

# 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

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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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  
Lecture 45  
Lecture 46  
Lecture 47  
Lecture 48  
Lecture 49  
Lecture 50  
Lecture 51  
Lecture 52  
Lecture 53  
Lecture 54  
Lecture 55  
Lecture 56  
Lecture 57  
Lecture 58  
Lecture 59  
Lecture 60

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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  
Lecture 3 - Soil Mechanics  
Lecture 4 - Soil Mechanics  
Lecture 5 - Soil Mechanics  
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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

Lecture 30 - Soil Mechanics  
Lecture 31 - Soil Mechanics  
Lecture 32 - Soil Mechanics  
Lecture 33 - Soil Mechanics  
Lecture 34 - Soil Mechanics  
Lecture 35 - Soil Mechanics  
Lecture 36 - Soil Mechanics  
Lecture 37 - Soil Mechanics  
Lecture 38 - Soil Mechanics  
Lecture 39 - Soil Mechanics  
Lecture 40 - Soil Mechanics  
Lecture 41 - Soil Mechanics  
Lecture 42 - Soil Mechanics  
Lecture 43 - Soil Mechanics  
Lecture 44 - Soil Mechanics  
Lecture 45 - Soil Mechanics  
Lecture 46 - Soil Mechanics  
Lecture 47 - Soil Mechanics  
Lecture 48 - Soil Mechanics  
Lecture 49 - Soil Mechanics  
Lecture 50 - Soil Mechanics  
Lecture 51 - Soil Mechanics  
Lecture 52 - Soil Mechanics  
Lecture 53 - Soil Mechanics  
Lecture 54 - Soil Mechanics  
Lecture 55 - Soil Mechanics  
Lecture 56 - Soil Mechanics  
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

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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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



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

---

NPTTEL 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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 - NOC:Geotechnical Engineering Laboratory

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

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Soil Processing  
Lecture 2 - Specific Gravity and Field Density  
Lecture 3 - Field Density  
Lecture 4 - Grain Size Analysis  
Lecture 5 - Grain Size Analysis (Continued...)  
Lecture 6 - Grain Size Analysis (Continued...)  
Lecture 7 - Atterberg Limit  
Lecture 8 - Compaction  
Lecture 9 - Compaction (Continued...)  
Lecture 10 - Compaction (Continued...)  
Lecture 11 - Compaction and Permeability  
Lecture 12 - Permeability  
Lecture 13 - Permeability and Shear Strength  
Lecture 14 - Shear Strength  
Lecture 15 - Shear Strength (Continued...)  
Lecture 16 - Shear Strength (Continued...)  
Lecture 17 - Shear Strength (Continued...)  
Lecture 18 - Shear Strength (Continued...)  
Lecture 19 - Shear Strength (Continued...)  
Lecture 20 - Consolidation  
Lecture 21 - Consolidation (Continued...)  
Lecture 22 - Consolidation (Continued...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Geosynthetics Testing Laboratory

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

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Introduction

Lecture 2 - Types of Geosynthetics

Lecture 3 - Functions

Lecture 4 - Tests for Physical Properties and tensile strength of geosynthetics

Lecture 5 - Tensile Modulus

Lecture 6 - Drop Cone Test

Lecture 7 - Puncture Resistance Test

Lecture 8 - Puncture Resistance Test and Burst Strength Test

Lecture 9 - Grab Tensile Test

Lecture 10 - Grab Tensile Test and Triaxial Test

Lecture 11 - Triaxial and Pullout Test

Lecture 12 - Pullout Test

Lecture 13 - Sewn Seam Strength, Permittivity and Transmissivity

Lecture 14 - Hydraulic Properties and abrasion Test of geosynthetics

Lecture 15 - Endurance properties of Geosynthetics

Lecture 16 - Density, Water Absorption and Compressive Properties tests of Geof foam

Lecture 17 - Compressive Properties of Geof foam

Lecture 18 - Compressive and Tensile Properties of Geof foam

Lecture 19 - Tensile and Shear Properties of Geof foam

Lecture 20 - Shear and Flexural Properties of Geof foam

Lecture 21 - Flexural Properties and Flammability Test of Geof foam

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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 - Water Management

Subject Co-ordinator - Dr. A.K. Gosain

Co-ordinating Institute - IIT - Delhi

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

- Lecture 1 - Introduction to Irrigation Water Management
- Lecture 2 - Soil - Water - Plant Relationships
- Lecture 3 - Soil - Water - Plant Relationships (Continued...)
- Lecture 4 - Soil - Water - Plant Relationships (Continued...)
- Lecture 5 - Soil - Water - Plant Relationships (Continued...)
- Lecture 6 - Soil - Water - Plant Relationships (Continued...) and Infiltration
- Lecture 7 - Crop Water Requirements
- Lecture 8 - Crop Water Requirements (Continued...)
- Lecture 9 - Crop Water Requirements (Continued...)
- Lecture 10 - Crop Water Requirements (Continued...)
- Lecture 11 - Crop Water Requirements (Continued...)
- Lecture 12 - Crop Water Requirements (Continued...)
- Lecture 13 - Crop Water Requirements (continued...)
- Lecture 14 - Irrigation Efficiencies - Part I
- Lecture 15 - Irrigation Efficiencies - Part II and Irrigation Methods and their Suitability
- Lecture 16 - Irrigation Methods - III
- Lecture 17 - Irrigation Methods - IV
- Lecture 18 - Irrigation Methods - V
- Lecture 19 - Irrigation Methods - VI
- Lecture 20 - Irrigation Methods and their Suitability
- Lecture 21 - Border Irrigation System - I
- Lecture 22 - Border Irrigation System - II
- Lecture 23 - Border Irrigation System - III
- Lecture 24 - Border Irrigation System - IV
- Lecture 25 - Furrow Irrigation System - I
- Lecture 26 - Furrow Irrigation System - II
- Lecture 27 - Furrow Irrigation System - III
- Lecture 28 - Furrow Irrigation System - IV
- Lecture 29 - Sprinkler Irrigation System - I

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Sprinkler Irrigation System - II
- Lecture 31 - Sprinkler Irrigation System - III
- Lecture 32 - Sprinkler Irrigation System - IV
- Lecture 33 - Sprinkler Irrigation System - V
- Lecture 34 - Sprinkler Irrigation System - VI
- Lecture 35 - Sprinkler Irrigation System - VII
- Lecture 36 - Sprinkler Irrigation System - VIII
- Lecture 37 - Drip Irrigation System - I
- Lecture 38 - Drip Irrigation System - II
- Lecture 39 - Drip Irrigation System - III
- Lecture 40 - Drip Irrigation System - IV

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

NPTEL Video Course - Civil Engineering - NOC:Geoenvironmental Engineering (Environmental Geotechnology) Landfills

Subject Co-ordinator - Prof. Manoj Datta

Co-ordinating Institute - IIT - Delhi

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

- Lecture 1 - Introduction to Geoenvironmental Engineering
- Lecture 2 - Sources and Impact of Contamination
- Lecture 3 - Waste-Soil Interaction
- Lecture 4 - Solid Waste Generation and Disposal
- Lecture 5 - Waste Minimization by Integrated Solid Waste Management (ISWM)
- Lecture 6 - Integrated Solid Waste Management (ISWM) - Case Studies
- Lecture 7 - Principles of Landfilling
- Lecture 8 - Planning of Landfills - Part 1
- Lecture 9 - Planning of Landfills - Part 2
- Lecture 10 - Liners for Landfills - Part 1
- Lecture 11 - Liners for Landfills - Part 2
- Lecture 12 - Liners for Landfills - Part 3
- Lecture 13 - Liners for Landfills - Part 4
- Lecture 14 - Covers for Landfills - Part 1
- Lecture 15 - Covers for Landfills - Part 2
- Lecture 16 - Generation and Control of Leachate
- Lecture 17 - Generation and Control of Landfill Gas
- Lecture 18 - Stability of Slopes - Part 1
- Lecture 19 - Stability of Slopes - Part 2
- Lecture 20 - Stability of Slopes - Part 3
- Lecture 21 - (Missing)
- Lecture 22 - Some Solved Examples
- Lecture 23 - Subsurface Monitoring Around Landfills - Part 1
- Lecture 24 - Subsurface Monitoring Around Landfills - Part 2
- Lecture 25 - Cost of Geotechnical Components of Landfills
- Lecture 26 - Construction and Operation of Landfills
- Lecture 27 - Site Selection for Landfills
- Lecture 28 - Closure, Rehabilitation and Expansion of MSW Landfills
- Lecture 29 - Control and Remedial Measures at Contaminated Sites - Part 1

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Control and Remedial Measures at Contaminated Sites - Part 2
- Lecture 31 - Slurry Disposal on Land
- Lecture 32 - Disposal of Slurry Waste in Ponds and Impoundments and Dry Waste in Mounds
- Lecture 33 - Geotechnical Properties of Coal Ash and Mine Tailings - Part 1
- Lecture 34 - Geotechnical Properties of Coal Ash and Mine Tailings - Part 2
- Lecture 35 - Planning and Design of Slurry Ponds
- Lecture 36 - Stability of Incrementally Raised Embankments - Part 1
- Lecture 37 - Stability of Incrementally Raised Embankments - Part 2
- Lecture 38 - Remedial Measures for Slope Failures in Embankments / Dykes of Slurry Ponds
- Lecture 39 - Environmental Control at Slurry Ponds
- Lecture 40 - Geotechnical Reuse of Waste Materials - Part 1
- Lecture 41 - Geotechnical Reuse of Waste Materials - Part 2
- Lecture 42 - End-of-the-Course Review

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

NPTEL Video Course - Civil Engineering - NOC:Energy Efficiency, Acoustics and Daylighting in Building

Subject Co-ordinator - Dr. B. Bhattacharjee

Co-ordinating Institute - IIT - Delhi

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

Lecture 1 - Introduction to Environmental Factors - 1  
Lecture 2 - Introduction to Environmental Factors - 2  
Lecture 3 - Introduction to Environmental Factors - 3  
Lecture 4 - Introduction to Environmental Factors - 4  
Lecture 5 - Introduction to Environmental Factors - 5  
Lecture 6 - Introduction to Environmental Factors - 6  
Lecture 7 - Introduction to Environmental Factors - 7  
Lecture 8 - Comfort and Heat Transfer Concepts  
Lecture 9 - Heat Flow in Buildings - 1  
Lecture 10 - Heat Flow in buildings - 2  
Lecture 11 - Heat Flow in buildings - 3  
Lecture 12 - Admittance Method - 1  
Lecture 13 - Admittance Method - 2  
Lecture 14 - Heat Flow in buildings - 1 (Frequency Domain)  
Lecture 15 - Heat Flow in buildings - 2 (Frequency Domain)  
Lecture 16 - Heat Flow in buildings - 2 (Frequency Domain)  
Lecture 17 - Heat flow in buildings  
Lecture 18 - Admittance Method  
Lecture 19 - Comfort - 1  
Lecture 20 - Comfort - 2  
Lecture 21 - Comfort and Thermal Design of Buildings - 1  
Lecture 22 - Comfort and Thermal Design of Buildings - 2  
Lecture 23 - Comfort and Thermal Design of Buildings - 3  
Lecture 24 - Thermal Design of Unconditioned Building  
Lecture 25 - External Shading Multipliers for external suns shading  
Lecture 26 - Passive Concepts  
Lecture 27 - Design for Thermal Efficiency  
Lecture 28 - Ventilation - 1  
Lecture 29 - Ventilation - 2

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Natural ventilation design
- Lecture 31 - Noise and Acoustic Fundamentals - 1
- Lecture 32 - Noise and Acoustic Fundamentals - 2
- Lecture 33 - Noise and Acoustic Fundamentals - 3
- Lecture 34 - Noise and Acoustic Fundamentals, Noise Outdoors
- Lecture 35 - Noise outdoors
- Lecture 36 - Sound within enclosure - 1
- Lecture 37 - Sound within enclosure - 2
- Lecture 38 - Sound within enclosure - 3
- Lecture 39 - Sound within enclosure - 4
- Lecture 40 - Sound within enclosure - 5
- Lecture 41 - Sound within enclosure - 6
- Lecture 42 - Sound within enclosure, isolation
- Lecture 43 - Isolation - 1
- Lecture 44 - Isolation - 2
- Lecture 45 - Auditorium - 1
- Lecture 46 - Auditorium - 2
- Lecture 47 - Daylighting - 1
- Lecture 48 - Daylighting - 2
- Lecture 49 - Daylighting - 3
- Lecture 50 - Daylighting - 4
- Lecture 51 - Daylighting - 5
- Lecture 52 - Daylighting - 6
- Lecture 53 - Artificial Lighting
- Lecture 54 - Design Sky models
- Lecture 55 - Live Session



