvement
- Lecture 45 - Geosynthetic for Ground Improvement
- Lecture 46 - Geosynthetic for Ground Improvement
- Lecture 47 - Geosynthetic for Ground Improvement
- Lecture 48 - Geosynthetic for Ground Improvement
- Lecture 49 - Geosynthetic for Ground Improvement
- Lecture 50 - Geosynthetic for Improvement in Bearing Capacity
- Lecture 51 - Designing with Geotextile Tube
- Lecture 52 - Designing with Geotextile Tube
- Lecture 53 - Design of Geosynthetic for Landfills
- Lecture 54 - Design of Geosynthetic for Landfills
- Lecture 55 - Design of Geosynthetic for Landfill
- Lecture 56 - Design of Geosynthetic for Landfill
- Lecture 57 - Design of Geosynthetic for Landfill
- Lecture 58 - Designing With Geofoam
- Lecture 59 - Designing With Geofoam
- Lecture 60 - Designing With Geofoam
- Lecture 61 - Designing With Geofoam
- Lecture 62 - Designing With Geofoam
- Lecture 63 - Designing With Geofoam

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

NPTEL Video Course - Civil Engineering - Concrete Technology

Subject Co-ordinator - Dr. B. Bhattacharjee

Co-ordinating Institute - IIT - Delhi

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

Lecture 1 - Production and Composition
Lecture 2 - Structure and Hydration
Lecture 3 - Structure and Hydration
Lecture 4 - Properties and Tests
Lecture 5 - Types and Use
Lecture 6 - Aggregates (Size, Shape)
Lecture 7 - Packing, FM, SM
Lecture 8 - Properties
Lecture 9 - Chemical Admixtures
Lecture 10 - Chemical Admixtures
Lecture 11 - Mineral Admixtures
Lecture 12 - Mineral Admixtures
Lecture 13 - Mineral Admixtures
Lecture 14 - Mix Proportioning of Concrete
Lecture 15 - Mix design of Concrete
Lecture 16 - Mix Design of Concrete
Lecture 17 - Mix Design of concrete
Lecture 18 - Mix Design of concrete
Lecture 19 - Batching and Mixing of concrete
Lecture 20 - RMC and Transporting Concrete
Lecture 21 - Workability and Pumping of Concrete
Lecture 22 - Compaction and Curing Concrete
Lecture 23 - Strength of Concrete
Lecture 24 - Strength of Concrete
Lecture 25 - Strength of Concrete
Lecture 26 - Mechanical Properties of Concrete
Lecture 27 - Creep of Concrete
Lecture 28 - Creep and Shrinkage of Concrete
Lecture 29 - Shrinkage of Concrete

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- Lecture 30 - Shrinkage of Concrete
- Lecture 31 - Fundamental Concepts, Degradation Process, Attacks
- Lecture 32 - Frost Action and Rebar Corrosion
- Lecture 33 - Carbonation and Chloride Affect
- Lecture 34 - Rebar Corrosion
- Lecture 35 - Rebar Corrosion and General Strategy
- Lecture 36 - High Strength Concrete
- Lecture 37 - High Strength Matrics and SCC
- Lecture 38 - Self Compacting Concrete
- Lecture 39 - Fiber Concrete
- Lecture 40 - Fiber and Roller Compacted Concrete
- Lecture 41 - Special Concrete and Sustainability

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

NPTEL Video Course - Civil Engineering - Seismic Analysis of Structures

Subject Co-ordinator - Dr. T.K. Datta, Dr. Ashok Gupta

Co-ordinating Institute - IIT - Delhi

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

- Lecture 1 - Seismology
- Lecture 2 - Seismology (Continued...)
- Lecture 3 - Seismology (Continued...)
- Lecture 4 - Seismology (Continued...)
- Lecture 5 - Seismic Inputs
- Lecture 6 - Seismic Inputs (Continued...)
- Lecture 7 - Seismic Inputs (Continued...)
- Lecture 8 - Seismic Inputs (Continued...)
- Lecture 9 - Response Analysis for Specified Ground Motion
- Lecture 10 - Response Analysis for Specified Ground Motion (Continued...)
- Lecture 11 - Response Analysis for Specified Ground Motion (Continued...)
- Lecture 12 - Response Analysis for Specified Ground Motion (Continued...)
- Lecture 13 - Response Analysis for Specified Ground Motion (Continued...)
- Lecture 14 - Response Analysis for Specified Ground Motion (Continued...)
- Lecture 15 - Frequency Domain Spectral Analysis
- Lecture 16 - Frequency Domain Spectral Analysis.
- Lecture 17 - Frequency Domain Spectral Analysis (Continued...)
- Lecture 18 - Frequency Domain Spectral Analysis (Continued...)
- Lecture 19 - Frequency Domain Spectral Analysis (Continued...)
- Lecture 20 - Response Spectrum Method of Analysis
- Lecture 21 - Response Spectrum Method of Analysis.
- Lecture 22 - Response Spectrum Method of Analysis (Continued...)
- Lecture 23 - Response Spectrum Method of Analysis (Continued...)
- Lecture 24 - Response Spectrum Method of Analysis (Continued...)
- Lecture 25 - Inelastic Seismic Response of Structures
- Lecture 26 - Inelastic Seismic Response of Structures (Continued...)
- Lecture 27 - Inelastic Seismic Response of Structures (Continued...)
- Lecture 28 - Inelastic Seismic Response of Structures (Continued...)
- Lecture 29 - Inelastic Seismic Response of Structures (Continued...)

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Lecture 30 - Inelastic Seismic Response of Structures (Continued...)

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

NPTEL Video Course - Civil Engineering - Building materials and Construction

Subject Co-ordinator - Dr. B. Bhattacharjee

Co-ordinating Institute - IIT - Delhi

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

Lecture 1 - Functions Of Buildings
Lecture 2 - Role Of Material In Construction
Lecture 3 - Concrete
Lecture 4 - Concrete Production (Continued...)
Lecture 5 - Concrete Production (Continued...)
Lecture 6 - Concrete
Lecture 7 - Concrete
Lecture 8 - Cement
Lecture 9 - Cement and Cementitious Material
Lecture 10 - Fresh Concrete
Lecture 11 - Fresh Concrete
Lecture 12 - Fresh Concrete
Lecture 13 - Fresh Concrete
Lecture 14 - Strength of Concrete - I
Lecture 15 - Strength of Concrete - II
Lecture 16 - Strength of Concrete - III
Lecture 17 - Mechanical Properties of Concrete - I
Lecture 18 - Mechanical Properties of Concrete - II
Lecture 19 - Strength of Concrete
Lecture 20 - Durability of Concrete - I
Lecture 21 - Durability of Concrete - II
Lecture 22 - Durability of Concrete - III
Lecture 23 - Cement Aggregate and Water Selection
Lecture 24 - Mix Design of Concrete
Lecture 25 - Mix Design Of concrete IS Method
Lecture 26 - Mix Design Of Concrete
Lecture 27 - Masonry
Lecture 28 - Masonry
Lecture 29 - Masonry

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

- Lecture 30 - Masonry
- Lecture 31 - Walls
- Lecture 32 - Walls
- Lecture 33 - Metals Fundamentals
- Lecture 34 - Metals and Iron Systems
- Lecture 35 - Steel
- Lecture 36 - Steel
- Lecture 37 - Polymer in Construction
- Lecture 38 - Polymer in Construction
- Lecture 39 - Glass and Timber
- Lecture 40 - Glass and Timber
- Lecture 41 - Roof and Floor Construction

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

NPTEL Video Course - Civil Engineering - Advanced Hydraulics

Subject Co-ordinator - Dr. Suresh A Kartha

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Introduction - advanced hydraulics & course structure
- Lecture 2 - Various classifications of open channel flows
- Lecture 3 - Flow classifications & velocity distribution
- Lecture 4 - Pressure distribution
- Lecture 5 - Equation of continuity & energy
- Lecture 6 - Specific energy & critical flow
- Lecture 7 - Energy, momentum & specific force
- Lecture 8 - Computation of critical flow - Part 1
- Lecture 9 - Critical flow computations
- Lecture 10 - Introduction to uniform flow
- Lecture 11 - Manning's equation and normal depth
- Lecture 12 - Uniform Flow Computations - Part 1
- Lecture 13 - Uniform flow in compound sections, concept of normal slope
- Lecture 14 - Uniform flow approximation for flood discharge
- Lecture 15 - Design of channels for uniform flow
- Lecture 16 - Design of channels using uniform flow
- Lecture 17 - Design of erodible channels
- Lecture 18 - Introduction to gradually varied flows
- Lecture 19 - Gradually varied flow equations
- Lecture 20 - Classification of gradually varied flow - Part 1
- Lecture 21 - Classification of gradually varied flow - Part 2
- Lecture 22 - Gradually varied flow profiles with change in bed slopes
- Lecture 23 - GVF profile properties and transitional depths
- Lecture 24 - Gradually varied flow computations - Part 1
- Lecture 25 - Gradually varied flow computations RK method - Part 2
- Lecture 26 - Standard step method for gradually varied flow computations
- Lecture 27 - Spatially varied flow
- Lecture 28 - Features on spatially varied flow
- Lecture 29 - Rapidly varied flow - introduction

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

- Lecture 30 - Theoretical aspects of hydraulic jump
- Lecture 31 - Characteristics of jumps in rectangular channel
- Lecture 32 - Features of hydraulic jumps
- Lecture 33 - Jumps as energy dissipators
- Lecture 34 - Jump controls
- Lecture 35 - Surges - Part 1
- Lecture 36 - Surges - Part 2
- Lecture 37 - Channel transitions - Part 1
- Lecture 38 - Channel transitions - Part 2
- Lecture 39 - Channel transitions - Part 3
- Lecture 40 - Application of momentum principles
- Lecture 41 - Pumps - 1
- Lecture 42 - Turbines - Part 3 (pumps, turbines)
- Lecture 43 - Turbines, cavitation

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

NPTEL Video Course - Civil Engineering - Design of Steel Structures

Subject Co-ordinator - Prof. Damodar Maity

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Introduction to Design of Steel Structures
- Lecture 2 - Connections
- Lecture 3 - Riveted Connections
- Lecture 4 - Design of Rivet Joint
- Lecture 5 - Welding
- Lecture 6 - Design of Fillet and Butt Welds
- Lecture 7 - Bolted Connection
- Lecture 8 - Eccentric Connections
- Lecture 9 - Design of Eccentric Connection With Load Lying in Plane of Joint Rivet Bolt
- Lecture 10 - Eccentric Connection With Load Perpendicular to Plane of Riveted Joint
- Lecture 11 - Analysis and Design of Join with Seat Connection
- Lecture 12 - Eccentric Connection
- Lecture 13 - Load Lying Perpendicular to the Plane of Weld Joint
- Lecture 14 - Tension Member
- Lecture 15 - Design of Tension Member
- Lecture 16 - Design of Tension Member
- Lecture 17 - Design of Tension Member
- Lecture 18 - Compression Member
- Lecture 19 - Design of Compression Member
- Lecture 20 - Design of Eccentrically Loaded tension Member
- Lecture 21 - Built up Compression Member
- Lecture 22 - Design of Built up Compression Member
- Lecture 23 - Lacing for Built Up Compression Member
- Lecture 24 - Design of Lacing System
- Lecture 25 - Design of Batten Plates
- Lecture 26 - Introduction to Flexural Members
- Lecture 27 - Design Procedure of Beam Members
- Lecture 28 - Design of Laterally Supported Beams
- Lecture 29 - Design of Laterally Unsupported Beams

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

- Lecture 30 - Built-Up Beams
- Lecture 31 - Built-Up Beams
- Lecture 32 - Design of a Built-Up Beams
- Lecture 33 - Design of Shear Connections and Purlins
- Lecture 34 - Gantry Girders
- Lecture 35 - Design of Gantry Girders
- Lecture 36 - Introduction to Plate Girders - Part 1
- Lecture 37 - Introduction to Plate Girders - Part 2
- Lecture 38 - Design of a Plate Girder
- Lecture 39 - Column Base - Part 1
- Lecture 40 - Column Base - Part 2