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

NPTEL Video Course - Civil Engineering - NOC:Fire Protection, Services and Maintenance Management of Building

Subject Co-ordinator - Dr. B. Bhattacharjee

Co-ordinating Institute - IIT - Delhi

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

- Lecture 1 - Basic concepts of Fire Protection - I
- Lecture 2 - Basic concepts of Fire Protection - II
- Lecture 3 - Fire Resistance
- Lecture 4 - Introduction Process of Combustion
- Lecture 5 - ventilation and fuel Process of Combustion controlled fire
- Lecture 6 - Process of Combustion
- Lecture 7 - Effect of Fire on Construction Materials
- Lecture 8 - Design for Fire Resistance
- Lecture 9 - Design for Fire Resistance
- Lecture 10 - Design for Fire Resistance
- Lecture 11 - Fire Safety
- Lecture 12 - Fire Safety
- Lecture 13 - Fire safety
- Lecture 14 - Fire Safety
- Lecture 15 - Introduction to Lift Design
- Lecture 16 - Design of Lift systems
- Lecture 17 - Design of Lift systems
- Lecture 18 - Design of Lift systems
- Lecture 19 - Design of Lift systems
- Lecture 20 - Introduction to System and Flow Systems
- Lecture 21 - Water Supply System
- Lecture 22 - Water Supply System
- Lecture 23 - Diversity factor (Continued...)
- Lecture 24 - Control Systems
- Lecture 25 - Introduction to HVAC
- Lecture 26 - Governing Equations for HVAC Process
- Lecture 27 - Numerical Problem on HVAC System
- Lecture 28 - Numerical Problem on HVAC System (Continued...)
- Lecture 29 - Psychrometric Chart

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Flow in Pipe Networks and Fixture Units
- Lecture 31 - Flow in Pipe Networks (Continued...) and Design of Water Supply Distribution System
- Lecture 32 - Design of Water Supply Distribution System (Continued...) and Flow in Waste Water pipes
- Lecture 33 - Electrical Systems (introduction)
- Lecture 34 - Design of Electrical Systems
- Lecture 35 - Intelligent Building
- Lecture 36 - Life cycle cost and basics of building maintenance
- Lecture 37 - Stages of maintenance management
- Lecture 38 - Planning for building maintenance
- Lecture 39 - Periodicity of maintenance management
- Lecture 40 - Estimation of repair cycle
- Lecture 41 - Cost profile of maintenance
- Lecture 42 - Lamp replacement
- Lecture 43 - Building inspection, Planned and Ad-hoc maintenance
- Lecture 44 - Condition survey and health evaluation of buildings
- Lecture 45 - Diagnosis of building by visual survey
- Lecture 46 - Case studies of visual survey
- Lecture 47 - Effect of corrosion and Alkali Aggregate Reaction
- Lecture 48 - Sampling and choice of test location
- Lecture 49 - Non Destructive Testing - 1
- Lecture 50 - Non Destructive Testing - 2
- Lecture 51 - Core strength test
- Lecture 52 - Carbonation and Chloride measurement
- Lecture 53 - Electrical methods of progress measurement
- Lecture 54 - Repair, Rehabilitation and Retrofit
- Lecture 55 - Periodicity and economics of condition survey
- Lecture 56 - Interpretation of test results

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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 - NOC:Higher Surveying

Subject Co-ordinator - Prof. Ajay Dashora

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Introduction to Higher Surveying
- Lecture 2 - Understanding reference system, reference frame, and coordinate system for Earth
- Lecture 3 - Coordinate and datum transformations
- Lecture 4 - Projected coordinate system
- Lecture 5 - Fundamentals of astronomy
- Lecture 6 - Applications of concepts of astronomy
- Lecture 7 - Time
- Lecture 8 - Application of concepts of astronomy and time
- Lecture 9 - Fundamental concepts of error, accuracy, and error propagation
- Lecture 10 - Applications of error propagation
- Lecture 11 - Observation Equation Method of adjustments
- Lecture 12 - Condition Equation Method and Combined Method of adjustments
- Lecture 13 - Analysis of adjustments and reporting of errors
- Lecture 14 - Global Positioning System (GPS)
- Lecture 15 - Introduction to Photogrammetry
- Lecture 16 - Vertical photogrammetry
- Lecture 17 - Stereo photogrammetry
- Lecture 18 - Analytical photogrammetry - I
- Lecture 19 - Analytical photogrammetry - II
- Lecture 20 - Photogrammetric products
- Lecture 21 - Image matching
- Lecture 22 - Close range photogrammetry
- Lecture 23 - Fundamentals of LiDAR
- Lecture 24 - LiDAR data acquisition
- Lecture 25 - Geolocation and errors of LiDAR data
- Lecture 26 - Information extraction from LiDAR data
- Lecture 27 - RADAR fundamentals - I
- Lecture 28 - RADAR fundamentals - II
- Lecture 29 - RADAR fundamentals - III

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Radargrammetry
- Lecture 31 - Geoscience perspective for RADAR applications
- Lecture 32 - Fundamental concepts of hydrographic survey
- Lecture 33 - Field procedures for hydrographic Surveying
- Lecture 34 - Modern techniques for hydrographic Survey
- Lecture 35 - Navigation
- Lecture 36 - Conclusive lecture

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

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

Subject Co-ordinator - Dr. Tadikonda Venkata Bharat

Co-ordinating Institute - IIT - Guwahati

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

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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

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

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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 - Part 1

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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Earth Sciences for Civil Engineering - Part 2

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 Geological Hazards and Enviromental Impact - Part 1

Lecture 2 - Introduction to Geological Hazards and Enviromental Impact - Part 2

Lecture 3 - Introduction to Geological Hazards and Enviromental Impact - Part 3

Lecture 4 - Active Faults and its Related Hazards in India - Part 1

Lecture 5 - Active Faults and its Related Hazards in India - Part 2

Lecture 6 - Active faults and its related hazards in India - Part 3

Lecture 7 - Active faults and its related hazards in India - Part 4

Lecture 8 - Active faults its related hazards in India - Part 5

Lecture 9 - Active faults its related hazards in India - Part 6

Lecture 10 - Active faults its related hazards in India - Part 7 and Civil Engineering applications - geologi

Lecture 11 - Civil Engineering applications Â geological considerations in dams, tunnels - Part 2

Lecture 12 - Civil Engineering applications Â geological considerations in dams, tunnels - Part 3 and Tsunan

Lecture 13 - Tsunami and related hazard - Part 2

Lecture 14 - Tsunami and related hazard - Part 3

Lecture 15 - Landslide and subsidence - Part 1

Lecture 16 - Landslide and subsidence - Part 2

Lecture 17 - Landslide and subsidence - Part 3

Lecture 18 - Flood and related hazard - Part 1

Lecture 19 - Flood and related hazard - Part 2

Lecture 20 - Groundwater

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Hydration, Porosity and Strength of Cementitious Materials

Subject Co-ordinator - Dr. Satyaki Roy, Dr. Sudhir Misra

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Lecture 1 - Introduction to the course  
Lecture 2 - Lecture 2 - Concrete - A Three Phase System  
Lecture 3 - Lecture 3 - Basic Properties of Concrete  
Lecture 4 - Lecture 4 - Portland Cement  
Lecture 5 - Lecture 5 - Portland Cement (Continued...)  
Lecture 6 - Lecture 6 - Introduction (Aggregates) - 1  
Lecture 7 - Lecture 7 - Introduction (Aggregates) - 2  
Lecture 8 - Lecture 8 - Introduction (Aggregates) - 3  
Lecture 9 - Lecture 9 - Introduction (Concrete Mixture Proportioning Strategies)  
Lecture 10 - Lecture 10 - Introduction (Chemical Admixtures)  
Lecture 11 - Lecture-11 - Portland Cement Based Paste Systems - I  
Lecture 12 - Lecture 12 - Portland Cement Based Paste Systems - II  
Lecture 13 - Lecture 13 - Portland Cement Based Paste Systems - III  
Lecture 14 - Lecture 14 - Portland Cement Paste Based Systems - IV  
Lecture 15 - Lecture 15 - Portland Cement Based Paste Systems - V  
Lecture 16 - Lecture 16 - 18 Part 1 - Portland Cement Based Paste Systems - VI  
Lecture 17 - Lecture 16 - 18 Part 2 - Portland Cement Based Paste Systems - VII  
Lecture 18 - Lecture 19 - Heat of hydration of Portland Cement  
Lecture 19 - Lecture 20 - Mass Concrete  
Lecture 20 - Lecture 21-22 - Mineral Admixtures - 1  
Lecture 21 - Lecture 23-24 - Mineral Admixtures - 2  
Lecture 22 - Lecture 25-27 - Mineral Admixtures - 3  
Lecture 23 - Lecture 28-30 - Mineral Admixtures - 4  
Lecture 24 - Lecture 31 - From paste to concrete  
Lecture 25 - Lecture 32 - Demonstration  
Lecture 26 - Lecture 33 - Pores and porosity - A revisit  
Lecture 27 - Lecture 34 - Measuring permeability of concrete  
Lecture 28 - Lecture 35 - Behavior under load  
Lecture 29 - Lecture 36 - Curing of concrete

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

Lecture 30 - Lecture 37 - Stress strain behaviour  
Lecture 31 - Lecture 38 - Durability of concrete - I  
Lecture 32 - Lecture 39 - Durability of concrete - II - Specifications

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

NPTEL Video Course - Civil Engineering - NOC:Mechanics of Solids

Subject Co-ordinator - Dr. Priyanka Ghosh

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Course Handout
- Lecture 2 - Analysis of Mechanical System
- Lecture 3 - Conditions of equilibrium in 2D and 3D
- Lecture 4 - FBD with examples on modelling of typical supports and joints
- Lecture 5 - Support Conditions
- Lecture 6 - FBD of Frame Structures
- Lecture 7 - Stability of Truss
- Lecture 8 - Solutions of Plane Truss
- Lecture 9 - Method of Sections
- Lecture 10 - Friction 2
- Lecture 11 - Tutorial on Truss
- Lecture 12 - Tutorial on Friction
- Lecture 13 - Force Displacement Relationship
- Lecture 14 - Hoop Stresses
- Lecture 15 - Mechanism of belt around wheel
- Lecture 16 - Tutorial on Force Displacement Relationship and Geometric Compatibility - 1
- Lecture 17 - Tutorial on Force Displacement Relationship and Geometric Compatibility - 2
- Lecture 18 - Tutorial on Force Displacement Relationship and Geometric Compatibility - 3
- Lecture 19 - Concept of Stress
- Lecture 20 - Plane Stress
- Lecture 21 - State of Stresses
- Lecture 22 - Mohrs Circle representation of plane stress
- Lecture 23 - Construction of Mohrs Circle
- Lecture 24 - Principal Stresses and Introduction to Concept of Strain
- Lecture 25 - Normal Strain and Shear Strain
- Lecture 26 - Strain Transformation
- Lecture 27 - Strain Measurement
- Lecture 28 - Tutorial
- Lecture 29 - Tutorial on Concept of Strain.