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

NPTEL Video Course - Civil Engineering - Hydraulics

Subject Co-ordinator - Prof. Arup Kumar Sharma

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Introduction to Hydraulics
- Lecture 2 - Open Channel Hydraulics - Part 1
- Lecture 3 - Open Channel Hydraulics - Part 2
- Lecture 4 - Velocity and Pressure Distribution
- Lecture 5 - Practical use of velocity co-efficient in channel flow
- Lecture 6 - Conservation Principles & Governing Equations
- Lecture 7 - Uniform Flow
- Lecture 8 - Uniform Flow Formula
- Lecture 9 - Computation of Uniform Flow - Part 1
- Lecture 10 - Computation of Uniform Flow - Part 2
- Lecture 11 - Uniform Flow in Mobile Boundary Channel
- Lecture 12 - Incipient Motion Condition and Regime of Flow
- Lecture 13 - Concept of Specific Energy
- Lecture 14 - Computation of Critical Depth
- Lecture 15 - Specific Force, Critical Depth & Sequent Depth
- Lecture 16 - Non-uniform Flow
- Lecture 17 - Classification of Gradually Varied Flow
- Lecture 18 - Characteristic of Gradually Varied Flow
- Lecture 19 - Characteristic of Gradually Varied Flow & its Computation
- Lecture 20 - Gradually Varied Flow & its Computation
- Lecture 21 - Computation of Gradually Varied Flow
- Lecture 22 - Gradually Varied Flow
- Lecture 23 - Rapidly Varied Flow
- Lecture 24 - Hydraulic Jump
- Lecture 25 - Flow Over Hump and Channel Contraction
- Lecture 26 - Canal Design - 1
- Lecture 27 - Canal Design - 2
- Lecture 28 - Design of Alluvial Channel - 1
- Lecture 29 - Design of Alluvial Channel - 2

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

- Lecture 30 - Design of Alluvial Channel - 3
- Lecture 31 - Unsteady Flow
- Lecture 32 - Unsteady Flow Part - 2
- Lecture 33 - Unsteady Flow Part - 3
- Lecture 34 - Pipe Flow
- Lecture 35 - Pipe Flow
- Lecture 36 - Pipe in Series & Parallel
- Lecture 37 - Pipe Network Analysis
- Lecture 38 - Water Hammer & Surge Tank
- Lecture 39 - Pipe Flow Friction Loss
- Lecture 40 - Pipe Flow

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

NPTEL Video Course - Civil Engineering - Advanced Hydrology

Subject Co-ordinator - Dr. Ashu Jain

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1
Lecture 2
Lecture 3
Lecture 4
Lecture 5
Lecture 6
Lecture 7
Lecture 8
Lecture 9
Lecture 10
Lecture 11
Lecture 12
Lecture 13
Lecture 14
Lecture 15
Lecture 16
Lecture 17
Lecture 18
Lecture 19
Lecture 20
Lecture 21
Lecture 22
Lecture 23
Lecture 24
Lecture 25
Lecture 26
Lecture 27
Lecture 28
Lecture 29

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

Lecture 30
Lecture 31
Lecture 32
Lecture 33
Lecture 34
Lecture 35
Lecture 36
Lecture 37
Lecture 38
Lecture 39
Lecture 40
Lecture 41
Lecture 42
Lecture 43
Lecture 44

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

NPTEL Video Course - Civil Engineering - Concrete Engineering and Technology

Subject Co-ordinator - Dr. Sudhir Misra

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction and course overview
- Lecture 2 - Constituents of concrete - Part 1 of 2
- Lecture 3 - Constituents of concrete - Part 2 of 2
- Lecture 4 - Admixtures in concrete â mineral and chemical
- Lecture 5 - Hydration of cement
- Lecture 6 - Basic properties of concrete
- Lecture 7 - Proportioning of concrete mixes - Part 1 of 3
- Lecture 8 - Proportioning of concrete mixes - Part 2 of 3
- Lecture 9 - Proportioning of concrete mixes - Part 3 of 3
- Lecture 10 - Pores and porosity in concrete
- Lecture 11 - Porosimetry â measuring pores in concrete
- Lecture 12 - Principles of quality control in concrete construction
- Lecture 13 - Quality control and acceptance criteria for concrete based on compressive strength
- Lecture 14 - Fibre reinforced concrete
- Lecture 15 - High strength concrete
- Lecture 16 - Mass concrete - Part 1 of 2
- Lecture 17 - Mass concrete - Part 2 of 2
- Lecture 18 - Concreting in cold weather
- Lecture 19 - Concreting in hot weather
- Lecture 20 - Roller compacted concrete
- Lecture 21 - Self-compacting concrete
- Lecture 22 - Testing self-compacting concrete
- Lecture 23 - Shotcrete and underwater concrete
- Lecture 24 - Alkali â aggregate reaction - Part 1 of 2
- Lecture 25 - Alkali â aggregate reaction - Part 2 of 2
- Lecture 26 - Reinforcement corrosion in concrete
- Lecture 27 - Chloride penetration in concrete
- Lecture 28 - Using epoxy-coated bars in concrete structures
- Lecture 29 - Using FRP as reinforcement in concrete structures - Part 1 of 2

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

- Lecture 30 - Using FRP as reinforcement in concrete structures - Part 2 of 2
- Lecture 31 - Grouting and importance of formwork in concrete construction
- Lecture 32 - Carbonation and freezing & thawing in concrete structures
- Lecture 33 - Using recycled aggregates in concrete construction
- Lecture 34 - Basic non-destructive testing for concrete structures
- Lecture 35 - Measuring permeability in concrete
- Lecture 36 - Some additional topics
- Lecture 37 - Considerations in repair of concrete structures - Part 1 of 2
- Lecture 38 - Considerations in repair of concrete structures - Part 2 of 2
- Lecture 39 - Laboratory demonstration
- Lecture 40 - Review of the course

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

NPTEL Video Course - Civil Engineering - Environmental Air Pollution

Subject Co-ordinator - Prof. Mukesh Sharma

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction to Atmosphere
- Lecture 2 - Air Pollution Systems
- Lecture 3 - Air Quality Standards
- Lecture 4 - Types and Forms of Air Pollutants
- Lecture 5 - Measurement Units and Particulate classification
- Lecture 6 - Interpretation and Particle size Distribution
- Lecture 7 - Atmospheric formation of Air Pollutants - I
- Lecture 8 - Atmospheric formation of Air Pollutants - II
- Lecture 9 - Atmospheric formation of Air Pollutants - III
- Lecture 10 - Kinetics of Air pollution and combustion processes
- Lecture 11 - Internal Combustion Engine and Air Pollution - I
- Lecture 12 - Internal Combustion Engine and Air Pollution - II
- Lecture 13 - Air Pollution and Health - I
- Lecture 14 - Air Pollution and Health - II
- Lecture 15 - Emission Inventory
- Lecture 16 - Sources of Air Pollution
- Lecture 17 - Emission from Fugitive Sources and Sulfuric Acid Production
- Lecture 18 - Aluminium Production and Air Pollution - I
- Lecture 19 - Aluminium Production and Air Pollution - II
- Lecture 20 - Coke Production and Air Pollution
- Lecture 21 - Examples for Practice
- Lecture 22 - Meteorological Measurements and their interpretation
- Lecture 23 - Examples for Practice - Dispersion Modeling
- Lecture 24 - Vertical Temperature Profile of Atmosphere
- Lecture 25 - Stability, Mixing Height and Plume Behavior - I
- Lecture 26 - Stability, Mixing Height and Plume Behavior - II
- Lecture 27 - Examples - Solar Radiation Based Stability Calculation
- Lecture 28 - Air Quality Modeling - I
- Lecture 29 - Air Quality Modeling - II

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

- Lecture 30 - Derivation of Gaussian Model
- Lecture 31 - Gaussian Model - Useful Formulation
- Lecture 32 - Plume rise, Area and Line Source Model
- Lecture 33 - Air Quality Modeling - Maximum Ground Level concentration
- Lecture 34 - Examples of Air Quality Modeling
- Lecture 35 - Air Pollution Control Devices - I
- Lecture 36 - Air Pollution Control Devices - II
- Lecture 37 - Source Emission Monitoring
- Lecture 38 - Receptor Source Modeling
- Lecture 39 - Environmental laws

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

NPTEL Video Course - Civil Engineering - Surveying

Subject Co-ordinator - Dr. Bharat Lohani

Co-ordinating Institute - IIT - Kanpur

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

Module 1 - Lecture 1
Module 2 - Lecture 1
Module 2 - Lecture 2
Module 2 - Lecture 3
Module 2 - Lecture 4
Module 2 - Lecture 5
Module 3 - Lecture 1
Module 3 - Lecture 2
Module 3 - Lecture 3
Module 3 - Lecture 4
Module 4 - Lecture 1
Module 4 - Lecture 2
Module 5 - Lecture 1
Module 5 - Lecture 2
Module 5 - Lecture 3
Module 5 - Lecture 4
Module 5 - Lecture 5
Module 5 - Lecture 6
Module 6 - Lecture 1
Module 6 - Lecture 2
Module 6 - Lecture 3
Module 7 - Lecture 1
Module 7 - Lecture 2
Module 7 - Lecture 3
Module 7 - Lecture 4
Module 7 - Lecture 5
Module 8 - Lecture 1
Module 8 - Lecture 2
Module 9 - Lecture 1

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

Module 9 - Lecture 2
Module 9 - Lecture 3
Module 9 - Lecture 4
Module 9 - Lecture 5
Module 10 - Lecture 1
Module 11 - Lecture 1
Module 11 - Lecture 2
Module 11 - Lecture 3
Module 12 - Lecture 1
Module 12 - Lecture 2
Module 12 - Lecture 3

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

NPTEL Video Course - Civil Engineering - Water Resources Engineering

Subject Co-ordinator - Dr. Pranab K Mohapatra, Prof. Rajesh Srivastava

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1

Lecture 2

Lecture 3

Lecture 4

Lecture 5

Lecture 6

Lecture 7

Lecture 8

Lecture 9

Lecture 10

Lecture 11

Lecture 12

Lecture 13

Lecture 14

Lecture 15

Lecture 16

Lecture 17

Lecture 18

Lecture 19

Lecture 20

Lecture 21

Lecture 22

Lecture 23

Lecture 24

Lecture 25 (Lecture Missing)

Lecture 26

Lecture 27

Lecture 28

Lecture 29

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

NPTEL Video Course - Civil Engineering - Geotechnical Measurements and Explorations

Subject Co-ordinator - Dr. Nihar Ranjan Patra

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Geotechnical Measurements & Explorations
Lecture 2 - Geotechnical Measurements & Explorations
Lecture 3 - Geotechnical Measurements & Explorations
Lecture 4 - Geotechnical Measurements & Explorations
Lecture 5 - Geotechnical Measurements & Explorations
Lecture 6 - Geotechnical Measurements & Explorations
Lecture 7 - Geotechnical Measurements & Explorations
Lecture 8 - Geotechnical Measurements & Explorations
Lecture 9 - Geotechnical Measurements & Explorations
Lecture 10 - Geotechnical Measurements & Explorations
Lecture 11 - Geotechnical Measurements & Explorations
Lecture 12 - Geotechnical Measurements & Explorations
Lecture 13 - Geotechnical Measurements & Explorations
Lecture 14 - Geotechnical Measurements & Explorations
Lecture 15 - Geotechnical Measurements & Explorations
Lecture 16 - Geotechnical Measurements & Explorations
Lecture 17 - Geotechnical Measurements & Explorations
Lecture 18 - Geotechnical Measurements & Explorations
Lecture 19 - Geotechnical Measurements & Explorations
Lecture 20 - Geotechnical Measurements & Explorations
Lecture 21 - Geotechnical Measurements & Explorations
Lecture 22 - Geotechnical Measurements & Explorations
Lecture 23 - Geotechnical Measurements & Explorations
Lecture 24 - Geotechnical Measurements & Explorations
Lecture 25 - Geotechnical Measurements & Explorations
Lecture 26 - Geotechnical Measurements & Explorations
Lecture 27 - Geotechnical Measurements & Explorations
Lecture 28 - Geotechnical Measurements & Explorations
Lecture 29 - Geotechnical Measurements & Explorations

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

Lecture 30 - Geotechnical Measurements & Explorations
Lecture 31 - Geotechnical Measurements & Explorations
Lecture 32 - Geotechnical Measurements & Explorations
Lecture 33 - Geotechnical Measurements & Explorations
Lecture 34 - Geotechnical Measurements & Explorations
Lecture 35 - Geotechnical Measurements & Explorations
Lecture 36 - Geotechnical Measurements & Explorations
Lecture 37 - Geotechnical Measurements & Explorations
Lecture 38 - Geotechnical Measurements & Explorations
Lecture 39 - Geotechnical Measurements & Explorations
Lecture 40 - Geotechnical Measurements & Explorations