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Elastic Stress Strain Relationship
- Lecture 31 - Von Mises Yield Criteria
- Lecture 32 - Tresca Criteria
- Lecture 33 - True Stress Strain
- Lecture 34 - Tutorial 2
- Lecture 35 - Forces and Moments Transmitted by Slender Members
- Lecture 36 - Bending Moment
- Lecture 37 - Shear Force and Bending Moment Diagrams
- Lecture 38 - Differential Equation Relationship
- Lecture 39 - Tutorial 3
- Lecture 40 - Tutorial 4
- Lecture 41 - Torsion
- Lecture 42 - Stress Components
- Lecture 43 - Tutorial A
- Lecture 44 - Tutorial B
- Lecture 45 - Stresses due to Bending
- Lecture 46 - Equilibrium Requirements
- Lecture 47 - Beam Transmitting both Shear Force and Bending Moment
- Lecture 48 - Shear Stress Distribution
- Lecture 49 - Distribution of Shear Stress in I Beam
- Lecture 50 - Tutorial 1
- Lecture 51 - Deflections due to Bending
- Lecture 52 - Integration of Moment Curvature Relation
- Lecture 53 - Superposition Continued
- Lecture 54 - Load Deflection Differential Equation
- Lecture 55 - Castigliano's Theorem
- Lecture 56 - Strain Energy Methods
- Lecture 57 - Introduction to Concept of Elastic Instability
- Lecture 58 - Critical Load
- Lecture 59 - Critical Load for Flexible Columns
- Lecture 60 - Concluding Lecture

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

NPTEL Video Course - Civil Engineering - NOC:Principles of Construction Management

Subject Co-ordinator - Dr. Sudhir Misra

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction to the course
- Lecture 2 - Interdisciplinary nature of modern construction projects
- Lecture 3 - Overview of steps in execution of a project
- Lecture 4 - Illustrative examples for evaluation of bids based on different schemes
- Lecture 5 - Resource management in construction projects
- Lecture 6 - Estimating quantities
- Lecture 7 - Description of items
- Lecture 8 - Estimation of project cost
- Lecture 9 - Discussion on the case study of boundary wall
- Lecture 10 - Running account bills
- Lecture 11 - Economic decision making in construction projects
- Lecture 12 - Depreciation of construction equipment
- Lecture 13 - Repayment of a loan
- Lecture 14 - Introduction to planning and scheduling
- Lecture 15 - Introduction to planning and scheduling (Continued...)
- Lecture 16 - Project scheduling
- Lecture 17 - Uncertainties in duration of activities -Using PERT in scheduling
- Lecture 18 - Project monitoring and control systems
- Lecture 19 - Resource leveling and allocation
- Lecture 20 - Crashing of networks
- Lecture 21 - Introduction to construction safety
- Lecture 22 - Accidents in construction industry - I
- Lecture 23 - Accidents in construction industry - II
- Lecture 24 - Personal protective equipment
- Lecture 25 - Implications of construction accidents
- Lecture 26 - Safety organization and safety officer
- Lecture 27 - Quality control in construction
- Lecture 28 - Quality in construction - welding
- Lecture 29 - Epoxy coated bars

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Quality control of grouts in ducts of post-tensioned PC members
- Lecture 31 - Quality control (QC) issues in concrete

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

NPTEL Video Course - Civil Engineering - NOC:Foundation Design

Subject Co-ordinator - Dr. Nihar Ranjan Patra

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - (1A) Subsoil Investigation or Site Investigation - Part 1  
Lecture 2 - (1B) Subsoil Investigation or Site Investigation - Part 2  
Lecture 3 - (2A) Subsoil Investigation or Site Investigation - Part 3  
Lecture 4 - (2B) Subsoil Investigation or Site Investigation - Part 4  
Lecture 5 - (3A) Subsoil Investigation or Site Investigation - Part 5  
Lecture 6 - (3B) Subsoil Investigation or Site Investigation - Part 6  
Lecture 7 - (4A) Subsoil Investigation or Site Investigation - Part 7  
Lecture 8 - (4B) Foundations  
Lecture 9 - (5A) Bearing Capacity Of Shallow Foundations - Part 1  
Lecture 10 - (5B) Bearing Capacity Of Shallow Foundations - Part 2  
Lecture 11 - (6A) Bearing Capacity Of Shallow Foundations - Part 3  
Lecture 12 - (6B) Bearing Capacity Of Shallow Foundations - Part 4  
Lecture 13 - (7A) Bearing Capacity Of Shallow Foundations - Part 5  
Lecture 14 - (7B) Bearing Capacity Of Shallow Foundations - Part 6  
Lecture 15 - (8A) Settlement Analysis - Part 1  
Lecture 16 - (8B) Settlement Analysis - Part 2  
Lecture 17 - (9A) Settlement Analysis - Part 3  
Lecture 18 - (9B) Stress distribution in soils - Part 1  
Lecture 19 - (10A) Stress distribution in soils - Part 2  
Lecture 20 - (10B) Stress distribution in soils - Part 3  
Lecture 21 - (11A) Stress distribution in soils - Part 4  
Lecture 22 - (11B) Stress distribution in soils - Part 5  
Lecture 23 - (12A) Examples based on bearing capacity and settlement  
Lecture 24 - (12B) Design of foundation - Part 1  
Lecture 25 - (13A) Design of Foundation - Part 2  
Lecture 26 - (13B) Design of Foundation - Part 3  
Lecture 27 - (14A) Design of Foundation - Part 4  
Lecture 28 - (14B) Design of Foundation - Part 5  
Lecture 29 - (15A) Types of foundations (Combined Footing)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - (15B) Design of Raft Foundation
- Lecture 31 - (16A) Earth Pressure Theories - Part 1
- Lecture 32 - (16B) Earth Pressure Theories - Part 2
- Lecture 33 - (17A) Earth Pressure Theories - Part 3
- Lecture 34 - (17B) Earth Pressure Theories - Part 4
- Lecture 35 - (18A) Earth Pressure Theories - Part 5
- Lecture 36 - (18B) Deep Foundation - Part 1
- Lecture 37 - (18C) Deep Foundation - Part 2
- Lecture 38 - (18D) Deep Foundation - Part 3
- Lecture 39 - (20A) Deep Foundation - Part 4
- Lecture 40 - (20B) Deep Foundation - Part 5

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

NPTEL Video Course - Civil Engineering - NOC:Photogeology In Terrain Evaluation

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 Remote Sensing - Photogeology
- Lecture 2 - Introduction to Remote Sensing - Photogeology
- Lecture 3 - Fundamental Principle in Remote Sensing
- Lecture 4 - Aerial Photography
- Lecture 5 - Stereo-photos and their Importance
- Lecture 6 - Photo-interpretation Techniques
- Lecture 7 - Photogrammetry and its Significance
- Lecture 8 - Sensors, Cameras and Panchromatic Data
- Lecture 9 - Stereoscopy and Methods
- Lecture 10 - Relief Displacement on Aerial Photographs
- Lecture 11 - Fluvial Processes and Landforms
- Lecture 12 - Geomorphology of River Channels
- Lecture 13 - Drainage Basins and their Features
- Lecture 14 - Morphometric Parameters of Fluvial Channels
- Lecture 15 - Drainage Patterns and their Morphology
- Lecture 16 - Determination of Flightline (Lab)
- Lecture 17 - Determination of Flightline (Lab)
- Lecture 18 - Exercise on Relief Displacement
- Lecture 19 - Exercise on Stereoscopic Parallax
- Lecture 20 - Exercise on Stereoscopic Parallax
- Lecture 21 - Generation of Digital Elevation Model and Anaglyph

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

NPTEL Video Course - Civil Engineering - NOC:Photogeology In Terrain Evaluation - Part 2

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 Geological Structures, Photo interpretation and Terrain evaluation

Lecture 2 - Photo interpretation/identification of Landforms associated with Folds - 1

Lecture 3 - Photo interpretation/identification of Landforms associated with Folds - 2

Lecture 4 - Identification of features related to ongoing Crustal Deformation and Mountain Building process

Lecture 5 - Identification of Fault Topography

Lecture 6 - Photogeology

Lecture 7 - Photo Interpretations

Lecture 8 - Photo Interpretations

Lecture 9 - Photo Interpretations

Lecture 10 - Photo-Interpretations

Lecture 11 - Photo Interpretations

Lecture 12 - Photo Interpretations

Lecture 13 - Photo Interpretations

Lecture 14 - Photo Interpretations

Lecture 15 - Photo Interpretations

Lecture 16 - Exercise on Identification of Geological Structures and related Landforms

Lecture 17 - Exercise on Identification of Geomorphic Features related to Various Environments

Lecture 18 - Exercise on Identification of Tectonic Features and Geomorphic Mapping using Satellite Data

Lecture 19 - Exercise on Identification of Geological Structures and Geomorphic Landforms on Aerial/Satellite

Lecture 20 - Exercise on Morphometric Parameters and 3D observation of the Earth Surface Features

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Introduction to Accounting and Finance for Civil Engineers

Subject Co-ordinator - Dr. Sudhir Misra

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Overview of the Course

Lecture 2 - Introduction

Lecture 3 - General Discussion on Construction Projects

Lecture 4 - Time value of money

Lecture 5 - Economic Decision Making - I

Lecture 6 - Economic decision making - II

Lecture 7 - Incremental Rate of Return (IROR)

Lecture 8 - Benefit cost ratio

Lecture 9 - Sensitivity analysis - Part 1

Lecture 10 - Sensitivity analysis - Part 2

Lecture 11 - Break-even analysis - Part 1

Lecture 12 - Break-even analysis - Part 2

Lecture 13 - Depreciation of construction equipment

Lecture 14 - Effect of depreciation on cash flows

Lecture 15 - Effect of depreciation and inflation on economic decision making

Lecture 16 - Replacement analysis

Lecture 17 - Risk analysis - Part 1

Lecture 18 - Risk analysis - Part 2

Lecture 19 - Risk analysis - Part 3

Lecture 20 - Simulation - Part 1

Lecture 21 - Simulation - Part 2

Lecture 22 - Bidding - Part 1

Lecture 23 - Bidding - Part 2

Lecture 24 - Bidding - Part 3

Lecture 25 - Bidding - Part 4

Lecture 26 - Bidding - Part 5

Lecture 27 - Bidding - Part 6

Lecture 28 - Bidding - Part 7

Lecture 29 - Introduction to accounting - Part 1

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Introduction to accounting - Part 2
- Lecture 31 - Introduction to accounting - Part 3
- Lecture 32 - Revenue recognition
- Lecture 33 - Construction Contract Status Reports
- Lecture 34 - Assets and Liabilities
- Lecture 35 - Accounting statements - case study
- Lecture 36 - Working capital
- Lecture 37 - Financing resources for working capital
- Lecture 38 - Ratio analysis

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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 Discharge

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...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

Lecture 30 - Deflection of RC Beams

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Visual Semiotics for Visual Communication

Subject Co-ordinator - Prof. Mainak Ghosh

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Visual Semantics for Visual Communication  
Lecture 2 - Visual Semantics for Visual Communication (Continued...)  
Lecture 3 - Visual Semantics for Visual Communication (Continued...)  
Lecture 4 - Visual Semantics for Visual Communication (Continued...)  
Lecture 5 - Introduction to Millimeter-Wave Technology (Continued...)  
Lecture 6 - Visual Semantics for Visual Communication (Continued...)  
Lecture 7 - Visual Semantics for Visual Communication (Continued...)  
Lecture 8 - Visual Semantics for Visual Communication (Continued...)  
Lecture 9 - Introduction to Millimeter-Wave Technology  
Lecture 10 - Visual Semantics for Visual Communication (Continued...)  
Lecture 11 - Visual Semantics for Visual Communication (Continued...)  
Lecture 12 - Visual Semantics for Visual Communication (Continued...)  
Lecture 13 - Conceptual Model and Affordances  
Lecture 14 - Visual Semantics for Visual Communication (Continued...)  
Lecture 15 - Visual Semantics for Visual Communication (Continued...)  
Lecture 16 - Visual Semantics for Visual Communication (Continued...)  
Lecture 17 - Visual Semantics for Visual Communication (Continued...)  
Lecture 18 - Visual Semantics for Visual Communication (Continued...)  
Lecture 19 - Visual Semantics for Visual Communication (Continued...)  
Lecture 20 - Visual Semantics for Visual Communication (Continued...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Life Cycle Assessment