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

NPTEL Video Course - Civil Engineering - Application of Soil Mechanics

Subject Co-ordinator - Dr. Nihar Ranjan Patra

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Application of Soil Mechanics
Lecture 2 - Application of Soil Mechanics
Lecture 3 - Application of Soil Mechanics
Lecture 4 - Application of Soil Mechanics
Lecture 5 - Application of Soil Mechanics
Lecture 6 - Application of Soil Mechanics
Lecture 7 - Application of Soil Mechanics
Lecture 8 - Application of Soil Mechanics
Lecture 9 - Application of Soil Mechanics
Lecture 10 - Application of Soil Mechanics
Lecture 11 - Application of Soil Mechanics
Lecture 12 - Application of Soil Mechanics
Lecture 13 - Application of Soil Mechanics
Lecture 14 - Application of Soil Mechanics
Lecture 15 - Application of Soil Mechanics
Lecture 16 - Application of Soil Mechanics
Lecture 17 - Application of Soil Mechanics
Lecture 18 - Application of Soil Mechanics
Lecture 19 - Application of Soil Mechanics
Lecture 20 - Application of Soil Mechanics
Lecture 21 - Application of Soil Mechanics
Lecture 22 - Application of Soil Mechanics
Lecture 23 - Application of Soil Mechanics
Lecture 24 - Application of Soil Mechanics
Lecture 25 - Application of Soil Mechanics
Lecture 26 - Application of Soil Mechanics
Lecture 27 - Application of Soil Mechanics
Lecture 28 - Application of Soil Mechanics
Lecture 29 - Application of Soil Mechanics

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

Lecture 30 - Application of Soil Mechanics
Lecture 31 - Application of Soil Mechanics
Lecture 32 - Application of Soil Mechanics
Lecture 33 - Application of Soil Mechanics
Lecture 34 - Application of Soil Mechanics
Lecture 35 - Application of Soil Mechanics
Lecture 36 - Application of Soil Mechanics
Lecture 37 - Application of Soil Mechanics
Lecture 38 - Application of Soil Mechanics
Lecture 39 - Application of Soil Mechanics
Lecture 40 - Application of Soil Mechanics

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

NPTEL Video Course - Civil Engineering - NOC:Geology and Soil Mechanics

Subject Co-ordinator - Dr. Priyanka Ghosh

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Description of soil, Engineering Geology Of Soils and Thier Formation
Lecture 2 - Index Properties Of Soil
Lecture 3 - Index Properties Of Soil - A
Lecture 4 - Index Properties Of Soil - B
Lecture 5 - Index Properties Of Soil - C
Lecture 6 - Index Properties Of soil - D
Lecture 7 - Classification Of Soils - A
Lecture 8 - Classification Of Soils - B
Lecture 9 - Classification Of Soils And Clay Mineralogy - A
Lecture 10 - Classification Of Soils And Clay Mineralogy - B
Lecture 11 - Soil compaction - A
Lecture 12 - Soil compaction - B
Lecture 13 - Soil compaction - C
Lecture 14 - Soil compaction - D
Lecture 15 - Soil compaction and Permeability
Lecture 16 - Permeability - A
Lecture 17 - Permeability - B
Lecture 18 - Permeability - C
Lecture 19 - Problems on permeability
Lecture 20 - Seepage
Lecture 21 - Seepage - A
Lecture 22 - Seepage - B
Lecture 23 - Seepage and In situ stress
Lecture 24 - In situ stresses - A
Lecture 25 - In situ stresses - B
Lecture 26 - In situ stresses - A
Lecture 27 - In situ stresses - B
Lecture 28 - In situ stresses - C
Lecture 29 - Consolidation - A

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- Lecture 30 - Consolidation - B
- Lecture 31 - Consolidation - A
- Lecture 32 - Consolidation - B
- Lecture 33 - Consolidation - C
- Lecture 34 - Consolidation - D
- Lecture 35 - Consolidation - E
- Lecture 36 - Consolidation - F
- Lecture 37 - Shear strength of Soil - A
- Lecture 38 - Shear strength of Soil - B
- Lecture 39 - Shear strength of Soil - C
- Lecture 40 - Shear Strength of Soils
- Lecture 41 - Shear Strength of Soils.
- Lecture 42 - Shear Strength of Soils..
- Lecture 43 - Shear strength of Soil
- Lecture 44 - Shear strength of Soil- e
- Lecture 45 - Shear strength of Soil_B
- Lecture 46 - Problem on shear strength of soil
- Lecture 47 - Problem on shear strength of soil -a
- Lecture 48 - Problem on shear strength of soil -a
- Lecture 49 - Earth Pressure on retaining wall
- Lecture 50 - Earth Pressure on retaining wall -A
- Lecture 51 - Tutorial on Index properties of soil
- Lecture 52 - Tutorial on compaction
- Lecture 53 - Tutorial on Permeability - a
- Lecture 54 - Tutorial on Permeability - b
- Lecture 55 - Tutorial On Consoildation
- Lecture 56 - Tutorial on consoildation - a
- Lecture 57 - Tutorial on Sheer Strength
- Lecture 58 - Tutorial on Sheer Strength - a
- Lecture 59 - Earth Pressure on Retaining Wall - a
- Lecture 60 - Earth Pressure on Retaining Wall - 1
- Lecture 61 - Earth Pressure Theories and Problems on Earth Pressure on Retaining Wall
- Lecture 62 - Problems on Earth Pressure on Retaining Wall Edit Lesson
- Lecture 63 - Problems on Earth Pressure on Retaining Wall - 2
- Lecture 64 - Problems on Earth Pressure Theories - 3
- Lecture 65 - Problems on Earth Pressure Theories - 4

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

NPTEL Video Course - Civil Engineering - NOC:Engineering Graphics

Subject Co-ordinator - Dr. Nihar Ranjan Patra

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Course Objectives, Lettering and Numbering
- Lecture 2 - Geometric Constructions - Part I
- Lecture 3 - Geometric Constructions - Part II
- Lecture 4 - Orthographic Projections - Part I
- Lecture 5 - Orthographic Projections - Part II
- Lecture 6 - Orthographic Projections - Part III
- Lecture 7 - Orthographic Projections - Part IV
- Lecture 8 - Orthographic Projections - Part V
- Lecture 9 - Isometric Projections - Part I
- Lecture 10 - Isometric Projections - Part II
- Lecture 11 - Isometric Projections - Part III
- Lecture 12 - Isometric Projections - Part IV
- Lecture 13 - Isometric Projections - Part V and Oblique Projections - Part I
- Lecture 14 - Oblique Projections - Part II
- Lecture 15 - Sectioning
- Lecture 16 - Hatching
- Lecture 17 - Orthographic Projections - Assemblies
- Lecture 18 - Missing Lines and Missing Views
- Lecture 19 - Perspective View - Part I
- Lecture 20 - Perspective View - Part II
- Lecture 21 - Perspective View - Part III
- Lecture 22 - Angular Perspective and Circles in perspective
- Lecture 23 - Perspective View examples and Space Geometry
- Lecture 24 - Space Geometry (Continued...)
- Lecture 25 - True Length, Point View and Slope of Oblique lines
- Lecture 26 - Space Geometry - Introduction
- Lecture 27 - Space Geometry - Part 2
- Lecture 28 - Auxiliary View, Lines, Planes
- Lecture 29 - Relationship between Lines and Planes, Planes and Planes

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

- Lecture 30 - Intersection of Solids
- Lecture 31 - AUTOCAD
- Lecture 32 - Development of Surfaces

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

NPTEL Video Course - Civil Engineering - NOC:Earth Sciences for Civil Engineering

Subject Co-ordinator - Prof. Javed N. Malik

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Introduction to Geosciences in Civil Engineering - Part 1

Lecture 2 - Introduction to Geosciences in Civil Engineering - Part 2

Lecture 3 - Plate Tectonics and Continental Drift - Part 2

Lecture 4 - Plate Tectonics and Continental Drift - Part 3

Lecture 5 - Plate Tectonics and Continental Drift - Part 4

Lecture 6 - Rock Forming Minerals and their Properties - Part 1

Lecture 7 - Rock types and their Properties - Part 1

Lecture 8 - Rock types and their Properties - Part 2

Lecture 9 - Rock types and their Properties - Part 3

Lecture 10 - Rock types and their Properties - Part 4

Lecture 11 - Rock types and their properties - Part 5

Lecture 12 - Rock types and their properties - Part 6

Lecture 13 - Rock types and their properties - Part-6 Seismology and the internal structure of the earth - Pa

Lecture 14 - Seismology and the internal structure of the earth - Part 2

Lecture 15 - Seismology and the internal structure of the earth - Part 3 Edit Lesson

Lecture 16 - Seismology and the internal structure of the earth - Part 4

Lecture 17 - Seismology and the internal structure of the earth - Part 5 and Geological Structures - Part 1

Lecture 18 - Geological Structures - Part 2

Lecture 19 - Geological Structures - Part 3

Lecture 20 - Geological Structures - Part 4

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

NPTEL Video Course - Civil Engineering - Advanced Foundation Engineering

Subject Co-ordinator - Dr. Kousik Deb

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction
Lecture 2 - Soil Exploration
Lecture 3 - Soil Exploration - Penetration Tests
Lecture 4 - Soil Exploration - Geophysical Exploration
Lecture 5 - Shallow Foundation - Introduction
Lecture 6 - Shallow Foundation
Lecture 7 - Shallow Foundation
Lecture 8 - Shallow Foundation
Lecture 9 - Shallow Foundation
Lecture 10 - Shallow Foundation
Lecture 11 - Shallow Foundation - Settlement Calculation - I
Lecture 12 - Shallow Foundation - Settlement Calculation - II
Lecture 13 - Shallow Foundation - Settlement Calculation - III
Lecture 14 - Design of Shallow Foundation
Lecture 15 - Design of Raft Foundation
Lecture 16 - Deep Foundation - Introduction
Lecture 17 - Pile Foundation - Load Carrying Capacity - I
Lecture 18 - Pile Foundation - Load Carrying Capacity - II
Lecture 19 - Pile Foundation - Load Carrying Capacity - III and Settlement Calculation
Lecture 20 - Tension and Lateral Loaded Piles
Lecture 21 - Well Foundation
Lecture 22 - Well Foundation (Continued...)
Lecture 23 - Design of Retaining Wall
Lecture 24 - Design of Retaining Wall (Continued...)
Lecture 25 - Design of Sheet Piles
Lecture 26 - Design of Sheet Piles (Continued...)
Lecture 27 - Design of Sheet Piles (Continued...)
Lecture 28 - Design of Sheet Piles (Continued...)
Lecture 29 - Reinforced Earth

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

- Lecture 30 - Reinforced Retaining Wall
- Lecture 31 - Seismic Design of Retaining Wall
- Lecture 32 - Seismic Design of Retaining Walls (Continued...)
- Lecture 33 - Soil - Foundation Interaction
- Lecture 34 - Soil - Foundation Interaction (Continued...)
- Lecture 35 - Soil - Foundation Interaction (Continued...)
- Lecture 36 - Soil - Foundation Interaction (Continued...)
- Lecture 37 - Soil - Foundation Interaction (Continued...)
- Lecture 38 - Soil - Foundation Interaction (Continued...)
- Lecture 39 - Soil - Foundation Interaction (Continued...)
- Lecture 40 - Soil - Foundation Interaction (Continued...)

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

NPTEL Video Course - Civil Engineering - Ground Water Hydrology

Subject Co-ordinator - Dr. Anirban Dhar, Dr. V.R. Desai

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction

Lecture 2 - Ground Water in Hydrologic Cycle (Continued...), Ground Water Budget, Ground Water Level Fluctuations

Lecture 3 - Ground water Level Fluctuations and Environmental Influence (Continued...) Literature/Data/Intern

Lecture 4 - Ground water Level Fluctuations and Environmental Influence (Continued...) Literature/Data/Intern

Lecture 5 - Occurrence and Movement of Ground Water

Lecture 6 - Zones of Aeration and Saturation; Aquifers and their characteristics/classification

Lecture 7 - Aquifer Classification (Continued...), Ground water Basins and Springs; Darcy's Law; Permeability

Lecture 8 - Determination of Permeability

Lecture 9 - Ground Water (GW) flowrates and flow directions; general flow equations through porous media

Lecture 10 - General Flow Equations Through Porous Media (Continued...), Dupuit's Assumptions

Lecture 11 - 1-D Unconfined Ground water Flows; Steady Flow into Wells

Lecture 12 - Steady Flow into Wells (Continued...); Unsteady Flow into Wells

Lecture 13 - Unsteady Flow into Wells (Continued...)