Subject Co-ordinator - Prof. Brajesh Kumar Dubey

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Life Cycle Assessment - Introduction  
Lecture 2 - Life Cycle Assessment - Introduction  
Lecture 3 - LCA and Sustainability  
Lecture 4 - LCA and Environmental Systems  
Lecture 5 - LCA and Water, Food and Energy  
Lecture 6 - RISK Assessment and LCA Frameworks  
Lecture 7 - RISK Assessment - Toxicology  
Lecture 8 - RISK Assessment Methods  
Lecture 9 - RISK Assessment Methods (Continued...)  
Lecture 10 - Environmental Risk Assessment  
Lecture 11 - Environmental Data Collection and LCA Methodology  
Lecture 12 - Environmental Data Collection and LCA Methodology (Continued...)  
Lecture 13 - Environmental Data Collection and LCA Methodology (Continued...)  
Lecture 14 - Environmental Data Collection and LCA Methodology (Continued...)  
Lecture 15 - LCA Methodology  
Lecture 16 - LCA - A Detailed Methodology  
Lecture 17 - LCA - A Detailed Methodology (Continued...)  
Lecture 18 - LCA Benefits and Drawbacks  
Lecture 19 - History of LCA  
Lecture 20 - The ISO Framework  
Lecture 21 - Unit Process, Data and LCI Databases  
Lecture 22 - Unit Process and System Boundary (Continued...)  
Lecture 23 - Inventory Data and LCIA  
Lecture 24 - LCIA  
Lecture 25 - LCA Interpretation  
Lecture 26 - ISO 14040  
Lecture 27 - Key Points of a Good LCA and Example LCA  
Lecture 28 - Chemical Release in Environment  
Lecture 29 - Green Sustainable Materials

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Green Sustainable Materials (Continued...)
- Lecture 31 - Design for Sustainability
- Lecture 32 - Design for Sustainability (Continued...)
- Lecture 33 - Design for Sustainability (Continued...)
- Lecture 34 - Sustainable Engineering Design Principles
- Lecture 35 - Sustainable Engineering Design Principles (Continued...)
- Lecture 36 - Summary and Case Studies
- Lecture 37 - Summary and Case Studies (Continued...)
- Lecture 38 - Summary and Case Studies (Continued...)
- Lecture 39 - Tutorial I
- Lecture 40 - Tutorial II

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

NPTEL Video Course - Civil Engineering - NOC: Integrated Waste Management for a Smart City

Subject Co-ordinator - Prof. Brajesh Kumar Dubey

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Introduction (Continued...)
- Lecture 3 - Introduction (Continued...)
- Lecture 4 - Introduction (Continued...)
- Lecture 5 - Introduction (Continued...)
- Lecture 6 - Introduction (Continued...)
- Lecture 7 - Municipal Solid Waste Characteristics and Quantities
- Lecture 8 - Municipal Solid Waste Characteristics and Quantities (Continued...)
- Lecture 9 - Municipal Solid Waste Characteristics and Quantities (Continued...)
- Lecture 10 - Municipal Solid Waste Characteristics and Quantities (Continued...)
- Lecture 11 - MSW Characteristics - Thermal Properties and Chemical Composition
- Lecture 12 - Chemical Analysis Procedure
- Lecture 13 - Chemical Analysis Procedure (Continued...)
- Lecture 14 - Working with Data and Statistical Methods
- Lecture 15 - Waste Management Rules 2016
- Lecture 16 - Waste Management Rules 2016 (Continued...)
- Lecture 17 - Swachh Bharat Mission and Smart Cities Program Overview
- Lecture 18 - Storage of Solid Waste
- Lecture 19 - MSW Collection System
- Lecture 20 - MSW Collection System (Continued...)
- Lecture 21 - Waste Collection and Transport
- Lecture 22 - Waste Collection and Transport (Continued...)
- Lecture 23 - Waste Collection and Transport (Continued...)
- Lecture 24 - Waste Collection and Transport (Continued...)
- Lecture 25 - Waste Collection and Transport (Continued...)
- Lecture 26 - Collection System
- Lecture 27 - Collection System (Continued...)
- Lecture 28 - Review of MSW Management in Proposed Smart Cities
- Lecture 29 - Biological Treatment of Waste

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

- Lecture 30 - Biological Treatment of Waste (Continued...)
- Lecture 31 - Biological Treatment of Waste (Continued...)
- Lecture 32 - Biological Treatment of Waste (Continued...)
- Lecture 33 - Biological Treatment of Waste (Continued...)
- Lecture 34 - Thermal Treatment
- Lecture 35 - Thermal Treatment (Continued...)
- Lecture 36 - Thermal Treatment (Continued...)
- Lecture 37 - Thermal Treatment (Continued...)
- Lecture 38 - Thermal Treatment (Continued...)
- Lecture 39 - Thermal Treatment (Continued...)
- Lecture 40 - Landfill Disposal
- Lecture 41 - Landfill Disposal (Continued...)
- Lecture 42 - Landfill Disposal (Continued...)
- Lecture 43 - Landfill Disposal (Continued...)
- Lecture 44 - Landfill Disposal (Continued...)
- Lecture 45 - Landfill Disposal (Continued...)
- Lecture 46 - Landfill Disposal (Continued...)
- Lecture 47 - Landfill Disposal (Continued...)
- Lecture 48 - Construction and Demolition Waste Management
- Lecture 49 - Construction and Demolition Waste Management (Continued...)
- Lecture 50 - Construction and Demolition Waste Management (Continued...)
- Lecture 51 - Construction and Demolition Waste Management (Continued...)
- Lecture 52 - Construction and Demolition Waste Management (Continued...)
- Lecture 53 - E-Waste Management
- Lecture 54 - E-Waste Management (Continued...)
- Lecture 55 - E-Waste Management (Continued...)
- Lecture 56 - E-Waste Management (Continued...)
- Lecture 57 - E-Waste Management (Continued...)
- Lecture 58 - E-Waste Management (Continued...)
- Lecture 59 - E-Waste Management (Continued...)
- Lecture 60 - E-Waste Management (Continued...)
- Lecture 61 - Tutorial - I
- Lecture 62 - Tutorial - II

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

NPTEL Video Course - Civil Engineering - NOC:Computational Hydraulics

Subject Co-ordinator - Dr. Anirban Dhar

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction to Computational Hydraulics
- Lecture 2 - Problem Definition and Governing Equations (GE)
- Lecture 3 - Classification of Problems based on Initial Condition (IC) and/or Boundary Conditions (BC)
- Lecture 4 - Classification of Differential Equations
- Lecture 5 - Numerical Methods
- Lecture 6 - Finite Difference Approximation
- Lecture 7 - Ordinary Differential Equation
- Lecture 8 - Ordinary Differential Equation
- Lecture 9 - Partial Differential Equation
- Lecture 10 - Partial Differential Equation
- Lecture 11 - Partial Differential Equation
- Lecture 12 - Partial Differential Equation
- Lecture 13 - Finite Volume Method - Overview
- Lecture 14 - Finite Volume Method - BVP
- Lecture 15 - Finite Volume Method - IBVP
- Lecture 16 - Finite Volume Method - Conservation Law
- Lecture 17 - Upwind Approach
- Lecture 18 - Godunov Approach
- Lecture 19
- Lecture 20
- Lecture 21 - Mesh-Tree Method
- Lecture 22 - Mesh-Free Method
- Lecture 23 - Mesh-Free Method
- Lecture 24 - Numerical Method
- Lecture 25 - Algebraic Equation
- Lecture 26 - Algebraic Equation
- Lecture 27 - Algebraic Equation
- Lecture 28 - Algebraic Equation
- Lecture 29 - Algebraic Equation

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Algebraic Equation
- Lecture 31 - One-Dimensional Flow
- Lecture 32 - Steady Two-Dimensional Flow
- Lecture 33 - Unsteady Two-Dimensional Flow using Finite Difference Method
- Lecture 34
- Lecture 35
- Lecture 36
- Lecture 37
- Lecture 38
- Lecture 39
- Lecture 40 - Steady Channel Flow
- Lecture 41 - Steady Channel Flow
- Lecture 42 - Steady Channel Flow
- Lecture 43 - Steady Channel Flow
- Lecture 44
- Lecture 45
- Lecture 46
- Lecture 47
- Lecture 48
- Lecture 49 - Unsteady Flow in Pipes
- Lecture 50 - Surface Water and Ground Water Interaction
- Lecture 51 - Course Summary

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

NPTEL Video Course - Civil Engineering - NOC:Design of Steel Structures

Subject Co-ordinator - Prof. Damodar Maity

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction to Design of Steel Structures (Limit State Method)

Lecture 2 - Steel as a Structural Material

Lecture 3 - Limit State Design

Lecture 4 - Introduction to Connections

Lecture 5 - Introduction to Bolt Connections

Lecture 6 - Design of Ordinary Black Bolts

Lecture 7 - Worked out Examples on Design of Ordinary Black Bolts

Lecture 8 - Design of High Strength Friction Grip Bolts

Lecture 9 - Weld connection

Lecture 10 - Design of Fillet Welds

Lecture 11 - Design of Butt Welds

Lecture 12 - Design of Plug and Slot Weld

Lecture 13 - Eccentric Connection (Load Lying in Plane of Bolted Joint)

Lecture 14 - Design of Eccentric Connection (Load Lying in Plane of Bolted Joint)

Lecture 15 - Eccentric Connection (Load Lying in Plane of Welded Joint)

Lecture 16 - Eccentric Connection (Load Lying Perpendicular to Plane of Bolted Joint)

Lecture 17 - Design of Eccentric Connection (Load Lying Perpendicular to Plane of Bolted Joint)

Lecture 18 - Eccentric Connection (Load Lying Perpendicular to Plane of Welded Joint)

Lecture 19 - Tension Members and Net Area

Lecture 20 - Calculation of Net Area in Tension Members

Lecture 21 - Net area, Staggered bolt, Chain bolt, Staggered pitch, Deduction of area

Lecture 22 - Strength Calculation of Tension Members

Lecture 23 - Strength of Tension Members with Weld Connection

Lecture 24 - Steps for Design of Tension Members

Lecture 25 - Design Calculation for Tension Members

Lecture 26 - Design of Gusset Plate

Lecture 27 - Lug Angles

Lecture 28 - Splices in Tension Members

Lecture 29 - Compression Members

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Design Strength of Compression Members
- Lecture 31 - Compressive Strength
- Lecture 32 - Compressive Strength of Angle Struts
- Lecture 33 - Compressive Strength of Double Angles
- Lecture 34 - Design of Compression Members
- Lecture 35 - Design of Builtup Compression Members
- Lecture 36 - Lacing Systems
- Lecture 37 - Design of Lacing Systems
- Lecture 38 - Connection Design of Lacing Systems
- Lecture 39 - Design of Double Lacing System
- Lecture 40 - Batten Plates
- Lecture 41 - Design of Batten Plates using Bolt Connection
- Lecture 42 - Design of Batten Plates using Weld Connection
- Lecture 43 - Design of Column Splices
- Lecture 44 - Design of Column Splices due to Shear
- Lecture 45 - Introduction to Flexural Members
- Lecture 46 - Failure Modes of Flexural Members
- Lecture 47 - Laterally Supported Beams
- Lecture 48 - Design of Laterally Supported Beams
- Lecture 49 - Laterally Supported Beams with High Shear
- Lecture 50 - Laterally Unsupported Beams
- Lecture 51 - Strength Calculation of Laterally Unsupported Beams
- Lecture 52
- Lecture 53
- Lecture 54
- Lecture 55
- Lecture 56
- Lecture 57
- Lecture 58 - Worked out Example for Gantry Girder
- Lecture 59 - Slab Base
- Lecture 60 - Design of Slab Base
- Lecture 61 - Eccentrically Loaded Base Plate
- Lecture 62 - Gusset Base
- Lecture 63 - Design of Gusset Base

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

NPTEL Video Course - Civil Engineering - NOC:Reinforced Concrete Road Bridges

Subject Co-ordinator - Prof. Nirjhar Dhang

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Classification of Bridges
- Lecture 3 - General Features of Design
- Lecture 4 - IRC Loading
- Lecture 5 - Design Codes
- Lecture 6 - Working Stress Method
- Lecture 7 - Limit State Method of Design as per IS456
- Lecture 8 - Limit State Method of Design as per IRC 112
- Lecture 9 - Design of Slab Bridges - Part I
- Lecture 10 - Design of Slab Bridges - Part II
- Lecture 11 - Design of Slab Bridges - Part III
- Lecture 12 - Design of Slab Bridges - Part IV
- Lecture 13 - Design of Slab Bridges - Part V
- Lecture 14 - Design of Slab Bridges - Part VI
- Lecture 15 - Abutment
- Lecture 16 - Design of RCC T Beam Bridge - Part I
- Lecture 17 - Design of RCC T Beam Bridge - Part II
- Lecture 18 - Design of RCC T Beam Bridge - Part III
- Lecture 19 - Design of RCC T Beam Bridge - Part IV
- Lecture 20 - Summary and Closure