Lecture 14 - Unsteady Radial Flow in Confined and Unconfined Aquifers

Lecture 15 - Unsteady Radial Flow in Leaky Aquifers (Continued...); Well Flow Near Aquifer Boundaries

Lecture 16 - Well Flow for Special Conditions; Partially Penetrating Wells; Horizontal Wells and Collector Wells

Lecture 17 - Well Completion; Well Development; Well Protection; Well Rehabilitation; Well testing for Yields

Lecture 18 - Well Protection/Rehabilitation/Testing for yield (Continued...); Artificial Ground Water Recharge

Lecture 19 - Concept and methods of Artificial Ground Water Recharge (Continued...); Recharge Mounds and Induced

Lecture 20 - Induced Recharge (Continued...); Wastewater recharge for reuse; Water spreading

Lecture 21 - Pollution and Quality Analysis of Ground Water

Lecture 22 - Ground Water Pollution from Industrial, Agricultural and Miscellaneous Sources (Continued...)

Lecture 23 - Ground Water Pollution from Miscellaneous Sources (Continued...), Attenuation and Underground Disposition

Lecture 24 - Potential Evaluation of Ground water Pollution; Physical/Chemical/Biological analysis of Ground

Lecture 25 - Ground water salinity and samples ; Graphical representations of ground water quality

Lecture 26 - Graphical representations of ground water quality (Continued...), SURFACE/SUB-SURFACE INVESTIGATION

Lecture 27 - Surface Investigation of ground water (Continued...)

Lecture 28 - Seismic refraction/gravity/magnetic methods (Continued...); Sub-surface investigation of ground water

Lecture 29 - Sub-surface investigation of ground water (Continued...)

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

- Lecture 30 - Radiation method of logging (Continued...); Temperature/caliper/fluid conductivity/fluid velocity
- Lecture 31 - Saline Water Intrusion in Aquifers
- Lecture 32 - Saline Water Intrusion in Aquifers
- Lecture 33 - Saline Water Intrusion in Aquifers
- Lecture 34 - Saline Water Intrusion in Aquifers
- Lecture 35 - Modeling and Management of Ground Water
- Lecture 36 - Modeling and Management of Ground Water
- Lecture 37 - Modeling and Management of Ground Water
- Lecture 38 - Modeling and Management of Ground Water
- Lecture 39 - Modeling and Management of Ground Water
- Lecture 40 - Modeling and Management of Ground Water

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

NPTEL Video Course - Civil Engineering - Numerical Methods in Civil Engineering

Subject Co-ordinator - Dr. A. Deb

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction to Numerical Methods
- Lecture 2 - Error Analysis
- Lecture 3 - Introduction to Linear Systems - I
- Lecture 4 - Linear Systems - II
- Lecture 5 - Linear Systems - III
- Lecture 6 - Linear Systems - Error Bounds
- Lecture 7 - Error Bounds and Iterative Methods for Solving Linear Systems
- Lecture 8 - Iterative Methods for Solving Linear Systems - I
- Lecture 9 - Iterative Methods - II
- Lecture 10 - Iterative Methods - III
- Lecture 11 - Iterative Methods for Eigen Value Extraction
- Lecture 12 - Solving Nonlinear Equations - I
- Lecture 13 - Solving Nonlinear Equations - II
- Lecture 14 - Solving Multi Dimensional Nonlinear Equations - I
- Lecture 15 - Solving Multi Dimensional Nonlinear Equations - II
- Lecture 16 - ARC Length and Gradient Based Methods
- Lecture 17 - Gradient Based Methods
- Lecture 18 - Conjugate Gradient Method - I
- Lecture 19 - Conjugate Gradient Method - II
- Lecture 20 - Nonlinear Conjugate Gradient and Introduction to PDEs
- Lecture 21 - Eigenfunction Solutions for the Wave Equation
- Lecture 22 - Analytical Methods for Solving the Wave Equation
- Lecture 23 - Analytical Methods for Hyperbolic and Parabolic PDEs
- Lecture 24 - Analytical Methods for Parabolic and Elliptic PDEs
- Lecture 25 - Analytical Methods for Elliptic PDE's
- Lecture 26 - Series Solutions for Elliptic PDE's and Introduction to Differential Operators
- Lecture 27 - Differential Operators - I
- Lecture 28 - Differential Operators - II
- Lecture 29 - Differential Operators - III

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

- Lecture 30 - Interpolation
- Lecture 31 - Polynomial Fitting
- Lecture 32 - Orthogonal Polynomials - I
- Lecture 33 - Orthogonal Polynomials - II
- Lecture 34 - Orthogonal Polynomials - III
- Lecture 35 - Spline Functions
- Lecture 36 - Orthogonal Basis Functions for Solving PDE\'s - I
- Lecture 37 - Orthogonal Basis Functions for Solving PDE\'s - II
- Lecture 38 - Integral Equations - I
- Lecture 39 - Integral Equations - II
- Lecture 40 - Integral Equations - III

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

NPTEL Video Course - Civil Engineering - Probability Methods in Civil Engineering

Subject Co-ordinator - Dr. Rajib Maity

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction - Role of Probability in Civil Engineering
- Lecture 2 - Random Events and Probability Concept
- Lecture 3 - Set Theory and Set Operations
- Lecture 4 - Axioms of Probability
- Lecture 5 - Probability of Events
- Lecture 6 - Concept and Definition of Random Variables
- Lecture 7 - Probability Distribution of Random Variables
- Lecture 8 - CDF and Descriptors of Random Variables
- Lecture 9 - Further Descriptors of Random Variables
- Lecture 10 - Discrete Probability Distribution
- Lecture 11 - Probability Distribution of Continuous RVs
- Lecture 12 - Probability Distribution of Continuous RVs (Continued...1)
- Lecture 13 - Probability Distribution of Continuous RVs (Continued...2)
- Lecture 14 - Functions of Single Random Variables
- Lecture 15 - Functions of Random Variables - Different Methods
- Lecture 16 - Functions of Random Variables - Different Methods (Continued...)
- Lecture 17 - Expectation and Moments of Functions of RV
- Lecture 18 - Expectation and Moments of Functions of RV (Continued...)
- Lecture 19 - Joint Probability Distribution
- Lecture 20 - Marginal Probability Distribution
- Lecture 21 - Conditional Probability Distribution
- Lecture 22 - Conditional Probability Distribution (Continued...)
- Lecture 23 - Properties of Multiple Random Variables
- Lecture 24 - Properties of Multiple Random Variables (Continued...)
- Lecture 25 - MGF of Multivariate RVs and Multivariate Probability Distributions
- Lecture 26 - Multivariate Distribution and Functions of Multiple Random Variables
- Lecture 27 - Functions of Multiple Random Variables (Continued...1)
- Lecture 28 - Functions of Multiple Random Variables (Continued...2)
- Lecture 29 - Introduction to Copulas

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

- Lecture 30 - Introduction to Copulas (Continued...)
- Lecture 31 - Probability Models using Normal Distribution
- Lecture 32 - Probability Models using Log Normal and Exponential Distribution
- Lecture 33 - Probability Models using Gamma and Extreme Value Distribution
- Lecture 34 - Probability Models using Discrete Probability Distributions
- Lecture 35 - Sampling Distribution and Parameter Estimation
- Lecture 36 - Sampling Distribution and Parameter Estimation (Continued...)
- Lecture 37 - Hypothesis Testing
- Lecture 38 - Goodness - of - fit tests
- Lecture 39 - Regression Analyses and Correlation
- Lecture 40 - Regression Analyses and Correlation (Continued...)

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

NPTEL Video Course - Civil Engineering - Design of Reinforced Concrete Structures

Subject Co-ordinator - Prof. N. Dhang

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction - I
- Lecture 2 - Materials
- Lecture 3 - Different Methods of Design of Reinforced Concrete Structures
- Lecture 4 - Working Stress Method
- Lecture 5 - Working Stress Method (Continued...)
- Lecture 6 - Limit State of Collapse Flexure - I
- Lecture 7 - Limit State of Collapse Flexure - II
- Lecture 8 - Design of Doubly Reinforced Beam Flexure - I
- Lecture 9 - Design of Doubly Reinforced Beam Flexure - II
- Lecture 10 - Design of Doubly Reinforced Beam Flexure
- Lecture 11 - Limit State of Collapse Shear
- Lecture 12 - Design for Shear
- Lecture 13 - Design for Shear (Continued...)
- Lecture 14 - Design of Slabs - Part I
- Lecture 15 - Design of Slabs - Part II
- Lecture 16 - Design of Slabs - Part III
- Lecture 17 - Design of Slabs - Part IV
- Lecture 18 - Design of Slabs - Part V
- Lecture 19 - Design of Columns - Part I
- Lecture 20 - Design of Columns - Part II
- Lecture 21 - Design of Columns - Part III
- Lecture 22 - Design of Columns - Part IV
- Lecture 23 - Design of Columns - Part V
- Lecture 24 - Design of Footings - Part I
- Lecture 25 - Design of Footings - Part II
- Lecture 26 - Design of Staircases
- Lecture 27 - Design for Torsion - Part I
- Lecture 28 - Design for Torsion - Part II
- Lecture 29 - Design of RC Slender Columns

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

Lecture 30 - Deflection of RC Beams

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

NPTEL Video Course - Civil Engineering - Engineering Geology

Subject Co-ordinator - Dr. Debasis Roy

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction to Engineering Geology
- Lecture 2 - Geologic Structures
- Lecture 3 - Geologic Maps and Stratigraphic Sections
- Lecture 4 - Remote Sensing in Engineering Geology
- Lecture 5 - Physical Properties of Minerals
- Lecture 6 - Crystallography and Optical Properties
- Lecture 7 - Chemical Characteristics of Minerals
- Lecture 8 - Origin And Types of Rocks
- Lecture 9 - Origin And Types of Soils
- Lecture 10 - Igneous Rocks
- Lecture 11 - Sedimentary Rocks
- Lecture 12 - Metamorphic Rocks
- Lecture 13 - Weathering
- Lecture 14 - Sediment Transport and Deposition
- Lecture 15 - Introduction to Subsurface Exploration
- Lecture 16 - Introduction to Subsurface Exploration
- Lecture 17 - Sampling and Non - Intrusive Methods
- Lecture 18 - Index Properties and Classification of Soils
- Lecture 19 - Index Properties of Rock and Rock Mass
- Lecture 20 - Stress-Strain Behavior of Soil and Rock - I
- Lecture 21 - Stress-Strain Behavior of Soil and Rock - II
- Lecture 22 - In-situ State of Stress
- Lecture 23 - Geologic Considerations in Tunneling
- Lecture 24 - Geologic Considerations in Dam Construction
- Lecture 25 - Groundwater - Preliminaries
- Lecture 26 - Groundwater Flow - I
- Lecture 27 - Groundwater Flow - II
- Lecture 28 - Groundwater Related Engineering Issues
- Lecture 29 - Groundwater Over Utilization

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

- Lecture 30 - Plate Tectonics
- Lecture 31 - Plate Tectonics - 2 and Earthquake
- Lecture 32 - Earthquake Hazard Assessment
- Lecture 33 - Geologic Hazards - Seismicity and Volcanism
- Lecture 34 - Geologic Hazards - Shoreline Processes
- Lecture 35 - Geologic Hazards - Shoreline Processes
- Lecture 36 - Geologic Hazards - Landslide Hazards - Zoning
- Lecture 37 - Geologic Hazards Subsidence , Collapsible Soils
- Lecture 38 - Preparation of Geologic Sections
- Lecture 39 - Index testing of soil & rocks
- Lecture 40 - Identification of minerals and rock samples

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

NPTEL Video Course - Civil Engineering - Introduction to Transportation Engineering

Subject Co-ordinator - Dr. K.S. Reddy, Dr. Bhargab Maitra

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Transportation Engineering
Lecture 2 - Elements of Concern and Components
Lecture 3 - Traffic Stream Characteristics
Lecture 4 - Traffic Studies
Lecture 5 - Traffic Studies
Lecture 6 - Highway Capacity and Level of Service
Lecture 7 - Intersection Control and Signalization
Lecture 8 - Functional Classification, Design Elements
Lecture 9 - Cross Section Elements
Lecture 10 - Stopping Sight Distance And Decision Sight
Lecture 11 - Overtaking, Intermediate and Headlight Sight
Lecture 12 - Intersection Sight Distance - I
Lecture 13 - Intersection Sight Distance - II
Lecture 14 - Horizontal Alignment - I
Lecture 15 - Horizontal Alignment - II
Lecture 16 - Horizontal Alignment - III
Lecture 17 - Horizontal Alignment - IV
Lecture 18 - Horizontal Alignment - V
Lecture 19 - Horizontal Alignment - VI
Lecture 20 - Vertical Alignment - I
Lecture 21 - Vertical Alignment - II
Lecture 22 - Vertical Alignment - III
Lecture 23 - Highway Alignment
Lecture 24 - Principles of Pavement Design
Lecture 25 - Traffic Loading - I
Lecture 26 - Traffic Loading - II
Lecture 27 - Pavement Materials - I
Lecture 28 - Pavement Materials - II
Lecture 29 - Pavement Materials - III

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

- Lecture 30 - Pavement Materials - IV
- Lecture 31 - Pavement Materials - V
- Lecture 32 - Design of Bituminous Mixes - I
- Lecture 33 - Design of Bituminous Mixes - II
- Lecture 34 - Analysis of Flexible Pavements
- Lecture 35 - Analysis of Concrete Pavements
- Lecture 36 - Flexible Pavement Design Indian Roads Congress
- Lecture 37 - Flexible Pavement Design AASHTO Method - 1993
- Lecture 38 - Concrete Pavement Design Indian Congress Method
- Lecture 39 - Concrete Pavement Design PCA and AASHTO Methods
- Lecture 40 - Pavement Evaluation and Rehabilitation
- Lecture 41 - Overlay Design - IRC Method

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

NPTEL Video Course - Civil Engineering - Strength of Materials

Subject Co-ordinator - Prof. S.K. Bhattacharyya

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction - Strength of Materials

Lecture 2 - Analysis of Stress - I

Lecture 3 - Analysis of Stress - II

Lecture 4 - Analysis of Stress - III

Lecture 5 - Analysis of Stress - IV

Lecture 6 - Analysis of Stress - V

Lecture 7 - Analysis of Strain - I

Lecture 8 - Analysis of Strain - II

Lecture 9 - Analysis of Strain - III

Lecture 10 - Analysis of Strain - IV

Lecture 11 - Analysis of Strain - V

Lecture 12 - Analysis of Strain - VI

Lecture 13 - Analysis of Strain - VII

Lecture 14 - Analysis of Strain - VIII

Lecture 15 - Application of Stress/Strain

Lecture 16 - Application of Stress / Strain

Lecture 17 - Application of Stress / Strain

Lecture 18 - Torsion - I

Lecture 19 - Torsion - II

Lecture 20 - Torsion - III

Lecture 21 - Torsion - IV

Lecture 22 - Bending of Beams - I

Lecture 23 - Bending of Beams - II

Lecture 24 - Bending of Beams - III

Lecture 25 - Bending of Beams - IV

Lecture 26 - Stresses in Beams - I

Lecture 27 - Stresses in Beams - II

Lecture 28 - Stresses in Beams - III

Lecture 29 - Stresses in Beams - IV

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- Lecture 30 - Deflection of Beams - I
- Lecture 31 - Deflection of Beams - II
- Lecture 32 - Deflection of Beams - III
- Lecture 33 - Deflection of Beams - IV
- Lecture 34 - Combined Stresses - I
- Lecture 35 - Combined Stresses - II
- Lecture 36 - Combined Stresses - III
- Lecture 37 - Stability of Columns - I
- Lecture 38 - Stability of Columns - II
- Lecture 39 - Springs - I
- Lecture 40 - Springs - II

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

NPTEL Video Course - Civil Engineering - NOC:Probability Methods in Civil Engineering

Subject Co-ordinator - Dr. Rajib Maity

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Random Events and Probability Concept
- Lecture 2 - Set Theory and Set Operations
- Lecture 3 - Axioms of Probability
- Lecture 4 - Probability of Events
- Lecture 5 - Concept and definition of Random variables
- Lecture 6 - Probability distribution of random variables
- Lecture 7 - CDF and Descriptors of Random Variables
- Lecture 8 - Further Descriptors of Random Variables
- Lecture 9 - Discrete Probability Distribution
- Lecture 10 - Probability Distribution of Continuous RVs
- Lecture 11 - Probability Distribution of Continuous RVs (Continued.....1)
- Lecture 12 - Probability Distribution of Continuous RVs (Continued.....2)
- Lecture 13 - Functions of Single Random Variables
- Lecture 14 - Functions of Different Variables - Different Methods
- Lecture 15 - Functions of Random Variables
- Lecture 16 - Probability Models using Normal Distribution
- Lecture 17 - Probability Models using Log Normal and Exponential Distribution
- Lecture 18 - Probability Models using Gamma and Extreme Value Distribution
- Lecture 19 - Probability Models using Discrete Probability Distributions
- Lecture 20 - Sampling Distribution and Parameter Estimation
- Lecture 21 - Sampling Distribution and Parameter Estimation (Continued...)
- Lecture 22 - Hypothesis Testing
- Lecture 23 - Goodness of Fit-Tests
- Lecture 24 - Regression Analyses and Correlation
- Lecture 25 - Regression Analyses and Correlation (Continued...)

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

NPTEL Video Course - Civil Engineering - Advanced Structural Analysis

Subject Co-ordinator - Prof. Devdas Menon

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Review of Basic Structural Analysis - I
Lecture 2 - Review of Basic Structural Analysis - I
Lecture 3 - Review of Basic Structural Analysis - I
Lecture 4 - Review of Basic Structural Analysis - I
Lecture 5 - Review of Basic Structural Analysis - I
Lecture 6 - Review of Basic Structural Analysis - I
Lecture 7 - Review of Basic Structural Analysis - II
Lecture 8 - Review of Basic Structural Analysis - II
Lecture 9 - Review of Basic Structural Analysis - II
Lecture 10 - Review of Basic Structural Analysis - II
Lecture 11 - Review of Basic Structural Analysis - II
Lecture 12 - Review of Basic Structural Analysis - II
Lecture 13 - Review of Basic Structural Analysis - II
Lecture 14 - Review of Basic Structural Analysis - II
Lecture 15 - Review of Basic Structural Analysis - II
Lecture 16 - Review of Basic Structural Analysis - II
Lecture 17 - Basic Matrix Concepts
Lecture 18 - Basic Matrix Concepts
Lecture 19 - Basic Matrix Concepts
Lecture 20 - Basic Matrix Concepts
Lecture 21 - Basic Matrix Concepts
Lecture 22 - Matrix Analysis of Structures with Axial Elements
Lecture 23 - Matrix Analysis of Structures with Axial Elements
Lecture 24 - Matrix Analysis of Structures with Axial Elements
Lecture 25 - Matrix Analysis of Structures with Axial Elements
Lecture 26 - Matrix Analysis of Structures with Axial Elements
Lecture 27 - Matrix Analysis of Beams and Grids
Lecture 28 - Matrix Analysis of Beams and Grids
Lecture 29 - Matrix Analysis of Beams and Grids

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- Lecture 30 - Matrix Analysis of Beams and Grids
- Lecture 31 - Matrix Analysis of Beams and Grids
- Lecture 32 - Matrix Analysis of Beams and Grids
- Lecture 33 - Matrix Analysis of Plane and Space Frames
- Lecture 34 - Matrix Analysis of Plane and Space Frames
- Lecture 35 - Matrix Analysis of Plane and Space Frames
- Lecture 36 - Matrix Analysis of Plane and Space Frames
- Lecture 37 - Matrix Analysis of Plane and Space Frames
- Lecture 38 - Analysis of elastic instability and second-order effects
- Lecture 39 - Analysis of elastic instability and second-order effects
- Lecture 40 - Analysis of elastic instability and second-order effects
- Lecture 41 - Life beyond Structures & Analysis

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

NPTEL Video Course - Civil Engineering - Finite Element Analysis

Subject Co-ordinator - Dr. B.N. Rao

Co-ordinating Institute - IIT - Madras

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

Lecture 1
Lecture 2
Lecture 3
Lecture 4
Lecture 5
Lecture 6
Lecture 7
Lecture 8
Lecture 9
Lecture 10
Lecture 11
Lecture 12
Lecture 13
Lecture 14
Lecture 15
Lecture 16
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Lecture 27
Lecture 28
Lecture 29

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Lecture 30
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Lecture 35
Lecture 36
Lecture 37
Lecture 38
Lecture 39
Lecture 40

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

NPTEL Video Course - Civil Engineering - Geosynthetics and Reinforced Soil Structures

Subject Co-ordinator - Dr. K. Rajagopal

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction & Need for Geosynthetics
- Lecture 2 - Types and Functions of Geosynthetics
- Lecture 3 - Polymers in Geosynthetics and Manufacturing Techniques
- Lecture 4 - Strength Analysis of Reinforced Soils - I
- Lecture 5 - Strength Analysis of Reinforced Soils - II
- Lecture 6 - Testing of Geosynthetics - I
- Lecture 7 - Testing of Geosynthetics - II
- Lecture 8 - Testing of Geosynthetics - III
- Lecture 9 - Different Types of Soil Retaining Structures
- Lecture 10 - Construction Aspects of Geosynthetic Reinforced Soil Retaining Walls
- Lecture 11 - Design Codes for Reinforced Soil Retaining Walls
- Lecture 12 - External Stability Analysis of Reinforced Soil Retaining Walls
- Lecture 13 - Seismic Loads and Internal Stability Analysis of Reinforced Soil Walls
- Lecture 14 - Testing Requirements for Reinforced Soil Retaining Walls
- Lecture 15 - Design Example of Reinforced Soil Retaining Walls - I
- Lecture 16 - Design Example of Reinforced Soil Retaining Walls - II
- Lecture 17 - Design Example of Reinforced Soil Retaining Walls - III
- Lecture 18 - Design Example of Reinforced Soil Retaining Walls - IV
- Lecture 19 - Case Study of Construction of Very High Tiered Reinforced Soil Walls
- Lecture 20 - Controlled Yielding to Reduce Lateral Earth Pressures on Rigid Walls
- Lecture 21 - Geosynthetic Reinforced Soil Embankments - I
- Lecture 22 - Geosynthetic Reinforced Soil Embankments - II
- Lecture 23 - Two-Part Wedge Analysis of Reinforced Soil Embankments
- Lecture 24 - Soil Embankments Supported on Geocell Mattresses
- Lecture 25 - Accelerated Pre-Consolidation of Soft Clay Soils Using Geosynthetics
- Lecture 26 - Geosynthetic Reinforced Pile Systems for High Embankments
- Lecture 27 - Geosynthetic Encasement for Stronger and Stiffer Stone Columns
- Lecture 28 - Response of Footings Resting on Reinforced Foundation Soils
- Lecture 29 - Bearing Capacity Analysis of Footings Resting on Reinforced Foundation Soils

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

- Lecture 30 - Design and Construction of Container Yards Using Geosynthetics
- Lecture 31 - Geosynthetics in Flexible Pavements - I
- Lecture 32 - Geosynthetics in Flexible Pavements - II
- Lecture 33 - Geosynthetics in Flexible Pavements and Carbon Foot Print Analysis
- Lecture 34 - Filtration of Soils Using Geosynthetics
- Lecture 35 - Drainage Applications of Geosynthetics
- Lecture 36 - Erosion Control of Soils Using Geosynthetics
- Lecture 37 - Sustainable Infrastructure Development & Natural Geosynthetics
- Lecture 38 - Introduction to Geosynthetics in Landfills
- Lecture 39 - Case Study of the Construction of Airport Runway at Pakyong, Sikkim Using Geosynthetics (Guest I
- Lecture 40 - Landfill Engineering Systems (Guest Lecture)

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

NPTEL Video Course - Civil Engineering - Modern Construction Materials

Subject Co-ordinator - Dr. Ravindra Gettu

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Prologue

Lecture 2 - The Science, Engineering and Technology of Materials An Introduction - I

Lecture 3 - The Science, Engineering and Technology of Materials An Introduction - II

Lecture 4 - Review of Atomic Bonding - I

Lecture 5 - Review of Atomic Bonding - II

Lecture 6 - Structure of Solids - I

Lecture 7 - Structure of Solids - II

Lecture 8 - Structure of Solids - III

Lecture 9 - Movement of Atoms in Solids

Lecture 10 - Development of Microstructure - I

Lecture 11 - Development of Microstructure - II

Lecture 12 - Surface Properties

Lecture 13 - Response to Stress - Part 1

Lecture 14 - Response to Stress - Part 2

Lecture 15 - Response to Stress - Part 3

Lecture 16 - Failure Theories

Lecture 17 - Fracture Mechanics - Part 1

Lecture 18 - Fracture Mechanics - Part 2

Lecture 19 - Rheology of Liquids and Solids

Lecture 20 - Thermal Properties

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

NPTEL Video Course - Civil Engineering - Urban transportation planning

Subject Co-ordinator - Dr. V. Thamizh Arasan

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction
Lecture 2 - Introduction (Continued...)
Lecture 3 - Introduction (Continued...)
Lecture 4 - Course Outline
Lecture 5 - Conceptual Aspects
Lecture 6 - Conceptual Aspects (Continued...)
Lecture 7 - Conceptual Aspects (Continued...)
Lecture 8 - Conceptual Aspects (Continued...)
Lecture 9 - Trip Generation Analysis
Lecture 10 - Trip Generation Analysis (Continued...)
Lecture 11 - Trip Generation Analysis (Continued...)
Lecture 12 - Trip Generation Analysis (Continued...)
Lecture 13 - Modal Split Analysis
Lecture 14 - Modal Split Analysis (Continued...)
Lecture 15 - Modal Split Analysis (Continued...)
Lecture 16 - Modal Split Analysis (Continued...)
Lecture 17 - Modal Split Analysis (Continued...)
Lecture 18 - Modal Split Analysis (Continued...)
Lecture 19 - Modal Split Analysis (Continued...)
Lecture 20 - Trip Distribution Analysis
Lecture 21 - Trip Distribution Analysis (Continued...)
Lecture 22 - Trip Distribution Analysis (Continued...)
Lecture 23 - Trip Distribution Analysis (Continued...)
Lecture 24 - Trip Distribution Analysis (Continued...)
Lecture 25 - Trip Distribution Analysis (Continued...)
Lecture 26 - Trip Distribution Analysis (Continued...)
Lecture 27 - Route Assignment
Lecture 28 - Route Assignment (Continued...)
Lecture 29 - Route Assignment (Continued...)