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Structural Analysis - I

Subject Co-ordinator - Prof. Amit Shaw

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Idealization of Structures, Threats and Responses
- Lecture 3 - Static Equilibrium
- Lecture 4 - Determinate and Indeterminate Structures
- Lecture 5 - Review of Bending Moment and Shear Force Diagram of Beam
- Lecture 6 - Tutorial - I
- Lecture 7 - Analysis of Statically Determinate Structures
- Lecture 8 - Analysis of Truss
- Lecture 9 - Analysis of Truss
- Lecture 10 - Analysis of Truss
- Lecture 11 - Analysis of Truss
- Lecture 12 - Analysis of Statically Determinate Structures
- Lecture 13 - Analysis of Statically Determinate Structures
- Lecture 14 - Analysis of Statically Determinate Structures
- Lecture 15 - Analysis of Statically Determinate Structures
- Lecture 16 - Analysis of Statically Determinate Structures
- Lecture 17 - Deflection of Beams and Frames
- Lecture 18 - Deflection of Beams and Frames (Continued...)
- Lecture 19 - Deflection of Beams and Frames (Continued...)
- Lecture 20 - Deflection of Beams and Frames (Continued...)
- Lecture 21 - Deflection of Beams and Frames (Continued...)
- Lecture 22 - Deflection of Beams and Frames (Continued...)
- Lecture 23 - Deflection of Beams and Frames (Continued...)
- Lecture 24 - Deflection of Beams and Frames (Continued...)
- Lecture 25 - Deflection of Beams and Frames (Continued...)
- Lecture 26 - Deflection of Beams and Frames (Continued...)
- Lecture 27 - Deflection of Beams and Frames (Continued...)
- Lecture 28 - Influence Line Diagram and moving Loads
- Lecture 29 - Influence Line Diagram and moving Loads (Continued...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Influence Line Diagram and moving Loads (Continued...)
- Lecture 31 - Influence Line Diagram and moving Loads (Continued...)
- Lecture 32 - Influence Line Diagram and moving Loads (Continued...)
- Lecture 33 - Analysis of Statically Indeterminate Structures
- Lecture 34 - Analysis of Statically Indeterminate Structures (Continued...)
- Lecture 35 - Analysis of Statically Indeterminate Structures (Continued...)
- Lecture 36 - Analysis of Statically Indeterminate Structures (Continued...)
- Lecture 37 - Analysis of Statically Indeterminate Structures (Continued...)
- Lecture 38 - Analysis of Statically Indeterminate Structures
- Lecture 39 - Analysis of Statically Indeterminate Structures
- Lecture 40 - Analysis of Statically Indeterminate Structures
- Lecture 41 - Analysis of Statically Indeterminate Structures
- Lecture 42 - Analysis of Statically Indeterminate Structures by Force Method
- Lecture 43 - Analysis of Statically Indeterminate Structures by Force Method (Continued...)
- Lecture 44 - Analysis of Statically Indeterminate Structures by Force Method (Continued...)
- Lecture 45 - Analysis of Statically Indeterminate Structures by Force Method (Continued...)
- Lecture 46 - Analysis of Statically Indeterminate Structures by Force Method (Continued...)
- Lecture 47 - Analysis of Indeterminate Structures by Displacement Methods
- Lecture 48 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 49 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 50 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 51 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 52 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 53 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 54 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 55 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)
- Lecture 56 - Analysis of Indeterminate Structures by Displacement Methods (Continued...)



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

NPTEL Video Course - Civil Engineering - NOC:Soil Mechanics, Geotechnical Engineering-I

Subject Co-ordinator - Prof. Dilip Kumar Baidya

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Rock cycle  
Lecture 2 - Soil Formation  
Lecture 3 - Soil Classification  
Lecture 4 - Soil Classification (Continued...)  
Lecture 5 - Soil Classification (Continued...)  
Lecture 6 - Three-phase diagram  
Lecture 7 - Three-phase diagram (Continued...)  
Lecture 8 - Permeability and seepage  
Lecture 9 - Permeability and Seepage (Continued...)  
Lecture 10 - Permeability and seepage (Continued...)  
Lecture 11 - Permeability And Seepage  
Lecture 12 - Permeability And Seepage (Continued...)  
Lecture 13 - Permeability And Seepage (Continued...)  
Lecture 14 - Compaction Of Soils  
Lecture 15 - Compaction Of Soils (Continued...)  
Lecture 16 - Deep Dynamic Compaction  
Lecture 17 - Permeability/Compaction (Continued...)  
Lecture 18 - Effective Stress  
Lecture 19 - Effective Stress (Continued...)  
Lecture 20 - Effective Stress Application  
Lecture 21 - Vertical Stress Distribution  
Lecture 22 - Boussinesq Point Load Formula  
Lecture 23 - Vertical Stress For Distributed Load  
Lecture 24 - Vertical Stress  
Lecture 25 - Vertical Stress (Continued...)  
Lecture 26 - Vertical Stress (Continued...)  
Lecture 27 - Shear Strength  
Lecture 28 - Shear Strength (Continued...)  
Lecture 29 - Shear Strength (Continued...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Shear Strength (Continued...)
- Lecture 31 - Shear Strength (Continued...)
- Lecture 32 - Shear Strength (Continued...)
- Lecture 33 - Shear Strength (Continued...)
- Lecture 34 - Shear Strength (Continued...)
- Lecture 35 - Shear Strength (Continued...)
- Lecture 36 - Shear Strength (Continued...)
- Lecture 37 - Compressibility Of Soils
- Lecture 38 - Compressibility Of Soils (Continued...)
- Lecture 39 - Compressibility Of Soils (Continued...)
- Lecture 40 - Compressibility Of Soils (Continued...)
- Lecture 41 - Compressibility Of Soils (Continued...)
- Lecture 42 - Compressibility Of Soils (Continued...)
- Lecture 43 - Compressibility Of Soils (Continued...)
- Lecture 44 - Compressibility And Settlement Of Soil
- Lecture 45 - Compressibility And Settlement (Continued...)
- Lecture 46 - Compressibility And Secondary Compression
- Lecture 47 - Earth Pressure
- Lecture 48 - Earth Pressure (Continued...)
- Lecture 49 - Earth Pressure (Continued...)
- Lecture 50 - Earth Pressure (Continued...)
- Lecture 51 - Earth Pressure (Continued...)
- Lecture 52 - Earth Pressure (Continued...)
- Lecture 53 - Earth Pressure (Continued...)
- Lecture 54 - Earth Pressure (Continued...)
- Lecture 55 - Stability Of Slopes
- Lecture 56 - Stability Of Slopes (Continued...)
- Lecture 57 - Stability Of Slopes (Continued...)
- Lecture 58 - Slope Stability
- Lecture 59 - Slope Stability
- Lecture 60 - Concluding Remarks
- Lecture 61 - Live Session

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

NPTEL Video Course - Civil Engineering - NOC:Electronic Waste Management - Issues and Challenges

Subject Co-ordinator - Prof. Brajesh Kumar Dubey

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - E-Waste Overview
- Lecture 2 - E-waste Overview
- Lecture 3 - E-waste Overview
- Lecture 4 - E-waste Management Overview
- Lecture 5 - E-waste Management Overview
- Lecture 6 - Environmental and Public Health Issues
- Lecture 7 - Environmental and Public Health Issues (Continued...)
- Lecture 8 - E-waste Health Risk Assessment
- Lecture 9 - Environmental and Public Health Issues (Continued...)
- Lecture 10 - Environmental and Public Health Issues (Continued...)
- Lecture 11 - Recovery of Materials from E-Waste
- Lecture 12 - Metal Recovery Process
- Lecture 13 - Recovery of Metals from Electronic Waste
- Lecture 14 - Recovery of Metals from Electronic Waste
- Lecture 15 - Recovery of Metals from Electronic Waste
- Lecture 16 - E-waste Management
- Lecture 17 - E-waste Management
- Lecture 18 - E-waste Management
- Lecture 19 - Electronics and LCA
- Lecture 20 - LCA applications for Electronics
- Lecture 21 - Tutorial-I
- Lecture 22 - Tutorial-II

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Mineral Resources - Geology, Exploration, Economics and Environment

Subject Co-ordinator - Prof. M.K.Panigrahi

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Mineral Deposits in Space and Time
- Lecture 3 - Mineral Deposits in Space and Time (Continued...)
- Lecture 4 - Mineral Deposits in Time, Attributes of Mineral Deposits and Theories of Mineral Deposits
- Lecture 5 - Classification of Mineral Deposits
- Lecture 6 - Magmatic Processes
- Lecture 7 - Magmatic Processes
- Lecture 8 - Magmatic Processes
- Lecture 9 - Magmatic Processes
- Lecture 10 - Sedimentary Processes and Resultant Mineral Deposits
- Lecture 11 - Sedimentary Processes and Resultant Deposits
- Lecture 12 - Sedimentary Processes and Resultant Deposits
- Lecture 13 - Sedimentary Processes and Resultant Deposits
- Lecture 14 - Sedimentary Processes and Resultant Deposits
- Lecture 15 - Morphology of Ore Deposits
- Lecture 16 - Hydrothermal Processes
- Lecture 17 - Hydrothermal Processes (Continued...)
- Lecture 18 - Hydrothermal Processes
- Lecture 19 - Hydrothermal Processes
- Lecture 20 - Hydrothermal Processes
- Lecture 21 - Hydrothermal Processes (Continued...)
- Lecture 22 - Hydrothermal Processes (Continued...)
- Lecture 23 - Hydrothermal Processes (Continued...)
- Lecture 24 - Hydrothermal Systems
- Lecture 25 - Hydrothermal Systems (Continued...)
- Lecture 26 - Hydrothermal Processes and Resultant Deposits
- Lecture 27 - Hydrothermal Processes and Resultant Deposits (Continued...)
- Lecture 28 - Hydrothermal Processes and Resultant Mineralization
- Lecture 29 - Indian Mineral Deposits

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Indian Mineral Deposits (Continued...)
- Lecture 31 - Indian Mineral Deposits (Continued...)
- Lecture 32 - Mineral Exploration
- Lecture 33 - Mineral Exploration (Continued...)
- Lecture 34 - Mineral Exploration (Continued...)
- Lecture 35 - Mineral Exploration (Continued...)
- Lecture 36 - Mineral Exploration (Continued...)
- Lecture 37 - Mineral Exploration (Continued...)
- Lecture 38 - Mineral Exploration (Continued...)
- Lecture 39 - Mineral Exploration (Continued...)
- Lecture 40 - Mineral Exploration (Continued...)
- Lecture 41 - Mineral Exploration (Continued...)
- Lecture 42 - Mineral Exploration (Continued...)
- Lecture 43 - Mineral Exploration (Continued...)
- Lecture 44 - Mineral Exploration (Continued...)
- Lecture 45 - Mineral Inventory Estimation
- Lecture 46 - Mineral Inventory Estimation (Continued...)
- Lecture 47 - Mineral Inventory Estimation (Continued...)
- Lecture 48 - Mineral Inventory Estimation (Continued...)
- Lecture 49 - Geostatistical Method of Mineral Inventory Estimation
- Lecture 50 - Geostatistical Method of Mineral Inventory Estimation (Continued...)
- Lecture 51 - Mineral Economics
- Lecture 52 - Mineral Economics (Continued...)
- Lecture 53 - Mineral Economics (Continued...)
- Lecture 54 - Mineral Economics (Continued...)
- Lecture 55 - Mineral Economics (Continued...)
- Lecture 56 - Environmental Impact of Mineral Resource Exploitation
- Lecture 57 - Environmental Impact of Mineral Resource Exploitation (Continued...)
- Lecture 58 - Environmental Impact of Mineral Resource Exploitation (Continued...)
- Lecture 59 - Environmental Impact of Mineral Resource Exploitation (Continued...)
- Lecture 60 - Environmental Impact of Mineral Resource Exploitation (Continued...)