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

- Lecture 30 - Route Assignment (Continued...)
- Lecture 31 - Transportation Surveys
- Lecture 32 - Transportation Surveys (Continued...)
- Lecture 33 - Transportation Surveys (Continued...)
- Lecture 34 - Transport Related Land-Use Models
- Lecture 35 - Transport Related Land-Use Models (Continued...)
- Lecture 36 - Transport Related Land-Use Models (Continued...)
- Lecture 37 - Urban Structure
- Lecture 38 - Urban Structure (Continued...)
- Lecture 39 - Urban Goods Movement
- Lecture 40 - Urban Goods Movement (Continued...)

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

NPTEL Video Course - Civil Engineering - Mechanics of Solids

Subject Co-ordinator - Prof. M.S. Sivakumar

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Planar Rigid Body
- Lecture 2 - Degrees of freedom
- Lecture 3 - Equations of Equilibrium
- Lecture 4 - Planar rigid body Statics - Example 1
- Lecture 5 - Rigid Body Statics - Example 2
- Lecture 6 - Structural Systems with rigid bodies
- Lecture 7 - Types of 1-D Structural Elements
- Lecture 8 - Trusses - Axial members
- Lecture 9 - Analysis of Truss Systems
- Lecture 10 - Stability of Structural systems
- Lecture 11 - Trusses - additional discussions
- Lecture 12 - Trusses - Method of Sections
- Lecture 13 - Beams - Example 1
- Lecture 14 - Beams - BMD & SFD
- Lecture 15 - Beams - loading, shear and BM relationships
- Lecture 16 - Virtual work method
- Lecture 17 - Virtual displacements
- Lecture 18 - Finding virtual displacements
- Lecture 19 - Virtual Work Method - Example 1
- Lecture 20 - Virtual Work Method - Example 2
- Lecture 21 - Static Friction - an understanding
- Lecture 22 - Belt Friction
- Lecture 23 - Friction
- Lecture 24 - General concepts - rigid bodies
- Lecture 25 - Motion of a rigid body = a translation + a rotation
- Lecture 26 - Motion of a point of the rigid body
- Lecture 27 - Motion of one point on a rigid body relative to another
- Lecture 28 - Understanding rotational motion $\dot{r} = \omega \times r$
- Lecture 29 - Kinematics velocity and acceleration

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

- Lecture 30 - Understanding Coriolis Acceleration
- Lecture 31 - Kinematics - Solving problems
- Lecture 32 - Equations of motion of a rigid body
- Lecture 33 - Tips and Techniques 1/2
- Lecture 34 - Tips and Techniques 2/2
- Lecture 35 - Solving Problems 1/4
- Lecture 36 - Solving Problems 2/4
- Lecture 37 - Solving Problems 3/4
- Lecture 38 - Solving Problems 4/4
- Lecture 39 - Engineering Statics - Solving problems

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

NPTEL Video Course - Civil Engineering - Pre-stressed Concrete Structures

Subject Co-ordinator - Prof. Devdas Menon, Dr. Amlan Kumar Sengupta

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Prestressing System
- Lecture 2 - Types of Prestressing
- Lecture 3 - Prestressing System and Devices (Pre-Tensioning)
- Lecture 4 - Prestressing System and Devices (Post-Tensioning)
- Lecture 5 - Concrete - Part-1
- Lecture 6 - Concrete, Grout - Part-2
- Lecture 7 - Prestressing Steel
- Lecture 8 - Losses in Prestress
- Lecture 9 - Friction & Anchorage Slip
- Lecture 10 - Creep, Shrinkage & Relaxation Losses
- Lecture 11 - Analysis of Members
- Lecture 12 - Analysis of Members Under Flexure
- Lecture 13 - Cracking Moment, Kern Point and Pressure Line
- Lecture 14 - Analysis of Rectangular sections
- Lecture 15 - Analysis of Flanged Sections
- Lecture 16 - Analysis of Partially Prestressed Section
- Lecture 17 - Design of Members
- Lecture 18 - Design of Members for Flexure (Type1 Members)
- Lecture 19 - Design of Members for Flexure (Type1 & Type3)
- Lecture 20 - Choice of Sections and Determination of Limiting
- Lecture 21 - Magnel's Graphical Method
- Lecture 22 - Detailing Requirements
- Lecture 23 - Analysis and Design for Shear and Torsion
- Lecture 24 - Design for Shear - Part-1
- Lecture 25 - Design for Shear - Part-2
- Lecture 26 - Analysis of Torsion
- Lecture 27 - Analysis of Torsion - Part-1
- Lecture 28 - Analysis of Torsion - Part-2
- Lecture 29 - Calculations of Deflection and Crack Width

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

- Lecture 30 - Transmission of Prestress
- Lecture 31 - Post-tensioned Members
- Lecture 32 - Cantilever Beams
- Lecture 33 - Continuous Beams - Part-1
- Lecture 34 - Continuous Beams - Part-2
- Lecture 35 - Composite Sections
- Lecture 36 - One-Way Slabs
- Lecture 37 - Two-Way Slabs - Part-1
- Lecture 38 - Two-Way Slabs - Part-2
- Lecture 39 - compression Members
- Lecture 40 - Circular Prestressing, Conclusion

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

NPTEL Video Course - Civil Engineering - Water and Waste Water Engineering

Subject Co-ordinator - Prof. B.S. Murty, Prof. C. Venkobachar, Prof. Ligy Philip

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction To Water & Waste Water Engineering
- Lecture 2 - Water & Waste Water Quality Enhancement
- Lecture 3 - Water & Waste Water Quantity Estimation
- Lecture 4 - Water & Waste Water Quantity Estimation (Continued...)
- Lecture 5 - Water & Waste Water Characteristics
- Lecture 6 - Water & Waste Water Characteristics (Continued...)
- Lecture 7 - Water Treatment System Unit Operations
- Lecture 8 - Sedimentation
- Lecture 9 - Sedimentation (Continued...)
- Lecture 10 - Coagulation & Flocculation
- Lecture 11 - Coagulation & Flocculation (Continued...)
- Lecture 12 - Softening
- Lecture 13 - Filtration
- Lecture 14 - Filtration (Continued...)
- Lecture 15 - Disinfection
- Lecture 16 - Introduction To Domestic Waste Water Treatment
- Lecture 17 - Physical Unit Processes For Waste Water Treatment
- Lecture 18 - Introduction To Microbiology
- Lecture 19 - Microbiology - (Continued...)
- Lecture 20 - Waste Water Treatment Reactor Analysis
- Lecture 21 - Biological Unit Processes - Activated Sludge Process
- Lecture 22 - Activated Sludge Process - Modification
- Lecture 23 - Activated Sludge Process (Continued...)
- Lecture 24 - Aeration, Nitrification And Denitrification
- Lecture 25 - Natural Waste Water Treatment Systems
- Lecture 26 - Attached Growth Aerobic Process
- Lecture 27 - Anaerobic Treatment
- Lecture 28 - Anaerobic Process-UASB Reactor (Continued...)
- Lecture 29 - UASB- Continued & Sludge Treatment

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

- Lecture 30 - Sludge Treatment (Continued...)
- Lecture 31 - Sludge Treatment (Continued...) & Waste Water Disposal
- Lecture 32 - Waste Water Disposal And Reuse
- Lecture 33 - Advanced Waste Water Treatment
- Lecture 34 - Adsorption
- Lecture 35 - Ion Exchange, Advanced Oxidation Process
- Lecture 36 - Industrial Waste Water Treatment
- Lecture 37 - Water Distribution Networks
- Lecture 38 - Sanitary sewerage systems
- Lecture 39 - Storm water sewerage systems
- Lecture 40 - Intake Structures And Pumping Installations

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

NPTEL Video Course - Civil Engineering - NOC:Sustainable River Basin Management

Subject Co-ordinator - Dr. Franziska Steinbruch

Co-ordinating Institute - IGCS

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

Lecture 1
Lecture 2
Lecture 3
Lecture 4
Lecture 5
Lecture 6
Lecture 7
Lecture 8
Lecture 9
Lecture 10
Lecture 11
Lecture 12
Lecture 13
Lecture 14
Lecture 15
Lecture 16
Lecture 17
Lecture 18
Lecture 19
Lecture 20
Lecture 21
Lecture 22
Lecture 23
Lecture 24
Lecture 25
Lecture 26
Lecture 27
Lecture 28
Lecture 29

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

Lecture 30
Lecture 31
Lecture 32
Lecture 33
Lecture 34
Lecture 35
Lecture 36
Lecture 37
Lecture 38
Lecture 39
Lecture 40

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

NPTEL Video Course - Civil Engineering - NOC:Project Planning and Control

Subject Co-ordinator - Dr. Koshy Varghese

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - What is Project Management? Is Project Management an Art/Science ?

Lecture 2 - Objectives of a Project, Scientific Way of Managing of Objectives

Lecture 3 - Course Scope and Plan, Questions and Discussions

Lecture 4 - Construction Industry and National Growth

Lecture 5 - Project Stakeholders, Project Phases, Project Organization

Lecture 6 - Project Scheduling Levels (Scheduling Engineer Responsibilities)

Lecture 7 - Time Management - Overview

Lecture 8 - Basics of Work Breakdown Structure (WBS)

Lecture 9 - Tools for Time Management

Lecture 10 - Gantt / Bar Chart - History, Representation, Progress Monitoring, Uses, Steps to draw a Bar Chart

Lecture 11 - Develop a Bar Chart (Exercise)

Lecture 12 - Bar Charts for Resource Usage, Pros and Cons

Lecture 13 - Duration Estimation - Types, Inputs, Methods, Parametric Estimation

Lecture 14 - Factors influencing Productivity, Example for Ideal Productivity, Factored Productivity and Work

Lecture 15 - Piling Activity Example, Applicability of different methods to Estimate Activity Duration

Lecture 16 - Summary of Key Topics, Types of Networks

Lecture 17 - Networks - Introduction, Techniques

Lecture 18 - Representing Results in a Bar Chart, AON Example-2

Lecture 19 - Introduction to Floats, Types of Floats and Example-1 Discussion

Lecture 20 - Example 4, Usage of Floats for Project Decisions

Lecture 21 - Two-Span Bridge

Lecture 22 - Two-Span Bridge

Lecture 23 - Two-Span Bridge

Lecture 24 - Review Network Analysis Concepts, Apply Network Analysis to Two-Span Bridge (Continued...)

Lecture 25 - Two-Span Bridge

Lecture 26 - Two-Span Bridge

Lecture 27 - Fast-Tracking vs Crashing, Relationship between Activity Direct Cost and Activity Duration - Ass

Lecture 28 - Time-Cost trade-off

Lecture 29 - Time-Cost trade-off

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

- Lecture 30 - Time-Cost trade-off
- Lecture 31 - Incorporating Factors such as Bonus and Penalty; Problem-4
- Lecture 32 - What is Resource?, Influence of Resources on Schedule, Two-Span Bridge Example, Resource Decision
- Lecture 33 - Projects and Resources, Example of Two Resources, Exercise, Two-Span Bridge Example
- Lecture 34 - Review Problem-1; Problem-2 (Cash Resource); Resolving Over-Allocation
- Lecture 35 - Problem 1 - Two Resources; Resolving Resource Allocation Problems
- Lecture 36 - Resource Profile Requirements
- Lecture 37 - Resource Leveling - Example Network
- Lecture 38 - Minimum Moment Concept
- Lecture 39 - Applying Improvement Factor - Illustration
- Lecture 40 - Introduction to Precedence Diagramming Method (PDM)
- Lecture 41 - PDM network representation and its issues, Network Calculation
- Lecture 42 - PDM - Problem #1
- Lecture 43 - Issues in PDM, Negative Lags, Problem #2 Solution
- Lecture 44 - PDM - Analysis with non-continuous duration, Floats
- Lecture 45 - Defining Relationship (Based on Construction Method) - Simple Shed
- Lecture 46 - Project Monitoring & Control - Typical Project Time Monitoring Process, Levels and Frequency of
- Lecture 47 - Project Control Process, Daily Progress Report, Macro Level Update- Data Need, Standard Progress
- Lecture 48 - Application
- Lecture 49 - Review of Key Issues in Project Monitoring, Earned Value Concept Through Examples
- Lecture 50 - Basic Earned Value Definitions and Terminology, Summary
- Lecture 51 - Uncertainty in Project Schedules
- Lecture 52 - PERT Background & Assumptions, Stepwise Procedure
- Lecture 53 - PERT Example Problem, Summary
- Lecture 54 - Course Conclusion
- Lecture 55 - Emerging Trends / Tools in Project Planning
- Lecture 56 - Industry Perspective - Prof. N. Raghavan
- Lecture 57 - Final Exam Pattern, Acknowledgements

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

NPTEL Video Course - Civil Engineering - NOC:Structural Dynamics

Subject Co-ordinator - Prof. Ramancharala Pradeep Kumar

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Module 1
Lecture 2 - Module 2
Lecture 3 - Module 3
Lecture 4 - Module 4
Lecture 5 - Module 5
Lecture 6 - Module 6
Lecture 28 - Damped Free Vibration
Lecture 29 - Types of Damping
Lecture 30 - Logarithmic Decrement
Lecture 31 - Dynamic Equilibrium Equation Using Energy Method
Lecture 32 - Module 1
Lecture 33 - Module 2
Lecture 34 - Module 3
Lecture 35 - Module 4
Lecture 36 - Module 5
Lecture 37 - Module 1
Lecture 38 - Module 2
Lecture 39 - Module 3
Lecture 40 - Module 1
Lecture 41 - Module 2
Lecture 42 - Module 3
Lecture 43 - Module 4
Lecture 44 - Central Difference Method (Tutorial)
Lecture 45 - Module 1
Lecture 46 - Module 2
Lecture 47 - Module 3
Lecture 48 - Module 1
Lecture 49 - Module 2
Lecture 50 - Module 3

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Lecture 51 - Module 4
Lecture 52 - Tutorial 01
Lecture 53 - Tutorial 2
Lecture 54 - Module 1
Lecture 55 - Module 2
Lecture 56 - Module 1
Lecture 57 - Module 2
Lecture 58 - W09T01
Lecture 59 - Module 1
Lecture 60 - Module 2
Lecture 61 - Module 3
Lecture 62 - Module 1
Lecture 63 - Module 2
Lecture 64 - W11T
Lecture 65 - Module 1
Lecture 66 - Module 2
Lecture 67 - Module 3
Lecture 68 - Module 4

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

NPTEL Video Course - Civil Engineering - Foundation Engineering

Subject Co-ordinator - Prof. Priti Maheswari, Prof. N.K. Samadhiya, Prof. Mahendra Singh

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Shallow Foundation - 1
Lecture 2 - Shallow Foundation - 2
Lecture 3 - Shallow Foundation - 3
Lecture 4 - Shallow Foundation - 4
Lecture 5 - Shallow Foundation - 5
Lecture 6 - Shallow Foundation - 6
Lecture 7 - Shallow Foundation - 7
Lecture 8 - Lateral Earth pressure Theories Retaining Walls - 1
Lecture 9 - Lateral Earth pressure Theories Retaining Walls - 2
Lecture 10 - Lateral Earth pressure Theories Retaining Walls - 3
Lecture 11 - Lateral Earth Pressure Theories Retaining Walls - 4
Lecture 12 - Lateral Earth Pressure Theories Retaining Walls - 5
Lecture 13 - Pile Foundations - 1
Lecture 14 - Pile Foundations - 2
Lecture 15 - Pile Foundations - 3
Lecture 16 - Pile Foundations - 4
Lecture 17 - Pile Foundations - 5
Lecture 18 - Pile Foundations - 6
Lecture 19 - Pile Foundations - 7
Lecture 20 - Machine Foundations - 1
Lecture 21 - Machine Foundations - 2
Lecture 22 - Machine Foundations - 3
Lecture 23 - Machine Foundations - 4
Lecture 24 - Well Foundations - 1
Lecture 25 - Well Foundations - 2
Lecture 26 - Well Foundations - 3
Lecture 27 - Foundation Engineering - 1
Lecture 28 - Foundation Engineering - 2
Lecture 29 - Foundation Engineering - 3

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Lecture 30	-	Foundation Engineering	-	4
Lecture 31	-	Foundation Engineering	-	5
Lecture 32	-	Foundation Engineering	-	6
Lecture 33	-	Foundation Engineering	-	7
Lecture 34	-	Foundation Engineering	-	8
Lecture 35	-	Foundation Engineering	-	9
Lecture 36	-	Foundation Engineering	-	10
Lecture 37	-	Foundation Engineering	-	11
Lecture 38	-	Foundation Engineering	-	12
Lecture 39	-	Foundation Engineering	-	13
Lecture 40	-	Foundation Engineering	-	14

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

NPTEL Video Course - Civil Engineering - Modern Surveying Techniques

Subject Co-ordinator - Prof. S.K. Ghosh

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Geographic Information System An Introduction
Lecture 2 - Introduction to Global Positioning System
Lecture 3 - GPS Positioning Methods
Lecture 4 - GPS Solutions and Errors
Lecture 5 - GPS Application
Lecture 6 - Remote Sensing Introduction
Lecture 7 - Electromagnetic Spectrum
Lecture 8 - Sensors and Platform
Lecture 9 - Sensors and Platform
Lecture 10 - Image Interpretation
Lecture 11 - Statistical Evaluation of RS Data
Lecture 12 - Rectification and Restoration
Lecture 13 - Image Enhancement
Lecture 14 - Image Transformation
Lecture 15 - Orthogonal Transformation
Lecture 16 - Image Classification (Supervised Classification)
Lecture 17 - Image Classification (Unsupervised Classification)
Lecture 18 - Spatial Filtering-Noise Removal
Lecture 19 - Spatial Filtering-Edge Removal
Lecture 20 - Photogramatic-Basic concepts of a single photography
Lecture 21 - Stereoscopy-Basic concepts
Lecture 22 - Stereoscopy-Geometry of overlapping photograph
Lecture 23 - Terrestrial Photogrammetry
Lecture 24 - Digital Elevation Model-Basic Concepts
Lecture 25 - Digital Elevation Model-Data Input and Stamping
Lecture 26 - Digital Elevation Model-Surface representation and analysis
Lecture 27 - GIS-Introductory Concepts
Lecture 28 - GIS-Data Input
Lecture 29 - Data Verification and Editing

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- Lecture 30 - GIS Data Model
- Lecture 31 - GIS Data Base
- Lecture 32 - Spatial Analysis
- Lecture 33 - Map Overlay and Spatial Correlation
- Lecture 34 - Application to Drought Management
- Lecture 35 - GIS base planning model for educational facilities in rural areas
- Lecture 36 - Application extraction of building attributes
- Lecture 37 - Zonal based tourism planning
- Lecture 38 - Zonal Planning using remote sensing
- Lecture 39 - Municipal GIS for assessment of property tax
- Lecture 40 - Application of remote sensing

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

NPTEL Video Course - Civil Engineering - Transportation Engineering II

Subject Co-ordinator - Prof. Rajat Rastogi

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Introduction to Railway Engineering
Lecture 2 - Gauges and Permanent Way
Lecture 3 - Wheel and Axles, Coning of Wheels
Lecture 4 - Track Resistances, Hauling Capacity
Lecture 5 - Track Modulus, Stresses in Track
Lecture 6 - Stresses in Components of Track
Lecture 7 - Rails
Lecture 8 - Creep in Rails
Lecture 9 - Wears & Failures in Rails
Lecture 10 - Jointed or Welded rails
Lecture 11 - Sleepers
Lecture 12 - Ballast
Lecture 13 - Fastenings
Lecture 14 - Geometric Design - Alignment of Track
Lecture 15 - Horizontal Curve and Super elevation
Lecture 16 - Speeds on Track
Lecture 17 - Transition Curve & Widening of Track
Lecture 18 - Vertical Curve & Gradients
Lecture 19 - Turnouts - Components
Lecture 20 - Crossing and Design of Turnout
Lecture 21 - Track Junctions and Designs
Lecture 22 - Signals - Part 1
Lecture 23 - Signals - Part 2
Lecture 24 - Train Control Systems
Lecture 25 - Interlocking of Track
Lecture 26 - High Speed Tracks
Lecture 27 - Introduction of Air Transport
Lecture 28 - Aircraft Characteristics
Lecture 29 - Aircraft Controls, Airport Site&Size Selection

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- Lecture 30 - Airport Obstructions
- Lecture 31 - Runway Orientation
- Lecture 32 - Runway Length
- Lecture 33 - Runway Geometric
- Lecture 34 - Taxiway
- Lecture 35 - Exit Taxiway
- Lecture 36 - Aprons and Aircraft Parking
- Lecture 37 - Terminal Area and Building
- Lecture 38 - Terminal Planning and Hangers
- Lecture 39 - Visual Aids-Markings
- Lecture 40 - Visual Aids-Lighting and Signage

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

NPTEL Video Course - Civil Engineering - NOC:Introduction to Geographic Information Systems

Subject Co-ordinator - Dr.Arun K.Saraf

Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - What is Geographic Information Systems ?
- Lecture 2 - Different components of GIS
- Lecture 3 - Different types of vector data and concept of topology
- Lecture 4 - Raster data models and comparisons with vector
- Lecture 5 - TIN data model and comparisons with raster
- Lecture 6 - Non-spatial data (attributes) and their type
- Lecture 7 - Raster data compression techniques
- Lecture 8 - Spatial database systems and their types
- Lecture 9 - Pre-processing of spatial datasets
- Lecture 10 - Geo-referencing
- Lecture 11 - Different map projections
- Lecture 12 - Spatial interpolation techniques
- Lecture 13 - Digital Elevation Models and different types of resolutions
- Lecture 14 - Quality assessment of freely available DEMS
- Lecture 15 - GIS analysis - Part 1
- Lecture 16 - GIS analysis - Part 2 (Overlaying Operations)
- Lecture 17 - GIS analysis - Part 3 (Buffer Analysis)
- Lecture 18 - Classification Methods
- Lecture 19 - Errors in GIS and Key elements of maps
- Lecture 20 - Limitations of GIS

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

NPTEL Video Course - Civil Engineering - NOC:Principles and Applications of Building Science

Subject Co-ordinator - Dr. E. Rajasekar

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Solar Geometry

Lecture 2 - Climate Classification

Lecture 3 - Thermal Comfort in Built Environment - 1

Lecture 4 - Thermal Comfort in Built Environment - 2

Lecture 5 - Thermal Adaptation

Lecture 6 - Bioclimatic Assessment

Lecture 7 - Thermal Performance of Building Envelop

Lecture 8 - Thermal Performance of Building Envelop - Indices and Measures (1/2)

Lecture 9 - Thermal Performance of Building Envelop - Indices and Measures (2/2)

Lecture 10 - Glazing and Shading Systems

Lecture 11 - Shading Analysis

Lecture 12 - Energy Efficiency and Simulation

Lecture 13 - Building Acoustics - Basics

Lecture 14 - Sound Propagation

Lecture 15 - Acoustic Quality Indicators (1/2)

Lecture 16 - Acoustic Quality Indicators (2/2)

Lecture 17 - Acoustic Design Considerations

Lecture 18 - Acoustic Materials

Lecture 19 - Lighting - Basics

Lecture 20 - Lighting Design Concepts

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

NPTEL Video Course - Civil Engineering - NOC:GPS Surveying

Subject Co-ordinator - Dr.Jayanta Kumar Ghosh

Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - Introduction (GPS Surveying and Applications)
- Lecture 2 - GPS System
- Lecture 3 - GPS Signal (Civilian Perspective)
- Lecture 4 - GPS Receiver
- Lecture 5 - GPS Software
- Lecture 6 - GPS Position
- Lecture 7 - GPS Positioning (Principle and Methods)
- Lecture 8 - Field demonstration of GPS Positioning Method
- Lecture 9 - GPS Observables (Types, Errors and Quality)
- Lecture 10 - Errors in GPS Observables (Systematics Errors)
- Lecture 11 - GPS Data Pre-Processing - I
- Lecture 12 - GPS Data Pre-Processing - II
- Lecture 13 - GPS Data Processing - I
- Lecture 14 - GPS Data Processing - II
- Lecture 15 - Quality Assessment of GPS Surveying
- Lecture 16 - Procedure of GPS Surveying - I
- Lecture 17 - Procedure of GPS Surveying - II
- Lecture 18 - Procedure of GPS Surveying - III
- Lecture 19 - GPS Field Surveying
- Lecture 20 - GPS Data Processing