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

NPTEL Video Course - Civil Engineering - NOC:Introduction to Mineral Processing

Subject Co-ordinator - Prof. Arun Kumar Majumder

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Importance of Mineral Processing  
Lecture 2 - Importance to Mineral Processing (Continued...)  
Lecture 3 - Importance of Mineral Processing (Continued...)  
Lecture 4 - Importance of Mineral Processing (Continued...)  
Lecture 5 - Importance of Mineral Processing (Continued...)  
Lecture 6 - Particle Characterization  
Lecture 7 - Particle Characterization (Continued...)  
Lecture 8 - Particle Characterization (Continued...)  
Lecture 9 - Particle Characterization (Continued...)  
Lecture 10 - Particle Characterization (Continued...)  
Lecture 11 - Particle Characterization (Continued...)  
Lecture 12 - Sampling  
Lecture 13 - Sampling (Continued...)  
Lecture 14 - Plant Sampling  
Lecture 15 - Plant Sampling (Continued...)  
Lecture 16 - Comminution  
Lecture 17 - Comminution (Continued...)  
Lecture 18 - Comminution Fundamentals  
Lecture 19 - Comminution Fundamentals (Continued...)  
Lecture 20 - Crushers  
Lecture 21 - Crushers (Continued...)  
Lecture 22 - Crushers (Continued...)  
Lecture 23 - Grinding  
Lecture 24 - Grinding (Continued...)  
Lecture 25 - Grinding (Continued...)  
Lecture 26 - Grinding (Continued...)  
Lecture 27 - Grinding (Continued...)  
Lecture 28 - Industrial Screening  
Lecture 29 - Industrial Screening (Continued...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Industrial Screening (Continued...)
- Lecture 31 - Industrial Screening (Continued...)
- Lecture 32 - Industrial Screening (Continued...)
- Lecture 33 - Industrial Screening (Continued...)
- Lecture 34 - Industrial Screening (Continued...)
- Lecture 35 - Movement of Solids in Fluids
- Lecture 36 - Movement of Solids in Fluids (Continued...)
- Lecture 37 - Movement of Solids in Fluids (Continued...)
- Lecture 38 - Classifier
- Lecture 39 - Classifier (Continued...)
- Lecture 40 - Hydrocyclone
- Lecture 41 - Hydrocyclone (Continued...)
- Lecture 42 - Hydrocyclone (Continued...)
- Lecture 43 - Hydrocyclone (Continued...)
- Lecture 44 - Hydrocyclone (Continued...)
- Lecture 45 - Mass Balancing
- Lecture 46 - Mass Balancing (Continued...)
- Lecture 47 - Closed-Circuit Grinding
- Lecture 48 - Gravity Concentration
- Lecture 49 - Gravity Concentration (Continued...)
- Lecture 50 - Gravity Concentration (Continued...)
- Lecture 51 - Gravity Concentration (Continued...)
- Lecture 52 - Gravity Concentration (Continued...)
- Lecture 53 - Flotation
- Lecture 54 - Flotation (Continued...)
- Lecture 55 - Flotation (Continued...)
- Lecture 56 - Flotation Chemicals
- Lecture 57 - Flotation Chemicals (Continued...)
- Lecture 58 - Flotation Chemicals (Continued...)
- Lecture 59 - Flotation Machines
- Lecture 60 - Flotation Machines (Continued...)
- Lecture 61 - Magnetic Separation
- Lecture 62 - Electric Separation
- Lecture 63 - Flow Sheets
- Lecture 64 - Flow Sheets (Continued...)

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

NPTEL Video Course - Civil Engineering - NOC:Foundation Engineering

Subject Co-ordinator - Prof. Koushik Deb

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Introduction (Continued...)
- Lecture 3 - Shear Strength
- Lecture 4 - Soil Exploration - Boring
- Lecture 5 - Standard Penetration Test
- Lecture 6 - Standard Penetration Test and Cone Penetration Test
- Lecture 7 - Cone Penetration Test and Other In-Situ Tests
- Lecture 8 - Types of Samples
- Lecture 9 - Geophysical Exploration - I
- Lecture 10 - Geophysical Exploration - II
- Lecture 11 - Shallow Foundation - Bearing Capacity I
- Lecture 12 - Shallow Foundation - Bearing Capacity II
- Lecture 13 - Shallow Foundation - Bearing Capacity III
- Lecture 14 - Shallow Foundation - Bearing Capacity IV
- Lecture 15 - Shallow Foundation - Bearing Capacity V
- Lecture 16 - Shallow Foundation - Settlement I
- Lecture 17 - Shallow Foundation - Settlement II
- Lecture 18 - Shallow Foundation - Settlement III
- Lecture 19 - Shallow Foundation - Settlement IV
- Lecture 20 - Shallow Foundation - Settlement V
- Lecture 21 - Shallow Foundation - Design I
- Lecture 22 - Shallow Foundation - Design II
- Lecture 23 - Shallow Foundation - Design III
- Lecture 24 - Shallow Foundation - Design IV
- Lecture 25 - Shallow Foundation - Design V
- Lecture 26 - Shallow Foundation - Design VI
- Lecture 27 - Pile Foundation - I
- Lecture 28 - Pile Foundation - II
- Lecture 29 - Pile Foundation - III

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

- Lecture 30 - Pile Foundation - IV
- Lecture 31 - Pile Foundation - V
- Lecture 32 - Pile Foundation - VI
- Lecture 33 - Pile Foundation - VII
- Lecture 34 - Pile Foundation - VIII
- Lecture 35 - Pile Foundation - IX
- Lecture 36 - Pile Foundation - X
- Lecture 37 - Pile Foundation - XI
- Lecture 38 - Pile Foundation - XII
- Lecture 39 - Pile Foundation - XIII
- Lecture 40 - Pile Foundation - XIV
- Lecture 41 - Earth Pressure - I
- Lecture 42 - Earth Pressure - II
- Lecture 43 - Earth Pressure - III
- Lecture 44 - Earth Pressure - IV
- Lecture 45 - Earth Pressure - V
- Lecture 46 - Earth Pressure - VI
- Lecture 47 - Earth Pressure - VII
- Lecture 48 - Earth Pressure and Retaining Wall
- Lecture 49 - Retaining Wall - II
- Lecture 50 - Retaining Wall - III
- Lecture 51 - Retaining Wall - IV
- Lecture 52 - Retaining Wall - V and Sheet Piles - I
- Lecture 53 - Sheet Piles - II
- Lecture 54 - Sheet Piles - III
- Lecture 55 - Sheet Piles - IV
- Lecture 56 - Sheet Piles - V
- Lecture 57 - Sheet Piles - VI
- Lecture 58 - Sheet Piles and Braced Excavation
- Lecture 59 - Braced Excavation and Underground Conduits
- Lecture 60 - Underground Conduits - II

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

NPTEL Video Course - Civil Engineering - NOC:Theory of Elasticity

Subject Co-ordinator - Prof. Biswanath Banjerjee, Prof. Amit Shaw

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Introduction to Tensor
- Lecture 3 - Introduction to Tensor (Continued...)
- Lecture 4 - Introduction to Tensor (Continued...)
- Lecture 5 - Introduction to Tensor (Continued...)
- Lecture 6 - Introduction to Tensor (Continued...)
- Lecture 7 - Concept of Stress and Strain
- Lecture 8 - Concept of Stress and Strain (Continued...)
- Lecture 9 - Concept of Stress and Strain (Continued...)
- Lecture 10 - Concept of Stress and Strain (Continued...)
- Lecture 11 - Concept of Stress and Strain (Continued...)
- Lecture 12 - Constitutive Relation - I
- Lecture 13 - Constitutive Relation - I (Continued...)
- Lecture 14 - Constitutive Relation - I (Continued...)
- Lecture 15 - Constitutive Relation - I (Continued...)
- Lecture 16 - Constitutive Relation - I (Continued...)
- Lecture 17 - Constitutive Relation - II
- Lecture 18 - Constitutive Relation - II (Continued...)
- Lecture 19 - Constitutive Relation - II (Continued...)
- Lecture 20 - Constitutive Relation - II (Continued...)
- Lecture 21 - Constitutive Relation - II (Continued...)
- Lecture 22 - Formulation of Boundary Value Problems
- Lecture 23 - Formulation of Boundary Value Problems (Continued...)
- Lecture 24 - Formulation of Boundary Value Problems (Continued...)
- Lecture 25 - Formulation of Boundary Value Problems (Continued...)
- Lecture 26 - Formulation of Boundary Value Problems (Continued...)
- Lecture 27 - Solution of Boundary Value Problems
- Lecture 28 - Solution of Boundary Value Problems (Continued...)
- Lecture 29 - Solution of Boundary Value Problems (Continued...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Solution of Boundary Value Problems (Continued...)
- Lecture 31 - Solution of Boundary Value Problems (Continued...)
- Lecture 32 - Solution of Boundary Value Problems (Continued...)
- Lecture 33 - Problems in Flexure
- Lecture 34 - Problems in Flexure (Continued...)
- Lecture 35 - Problems in Flexure (Continued...)
- Lecture 36 - Problems in Flexure (Continued...)
- Lecture 37 - Problems in Flexure (Continued...)
- Lecture 38 - Boundary Value Problems in Elasticity
- Lecture 39 - Boundary Value Problems in Elasticity (Continued...)
- Lecture 40 - Boundary Value Problems in Elasticity (Continued...)
- Lecture 41 - Boundary Value Problems in Elasticity (Continued...)
- Lecture 42 - Boundary Value Problems in Elasticity (Continued...)
- Lecture 43 - Complex Variable Method
- Lecture 44 - Complex Variable Method (Continued...)
- Lecture 45 - Complex Variable Method (Continued...)
- Lecture 46 - Complex Variable Method (Continued...)
- Lecture 47 - Complex Variable Method (Continued...)
- Lecture 48 - Complex Variable Method (Continued...)
- Lecture 49 - Thermoelasticity
- Lecture 50 - Thermoelasticity (Continued...)
- Lecture 51 - Thermoelasticity (Continued...)
- Lecture 52 - Thermoelasticity (Continued...)
- Lecture 53 - Thermoelasticity (Continued...)
- Lecture 54 - Photo-Elasticity
- Lecture 55 - Photo-Elasticity (Continued...)
- Lecture 56 - Photo-Elasticity (Continued...)
- Lecture 57 - Photo-Elasticity (Continued...)
- Lecture 58 - Photo-Elasticity (Continued...)
- Lecture 59 - Introduction to Nonlinear Elasticity
- Lecture 60 - Closure

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

NPTEL Video Course - Civil Engineering - NOC:Wastewater Treatment and Recycling

Subject Co-ordinator - Prof. Manoj Kumar Tiwari

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Course Introduction  
Lecture 2 - Sources and Types of Wastewater  
Lecture 3 - Pollutants in Wastewater  
Lecture 4 - Wastewater Management  
Lecture 5 - Wastewater Management  
Lecture 6 - Wastewater Generation and Quantity Estimation  
Lecture 7 - Quantity Estimation of Sewage  
Lecture 8 - Population Forecasting Methods  
Lecture 9 - Quantity Estimation of Sewage Flow  
Lecture 10 - Sewage Quantity Estimation  
Lecture 11 - Wastewater Characteristics  
Lecture 12 - Wastewater Characteristics  
Lecture 13 - Wastewater Characteristics  
Lecture 14 - Wastewater Characteristics  
Lecture 15 - Wastewater Characteristics  
Lecture 16 - Terrace - Introduction  
Lecture 17 - Bench Terraces  
Lecture 18 - Problems on Bench Terraces  
Lecture 19 - Broad-base Terraces  
Lecture 20 - Problems on Broad-base Terraces  
Lecture 21 - Mass Balance  
Lecture 22 - Mass Balance in Reactors  
Lecture 23  
Lecture 24  
Lecture 25  
Lecture 26  
Lecture 27  
Lecture 28 - Secondary Treatment Processes  
Lecture 29 - Biological Treatment of Wastewater

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Biological Treatment of Wastewater
- Lecture 31 - Biological Treatment of Wastewater
- Lecture 32 - Biological Treatment of Wastewater
- Lecture 33
- Lecture 34
- Lecture 35
- Lecture 36
- Lecture 37
- Lecture 38 - Introduction to Sludge Management
- Lecture 39 - Wastewater Sludge
- Lecture 40 - Wastewater Sludge Processing and Treatment
- Lecture 41 - Wastewater Sludge Processing and Treatment
- Lecture 42 - Wastewater Sludge Processing and Treatment
- Lecture 43 - Tertiary (Advanced) Treatment of Wastewater
- Lecture 44 - Tertiary Treatment
- Lecture 45 - Tertiary Treatment
- Lecture 46 - Tertiary Treatment
- Lecture 47 - Tertiary Treatment
- Lecture 48 - Wastewater Treatment Systems
- Lecture 49 - Wastewater Treatment Systems
- Lecture 50 - Alternate Wastewater Treatment Systems
- Lecture 51 - Alternate Wastewater Treatment Systems
- Lecture 52
- Lecture 53
- Lecture 54
- Lecture 55
- Lecture 56
- Lecture 57 - Wastewater Reuse and Recycling
- Lecture 58 - Decision Making in Wastewater Reuse and Recycling
- Lecture 59 - Public Acceptance for Recycled Water Use
- Lecture 60 - Wastewater Reuse and Recycling
- Lecture 61 - Course Summary
- Lecture 62 - Course Summary (Continued...)

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

NPTEL Video Course - Civil Engineering - NOC:Fluid Inclusion in Mineral Principles, Methodology, Practice and

Subject Co-ordinator - Prof. M.K.Panigrahi

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Introduction (Continued...)
- Lecture 3 - Introduction (Continued...)
- Lecture 4 - Introduction (Continued...)
- Lecture 5 - Introduction (Continued...)
- Lecture 6 - Microthermometry
- Lecture 7 - Microthermometry
- Lecture 8 - Microthermometry
- Lecture 9 - Microthermometry
- Lecture 10 - Fluid Inclusion Petrography
- Lecture 11 - Aqueous Fluid Inclusions
- Lecture 12 - Aqueous Fluid Inclusions (Continued...)
- Lecture 13 - Response to Heating Experiment
- Lecture 14 - Aqueous Fluid Inclusions (Continued...)
- Lecture 15 - Aqueous Fluid Inclusions (Continued...)
- Lecture 16 - Pure Carbonic Inclusion
- Lecture 17 - Pure Carbonic Inclusion (Continued...)
- Lecture 18 - Microthermometry of Aqueous-Carbonic Inclusion
- Lecture 19 - Microthermometry of Aqueous-Carbonic Inclusion (Continued...)
- Lecture 20 - Microthermometry of Aqueous-Carbonic Fluid Inclusion
- Lecture 21 - Application of Fluid Inclusion to Ore Environment
- Lecture 22 - Application of Fluid Inclusion Studies to Ore Environment
- Lecture 23 - Application of fluid Inclusion to Ore Forming Environments
- Lecture 24 - Application of fluid Inclusion to Ore Forming Environments (Continued...)
- Lecture 25 - Application of fluid Inclusion to Ore Forming Environments (Continued...)
- Lecture 26 - Application of fluid Inclusion to Deformation, Metamorphism
- Lecture 27 - Application of fluid Inclusion to Deformation, Metamorphism (Continued...)
- Lecture 28 - Application of fluid Inclusion to Deformation, Metamorphism (Continued...)
- Lecture 29 - Application of fluid Inclusion to Deformation, Metamorphism (Continued...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Application of fluid Inclusion to Deformation, Metamorphism (Continued...)
- Lecture 31 - Analysis of Fluid Inclusion
- Lecture 32 - Analysis of Fluid Inclusion (Continued...)
- Lecture 33 - Analysis of Fluid Inclusion (Continued...)
- Lecture 34 - Analysis of Fluid Inclusion (Continued...)
- Lecture 35 - Analysis of Fluid Inclusion (Continued...)
- Lecture 36 - Computer Software for Fluid Inclusion Data
- Lecture 37 - Computer Software for Fluid Inclusion Data (Continued...)
- Lecture 38 - Computer Software for Fluid Inclusion Data (Continued...)
- Lecture 39 - Review of the Course
- Lecture 40 - Review of the Course (Continued...)

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

NPTEL Video Course - Civil Engineering - NOC:Matrix Method of Structural Analysis

Subject Co-ordinator - Prof. Biswanath Banerjee, Prof. Amit Shaw

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Review of Structural Analysis - I
- Lecture 3 - Review of Structural Analysis - I (Continued...)
- Lecture 4 - Review of Structural Analysis - I (Continued...)
- Lecture 5 - Review of Structural Analysis - I (Continued...)
- Lecture 6 - Review of Structural Analysis - I (Continued...)
- Lecture 7 - Review of Structural Analysis - I (Continued...)
- Lecture 8 - Review of Structural Analysis - I (Continued...)
- Lecture 9 - Review of Structural Analysis - I (Continued...)
- Lecture 10 - Review of Structural Analysis - I (Continued...)
- Lecture 11 - Matrix Algebra Review
- Lecture 12 - Matrix Algebra Review (Continued...)
- Lecture 13 - Matrix Algebra Review (Continued...)
- Lecture 14 - Matrix Algebra Review (Continued...)
- Lecture 15 - Matrix Algebra Review (Continued...)
- Lecture 16 - Matrix Method of Analysis of Trusses
- Lecture 17 - Matrix Method of Analysis of Trusses (Continued...)
- Lecture 18 - Matrix Method of Analysis of Trusses (Continued...)
- Lecture 19 - Matrix Method of Analysis of Trusses (Continued...)
- Lecture 20 - Matrix Method of Analysis of Trusses (Continued...)
- Lecture 21 - Matrix Method of Analysis
- Lecture 22 - Matrix Method of Analysis
- Lecture 23 - Matrix Method of Analysis
- Lecture 24 - Matrix Method of Analysis
- Lecture 25 - Matrix Method of Analysis
- Lecture 26 - Matrix Method of Analysis
- Lecture 27 - Matrix Method of Analysis
- Lecture 28 - Matrix Method of Analysis
- Lecture 29 - Matrix Method of Analysis

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

- Lecture 30 - Matrix Method of Analysis
- Lecture 31 - Computer Implementation
- Lecture 32 - Computer Implementation (Continued...)
- Lecture 33 - Analysis of 3D Truss
- Lecture 34 - Analysis of 3D Truss (Continued...)
- Lecture 35 - Analysis of Beam
- Lecture 36 - Introduction to Finite Element Method
- Lecture 37 - Introduction to Finite Element Method (Continued...)
- Lecture 38 - Introduction to Finite Element Method (Continued...)
- Lecture 39 - Introduction to Finite Element Method (Continued...)
- Lecture 40 - Introduction to Finite Element Method (Continued...)
- Lecture 41 - Introduction to Finite Element Method (Continued...)
- Lecture 42 - Introduction to Finite Element Method (Continued...)

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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  
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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

Lecture 21 - Review of Construction Materials

Lecture 22 - Wood and Wood Products - 1

Lecture 23 - Wood and Wood Products - 2

Lecture 24 - Wood and Wood Products - Guest Lecture

Lecture 25 - Polymers

Lecture 26 - Fibre Reinforced Polymer - 1

Lecture 27 - Fibre Reinforced Polymer - 2

Lecture 28 - Metals - Part 1

Lecture 29 - Metals - Part 2

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

- Lecture 30 - Metals - Part 3
- Lecture 31 - Bituminous Material - Part 1
- Lecture 32 - Bituminous Material - Part 2
- Lecture 33 - Concrete - Part 1
- Lecture 34 - Concrete - Part 2
- Lecture 35 - Concrete - Part 3
- Lecture 36 - Concrete - Part 4
- Lecture 37 - Concrete - Part 5
- Lecture 38 - Glass - Guest Lecture
- Lecture 39 - Social Perception - Guest Lecture
- Lecture 40 - Water Proofing - Guest Lecture
- Lecture 41 - Floor Finishes - Guest Lecture
- Lecture 42 - Anchors - Guest Lecture

# 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...)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

# 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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: Introduction of Structural Dynamics  
Lecture 2 - Module 2: Types of Analysis  
Lecture 3 - Module 3: Degrees of Freedom  
Lecture 4 - Module 4: Vibrations of SDOF Systems  
Lecture 5 - Module 5: Methods Solution of Equilibrium Equation  
Lecture 6 - Module 6: UnDamped free Vibration  
Lecture 7 - What is MATLAB?  
Lecture 8 - Getting Started with MATLAB Online  
Lecture 9 - MATLAB Variables  
Lecture 10 - MATLAB as a Calculator  
Lecture 11 - MATLAB Functions  
Lecture 12 - Creating Vectors  
Lecture 13 - Creating Uniformly Spaced Vectors (Colon Operator)  
Lecture 14 - Creating Uniformly Spaced Vectors (Linspace)  
Lecture 15 - Accessing Elements of a Vector  
Lecture 16 - Calculations with Vectors  
Lecture 17 - Creating Matrices  
Lecture 18 - Matrix Creation Functions  
Lecture 19 - Accessing Elements of a Matrix  
Lecture 20 - Matrix Multiplication  
Lecture 21 - Logical Operators  
Lecture 22 - Writing a FOR Loop  
Lecture 23 - If - Else Statements  
Lecture 24 - While Loop  
Lecture 25 - Line Plots  
Lecture 26 - Annotating Graphs  
Lecture 27 - Exploring Figures in MATLAB Online  
Lecture 28 - Damped Free Vibration  
Lecture 29 - Types of Damping

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Logarithmic Decrement
- Lecture 31 - Dynamic Equilibrium Equation Using Energy Method
- Lecture 32 - Module 1: UnDamped Forced Vibration
- Lecture 33 - Module 2: Damped Forced Vibration
- Lecture 34 - Module 3: Relationship between  $R_d$ ,  $R_v$  &  $R_a$
- Lecture 35 - Module 4: Resonant Frequency & Half Power Band Width
- Lecture 36 - Module 5: Transmissibility
- Lecture 37 - Module 1: Response to Arbitrary Force
- Lecture 38 - Module 2: Special Cases in Arbitrary Force
- Lecture 39 - Module 3: Fourier Transformation
- Lecture 40 - Module 1: Numerical Methods
- Lecture 41 - Module 2: Methods Based on Interpolation of Excitation
- Lecture 42 - Module 3: Central Difference Method
- Lecture 43 - Module 4: Numerical Methods based on Variation of Acceleration: Newmark's Method
- Lecture 44 - Central Difference Method (Tutorial)
- Lecture 45 - Module 1: Response Spectrum
- Lecture 46 - Module 2: Special Cases of Response Spectrum
- Lecture 47 - Module 3: Development of Tripartite Plot
- Lecture 48 - Module 1: Multi-Degree of Freedom System
- Lecture 49 - Module 2: Multi-Degree of Freedom System: Solution of Equilibrium Equation
- Lecture 50 - Module 3: Multi-Degree of Freedom System: Modal Orthogonality
- Lecture 51 - Module 4: Approximate Methods For Finding Natural Frequency
- Lecture 52 - Tutorial 01: Generation of Mass Matrix
- Lecture 53 - Tutorial 2: Eigen vector and Modal Orthogonality
- Lecture 54 - Module 1: Time History Analysis
- Lecture 55 - Module 2: Response Spectrum Analysis
- Lecture 56 - Module 1: Three Dimensional Dynamic Analysis
- Lecture 57 - Module 2: Generation of Elastic Design Response Spectra
- Lecture 58 - W09T01: Centre of Mass & Centre of Stiffness
- Lecture 59 - Module 1: Vibration of Continuous Systems
- Lecture 60 - Module 2: Example Problem on Continuous system
- Lecture 61 - Module 3: Theory of Seismometer
- Lecture 62 - Module 1: Dynamics of Non Structural Elements
- Lecture 63 - Module 2: Non Structural Elements Example
- Lecture 64 - W11T: Non Structural Elements
- Lecture 65 - Module 1: Classical and Non-classical Damping
- Lecture 66 - Module 2: Vibration Control
- Lecture 67 - Module 3: Base Isolation
- Lecture 68 - Module 4: Tuned Mass Damper

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Mechanics of Materials

Subject Co-ordinator - Dr. U. Saravanan

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Why this course?
- Lecture 2 - Concepts and equations in this course
- Lecture 3 - Objectives and prerequisite
- Lecture 4 - Linear Algebra
- Lecture 5 - Vector Algebra
- Lecture 6 - Representation of Vector
- Lecture 7 - Concept of Force
- Lecture 8 - Definition of a body
- Lecture 9 - Motion and Displacement field
- Lecture 10 - Traction
- Lecture 11 - Properties of traction
- Lecture 12 - Definition of stress tensor and linear function
- Lecture 13 - Tensor Algebra
- Lecture 14 - Meaning of components of the stress tensor
- Lecture 15 - Transformation of stress components
- Lecture 16 - Mohr's Circle derivation
- Lecture 17 - Example 1
- Lecture 18 - Example 2
- Lecture 19 - Example 3
- Lecture 20 - Uniaxial stress
- Lecture 21 - Hydrostatic, pure shear and deviatoric stress
- Lecture 22 - Biaxial and Plane state of stress
- Lecture 23 - Extreme stress for 3D stresses
- Lecture 24 - Extremum shear stress
- Lecture 25 - Stresses in the Octahedral plane
- Lecture 26 - 2D Equilibrium equations
- Lecture 27 - 3D Equilibrium equations
- Lecture 28 - Stretch ratio and strain
- Lecture 29 - Curves and arc Length