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

NPTEL Video Course - Civil Engineering - Ground Improvement Techniques

Subject Co-ordinator - Dr. G.L. Sivakumar Babu

Co-ordinating Institute - IISc - Bangalore

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

- Lecture 1 - Need for Ground Improvement
- Lecture 2 - Classification of ground modification techniques
- Lecture 3 - Emerging trends in ground improvement
- Lecture 4 - Mechanical modification
- Lecture 5 - Compaction Control
- Lecture 6 - Deep compaction
- Lecture 7 - Dynamic compaction
- Lecture 8 - Vibro-compaction methods
- Lecture 9 - Case studies in stone columns
- Lecture 10 - Prefabricated Vertical Drains (PVDS) - I
- Lecture 11 - Prefabricated drains (PVDS) - II
- Lecture 12 - Dewatering - I
- Lecture 13 - Dewatering - II
- Lecture 14 - Electro-kinetic stabilization
- Lecture 15 - Heating and freezing methods, Blasting methods - I
- Lecture 16 - Heating and freezing methods, Blasting methods - II
- Lecture 17 - Ground Treatment with lime - I
- Lecture 18 - Ground Treatment with lime - II
- Lecture 19 - Ground treatment with cement
- Lecture 20 - Grouting procedures
- Lecture 21 - Grouting
- Lecture 22 - Micropiles
- Lecture 23 - Introduction to Geosynthetics - I
- Lecture 24 - Introduction to Geosynthetics - II
- Lecture 25 - Reinforced soil principles and mechanisms
- Lecture 26 - Material properties
- Lecture 27 - Factors affecting reinforced soil
- Lecture 28 - Bearing capacity improvement - I
- Lecture 29 - Bearing capacity improvement - II

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- Lecture 30 - Reinforced soil slopes
- Lecture 31 - Reinforced Soil Walls
- Lecture 32 - Reinforced Soil Walls - I
- Lecture 33 - Soil Nailing
- Lecture 34 - Design of embankments on soft soil using geosynthetics
- Lecture 35 - Design of embankments on soft soil using geocells, Use of geosynthetics for filtration and drainage
- Lecture 36 - Applications in filtration and drainage & erosion control
- Lecture 37 - Geosynthetics in pavements
- Lecture 38 - Sustainable development and energy geotechnology
- Lecture 39 - Microbial geotechnology and Ground Improvement
- Lecture 40 - Nano-technologies in ground improvement and site remediation

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

NPTEL Video Course - Civil Engineering - Stochastic Hydrology

Subject Co-ordinator - Prof. P.P. Mujumdar

Co-ordinating Institute - IISc - Bangalore

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

- Lecture 1 - Introduction
- Lecture 2 - Bivariate Distributions
- Lecture 3 - Independence ; Functions of Random Variables
- Lecture 4 - Moments of a Distribution
- Lecture 5 - Normal Distribution
- Lecture 6 - Other Continuous Distributions
- Lecture 7 - Parameter Estimation
- Lecture 8 - Covariance and Correlation
- Lecture 9 - Data Generation
- Lecture 10 - Time Series Analysis (1)
- Lecture 11 - Time Series Analysis (2)
- Lecture 12 - Time Series Analysis (3)
- Lecture 13 - Frequency Domain Analysis (1)
- Lecture 14 - Frequency Domain Analysis (2) and ARIMA Models (1)
- Lecture 15 - ARIMA Models (2)
- Lecture 16 - ARIMA Models (3)
- Lecture 17 - ARIMA Models (4)
- Lecture 18 - Case Studies (1)
- Lecture 19 - Case Studies (2)
- Lecture 20 - Case Studies (3)
- Lecture 21 - Case Studies (4)
- Lecture 22 - Markov Chains (1)
- Lecture 23 - Markov Chains (2)
- Lecture 24 - Frequency Analysis (1)
- Lecture 25 - Frequency Analysis (2)
- Lecture 26 - Frequency Analysis (3) and Probability Plotting (1)
- Lecture 27 - Probability Plotting (2)
- Lecture 28 - Goodness of Fit
- Lecture 29 - IDF Relationships

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

- Lecture 30 - Multiple Linear Regression
- Lecture 31 - Principal Component Analysis
- Lecture 32 - Regression on Principal Components
- Lecture 33 - Multivariate Stochastic Models (1)
- Lecture 34 - Multivariate Stochastic Models (2)
- Lecture 35 - Multivariate Stochastic Models (3)
- Lecture 36 - Data Consistency Checks (1)
- Lecture 37 - Data Consistency Checks (2)
- Lecture 38 - Data Consistency Checks (3)
- Lecture 39 - Recent Applications
- Lecture 40 - Summary of the Course

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

NPTEL Video Course - Civil Engineering - Stochastic Structural Dynamics

Subject Co-ordinator - Prof. C.S. Manohar

Co-ordinating Institute - IISc - Bangalore

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

- Lecture 1 - Definition of probability measure and conditional probability
- Lecture 2 - Scalar random variables - 1
- Lecture 3 - Scalar random variables - 2
- Lecture 4 - Multi-dimensional random variables - 1
- Lecture 5 - Multi-dimensional random variables - 2
- Lecture 6 - Random processes - 1
- Lecture 7 - Random processes - 2
- Lecture 8 - Random processes - 3
- Lecture 9 - Random processes - 4, Random vibrations of sdof systems - 1
- Lecture 10 - Random processes - 4, Random vibrations of sdof systems - 1
- Lecture 11 - Random vibrations of sdof systems - 2
- Lecture 12 - Random vibrations of sdof systems - 3
- Lecture 13 - Random vibrations of sdof systems - 4
- Lecture 14 - Random vibrations of mdof systems - 1
- Lecture 15 - Random vibrations of mdof systems - 2
- Lecture 16 - Random vibrations of mdof systems - 3
- Lecture 17 - Random vibrations of mdof systems - 4
- Lecture 18 - Failure of randomly vibrating systems - 1
- Lecture 19 - Failure of randomly vibrating systems - 2
- Lecture 20 - Failure of randomly vibrating systems - 3
- Lecture 21 - Failure of randomly vibrating systems - 4
- Lecture 22 - Markov vector approach - 1
- Lecture 23 - Markov vector approach - 2
- Lecture 24 - Markov vector approach - 3
- Lecture 25 - Markov vector approach - 4
- Lecture 26 - Markov vector approach - 5, Monte Carlo simulation approach - 1
- Lecture 27 - Markov vector approach - 5 & Monte Carlo simulation approach - 1
- Lecture 28 - Monte Carlo simulation approach - 2
- Lecture 29 - Monte Carlo simulation approach - 3

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- Lecture 30 - Monte Carlo simulation approach - 4
- Lecture 31 - Monte Carlo simulation approach - 5
- Lecture 32 - Monte Carlo simulation approach - 6
- Lecture 33 - Monte Carlo simulation approach - 7
- Lecture 34 - Probabilistic methods in earthquake engineering - 1
- Lecture 35 - Probabilistic methods in earthquake engineering - 2
- Lecture 36 - Probabilistic methods in earthquake engineering - 3
- Lecture 37 - Probabilistic methods in earthquake engineering - 4
- Lecture 38 - Fatigue failure & Vibration energy flow models
- Lecture 39 - Problem solving session - 1
- Lecture 40 - Problem solving session - 2
- Lecture 41 - Problem solving session - 3
- Lecture 42 - Problem solving session - 4

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

NPTEL Video Course - Civil Engineering - Water Resources Systems : Modeling Techniques and Analysis

Subject Co-ordinator - Prof. P.P. Mujumdar

Co-ordinating Institute - IISc - Bangalore

- Lecture 1 - Introduction
- Lecture 2 - Definitions and types of systems
- Lecture 3 - Optimization
- Lecture 4 - Optimization
- Lecture 5 - Constrained optimization (1)
- Lecture 6 - Constrained optimization (2)
- Lecture 7 - Kuhn-Tucker conditions and Introduction to Linear Programming
- Lecture 8 - Linear Programming
- Lecture 9 - Linear Programming
- Lecture 10 - Linear Programming
- Lecture 11 - Linear Programming
- Lecture 12 - Linear Programming
- Lecture 13 - Linear Programming
- Lecture 14 - Introduction to Dynamic Programming
- Lecture 15 - Dynamic Programming
- Lecture 16 - Dynamic Programming
- Lecture 17 - Dynamic Programming
- Lecture 18 - Simulation
- Lecture 19 - Multi-objective planning
- Lecture 20 - Reservoir sizing
- Lecture 21 - Reservoir capacity using Linear Programming (1)
- Lecture 22 - Reservoir capacity using Linear Programming (2)
- Lecture 23 - Reservoir operation
- Lecture 24 - Multi-reservoir systems
- Lecture 25 - Stationary policy using Dynamic Programming
- Lecture 26 - Hydropower generation
- Lecture 27 - Basic probability theory (1)
- Lecture 28 - Basic probability theory (2)
- Lecture 29 - Chance constrained Linear Programming for reservoir operation and design (1)
- Lecture 30 - Chance constrained Linear Programming for reservoir operation and design (2)
- Lecture 31 - Stochastic Dynamic Programming for reservoir operation (1)
- Lecture 32 - Stochastic Dynamic Programming for reservoir operation (2)
- Lecture 33 - Stochastic Dynamic Programming for reservoir operation (3)

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- Lecture 34 - Fuzzy optimization (1)
- Lecture 35 - Fuzzy optimization (2)
- Lecture 36 - Fuzzy optimization for water quality control and reservoir operation
- Lecture 37 - Conjunctive use of ground and surface water
- Lecture 38 - Hydropower optimization
- Lecture 39 - Crop yield optimization
- Lecture 40 - Multi-basin and multi-reservoir systems

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

NPTEL Video Course - Civil Engineering - Finite Element method for vibration and Stability analyses

Subject Co-ordinator - Prof. C.S. Manohar

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Equations of motion using Hamilton's principle

Lecture 2 - Equations of motion for continuous systems and Rayleigh's quotient

Lecture 3 - Rayleigh Ritz method and method of weighted residuals

Lecture 4 - FEM

Lecture 5 - Beam elements. Reference system. Assembly of matrices. Imposition of BCS. Final equation of motion

Lecture 6 - FE modelling of planar structures

Lecture 7 - FE modelling of planar structures (Continued...)

Lecture 8 - FRF-s and damping models-1

Lecture 9 - FRF-s and damping models-2

Lecture 10 - Material damping models. Dynamic stiffness and transfer matrices

Lecture 11 - Twisting of circular bars and rectangular bars. Analysis of grids

Lecture 12 - 3D frames

Lecture 13 - Mathematical preliminaries and terminologies; Euler's forward and backward difference methods

Lecture 14 - Forward and backward Euler method. Central difference method

Lecture 15 - Second order implicit methods

Lecture 16 - Energy conservation. Nonlinear systems

Lecture 17 - Model reduction schemes

Lecture 18 - Substructuring schemes

Lecture 19 - Plane stress models

Lecture 20 - Plane stress models (Continued...)

Lecture 21 - 3d Solid element

Lecture 22 - Axisymmetric models. Plate bending elements.

Lecture 23 - Plate bending elements (Continued...)

Lecture 24 - Plate bending elements (Continued...)

Lecture 25 - Plate bending elements (Continued...)

Lecture 26 - Introduction

Lecture 27 - Introduction (Continued...)

Lecture 28 - Nonlinear dynamical systems, fixed points and bifurcations

Lecture 29 - Energy methods in stability analysis

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- Lecture 30 - FEM for stability analysis. Euler-Bernoulli beam and general formulations
- Lecture 31 - 3D beam element; plate element; imperfection sensitive structures; beams on elastic foundations;
- Lecture 32 - Dynamic analysis of stability and analysis of time varying systems
- Lecture 33 - Dynamic analysis of stability and analysis of time varying systems
- Lecture 34 - FE modelling of vehicle structure interactions
- Lecture 35 - Inverse response sensitivity analysis
- Lecture 36 - Inverse response sensitivity analysis (Continued...)
- Lecture 37 - Introduction and review of continuum mechanics
- Lecture 38 - Review of measures of strain and stress; balance laws
- Lecture 39 - Total and updated Lagrangian formulations
- Lecture 40 - Closure