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

- Lecture 30 - Gradient
- Lecture 31 - Deformation and displacement Gradient
- Lecture 32 - Right Cauchy Green Deformation tensor
- Lecture 33 - Homogeneous deformation
- Lecture 34 - Engineering strain
- Lecture 35 - Change in Angle
- Lecture 36 - Transformation of strain components/ Strain Rosette
- Lecture 37 - Compatibility condition
- Lecture 38 - Constitutive relation
- Lecture 39 - Young's Modulus and Poisson's Ratio
- Lecture 40 - Shear Modulus
- Lecture 41 - Bulk Modulus
- Lecture 42 - Restriction on material parameters
- Lecture 43 - Thermal strain
- Lecture 44 - Strain energy, load potential and total potential
- Lecture 45 - Stepped shaft subjected to axial force
- Lecture 46 - Inhomogeneous bar subjected to axial force
- Lecture 47 - Stepped shaft subjected to raise in temperature
- Lecture 48 - Traction in member subjected to bending
- Lecture 49 - Governing equilibrium equations
- Lecture 50 - Displacement field
- Lecture 51 - Bending equation
- Lecture 52 - Radius of curvature
- Lecture 53 - Shear force and bending moment diagram
- Lecture 54 - Variation of axial stress
- Lecture 55 - Deflected shape and rotation of cross section
- Lecture 56 - Expression to find shear stress
- Lecture 57 - Finding centroid of a cross section
- Lecture 58 - Parallel axis theorem and its application
- Lecture 59 - Vertical shear stress in I section
- Lecture 60 - Horizontal shear stress in I section
- Lecture 61 - Connection design
- Lecture 62 - Definition of shear center
- Lecture 63 - Shear center of Channel section
- Lecture 64 - Expression to find shear center
- Lecture 65 - Shear force and bending moment diagram
- Lecture 66 - Deflected shape and rotation of cross section
- Lecture 67 - Finding allowable load
- Lecture 68 - Modified bending equation

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 69 - Bending of a composite beam
- Lecture 70 - Connection design
- Lecture 71 - Moment of Intertia about arbitrarily oriented axis
- Lecture 72 - Example
- Lecture 73 - Bending equation for bending about principal axis
- Lecture 74 - Bending equation about arbitrary axis
- Lecture 75 - Neutral axis
- Lecture 76 - Load not about principal axis
- Lecture 77 - Load about principal axis
- Lecture 78 - Displacement field
- Lecture 79 - Torsion equation
- Lecture 80 - Example problems
- Lecture 81 - Expression relating angle of twist with torsion and shear stress
- Lecture 82 - Example problems
- Lecture 83 - Thin walled closed sections
- Lecture 84 - Example problems
- Lecture 85 - Cylindrical polar coordinate system
- Lecture 86 - Displacement field
- Lecture 87 - Governing differential equation and solution
- Lecture 88 - Example problems
- Lecture 89 - Thin walled pressure vessels
- Lecture 90 - General Principals
- Lecture 91 - Different failure modes
- Lecture 92 - Tresca Condition
- Lecture 93 - vonMises condition
- Lecture 94 - Maximum normal stress or rankine condition
- Lecture 95 - Mohr - Columb condition
- Lecture 96 - Drucker-Prager Condition
- Lecture 97 - General Concepts
- Lecture 98 - Euler critical load for simply supported column
- Lecture 99 - Euler critical load for column with any boundary condition
- Lecture 100 - Secant formula
- Lecture 101 - Pressure vessel and failure theory
- Lecture 102 - Determination of maximum load carrying capacity of a simple truss

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

NPTEL Video Course - Civil Engineering - NOC:Advanced Concrete Technology

Subject Co-ordinator - Prof. Manu Santhanam

Co-ordinating Institute - IIT - Madras

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

Lecture 0 - Introduction to course  
Lecture 1 - Cement Production - Part 1  
Lecture 2 - Cement Production - Part 2  
Lecture 3 - Cement Composition - Part 1  
Lecture 4 - Cement Composition - Part 2  
Lecture 5 - Cement Classification - Part 1  
Lecture 6 - Cement Classification - Part 2  
Lecture 7 - Cement Chemistry - Part 1  
Lecture 8 - Cement Chemistry - Part 2  
Lecture 9 - Cement Chemistry - Part 3  
Lecture 10 - Cement Chemistry - Part 4  
Lecture 11 - Cement Chemistry - Part 5  
Lecture 12 - Aggregates for concrete - Part 1  
Lecture 13 - Aggregates for concrete - Part 2  
Lecture 14 - Chemical admixtures - Part 1  
Lecture 15 - Chemical admixtures - Part 2  
Lecture 16 - Chemical admixtures - Part 3  
Lecture 17 - Chemical admixtures - Part 4  
Lecture 18 - Chemical admixtures - Part 5  
Lecture 19 - Mineral admixtures - Part 1  
Lecture 20 - Mineral admixtures - Part 2  
Lecture 21 - Mineral admixtures - Part 3  
Lecture 22 - Mineral admixtures - Part 4  
Lecture 23 - Mineral admixtures - Part 5  
Lecture 24 - Mineral admixtures - Part 6  
Lecture 25 - Mineral admixtures - Part 7  
Lecture 26 - Mixture proportioning  
Lecture 27 - Fresh concrete - Part 1  
Lecture 28 - Fresh concrete - Part 2

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 29 - Fresh properties - Part 3
- Lecture 30 - Introduction to Harden concrete properties
- Lecture 31 - Post peak response and Fibre reinforced concrete
- Lecture 32 - Shrinkage
- Lecture 33 - Creep
- Lecture 34 - Shrinkage
- Lecture 35 - Shrinkage
- Lecture 36 - Introduction to Durability
- Lecture 37 - Performance based specifications for durable concrete
- Lecture 38 - Durability issues in concrete - Part 1
- Lecture 39 - Durability issues in concrete - Part 2
- Lecture 40 - Durability issues in concrete - Part 3
- Lecture 41 - Durability issues in concrete - Part 4
- Lecture 42 - Durability issues in concrete - Part 5
- Lecture 43 - Durability issues in concrete - Part 6

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

NPTEL Video Course - Civil Engineering - NOC:Glass in Buildings: Design and Application

Subject Co-ordinator - Prof. K.N. Satyanarayana

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction
- Lecture 2 - Float Process for Manufacturing Glass - Part 1
- Lecture 3 - Float Process for Manufacturing Glass - Part 2
- Lecture 4 - Coatings on Glass - Need and Types - Part 2
- Lecture 5 - Coatings on Glass - Need and Types - Part 2
- Lecture 6 - Glass Design for Safety, Sustainability and Aesthetic - Part 1
- Lecture 7 - Glass Design for Safety, Sustainability and Aesthetic - Part 2
- Lecture 8 - Structural Control and Design for Energy Efficiency - Part I
- Lecture 9 - Structural Control and Design for Energy Efficiency - Part II
- Lecture 10 - Structural Control and Design for Energy Efficiency - Part III
- Lecture 11 - Structural Control and Design for Energy Efficiency - Part IV
- Lecture 12 - Structural Control and Design for Energy Efficiency - Part V
- Lecture 13 - Design Tools for Glass Selection - Part I
- Lecture 14 - Design Tools for Glass Selection - Part II
- Lecture 15 - Modeling the Building Envelope - Part I
- Lecture 16 - Modeling the Building Envelope - Part II
- Lecture 17 - Modeling the Building Envelope - Part III
- Lecture 18 - Innovations in Glass Future Facades - Part I
- Lecture 19 - Innovations in Glass Future Facades - Part II
- Lecture 20 - Standards Related to Glass
- Lecture 21 - Introduction to Useful Daylighting in Buildings
- Lecture 22 - Fundamentals of Daylighting - Part I
- Lecture 23 - Fundamentals of Daylighting - Part II
- Lecture 24 - Daylighting Strategies - Techniques - Part I - Video 1
- Lecture 25 - Daylighting Strategies - Techniques - Part I - Video 2
- Lecture 26 - Daylighting Strategies - Techniques - Part II - Video 1
- Lecture 27 - Daylighting Strategies - Techniques - Part II - Video 2
- Lecture 28 - Daylighting Strategies - Techniques - Part II - Video 3
- Lecture 29 - ECBC and Green Building Requirements

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Introduction to Daylight Simulation
- Lecture 31 - Daylighting Controls - Part I
- Lecture 32 - Daylighting Controls - Part II
- Lecture 33 - Achieving Acoustics Through Glass
- Lecture 34 - Glass Processing Overview - Part I
- Lecture 35 - Glass Processing Overview - Part II
- Lecture 36 - Interior Glazing Program - Part I
- Lecture 37 - Interior Glazing Program - Part II
- Lecture 38 - Interior Glazing Applications-Shower Enclosure - Part I
- Lecture 39 - Interior Glazing Applications-Shower Enclosure - Part II
- Lecture 40 - Interior Glazing Applications-Shower Enclosure - Part III
- Lecture 41 - Interior Glazing Applications-Shower Enclosure - Part IV
- Lecture 42 - Glass in Passive Fire Protection - Part I
- Lecture 43 - Glass in Passive Fire Protection - Part II
- Lecture 44 - Glass in Passive Fire Protection - Part III
- Lecture 45 - Glazing Choices for Project Segment - Part I
- Lecture 46 - Glazing Choices for Project Segment - Part II
- Lecture 47 - National Building Code 2016 - Part I
- Lecture 48 - National Building Code 2016 - Part II
- Lecture 49 - National Building Code 2016 - Part III
- Lecture 50 - National Building Code 2016 - Part IV
- Lecture 51 - Facade Fundamentals - Part I
- Lecture 52 - Facade Fundamentals - Part II
- Lecture 53 - Facade Fundamentals - Part III
- Lecture 54 - Facade Fundamentals - Part IV
- Lecture 55 - Glass Application on Facades - Part I
- Lecture 56 - Glass Application on Facades - Part II
- Lecture 57 - Glass Application on Facades - Part III
- Lecture 58 - Energy Efficiency Facade System
- Lecture 59 - Structural Design of Facades - Part I
- Lecture 60 - Structural Design of Facades - Part II
- Lecture 61 - Silicone for Structural Glazing - Part - I
- Lecture 62 - Silicone for Structural Glazing - Part - II
- Lecture 63 - Silicone for Structural Glazing - Part - III
- Lecture 64 - Facade Factory Operations - Part I
- Lecture 65 - Facade Factory Operations - Part II
- Lecture 66 - Performance Testing for Facades - Part I
- Lecture 67 - Performance Testing for Facades - Part II
- Lecture 68 - The Role of Windows in Building Design - Part I

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 69 - The Role of Windows in Building Design - Part II
- Lecture 70 - Standards Related to Glass II
- Lecture 71 - FAQs about usage of Glass in Buildings
- Lecture 72 - Case Study of a Different Concept of Facade
- Lecture 73 - Case Studies-Envelope Design and Its Impact - Part I
- Lecture 74 - Case Studies-Envelope Design and Its Impact - Part II
- Lecture 75 - A Case Study of Building Envelope in the context of Environmentally Sustainable Design - Part I
- Lecture 76 - A Case Study of Building Envelope in the context of Environmentally Sustainable Design - Part II
- Lecture 77 - Sustainable Building and Facades - Part I
- Lecture 78 - Sustainable Building and Facades - Part II
- Lecture 79 - Building Envelope Design for Sustainable Buildings
- Lecture 80 - Building Envelope Design
- Lecture 81 - Case Study for Building Envelop Design - Part I
- Lecture 82 - Case Study for Building Envelop Design - Part II
- Lecture 83 - Case study-Commercial Buildings - Part I
- Lecture 84 - Case study-Commercial Buildings - Part II
- Lecture 85 - Case study-Commercial Buildings - Part III
- Lecture 86 - Case Study-The Untold Truth of the Unbuilt - Part I
- Lecture 87 - Case Study-The Untold Truth of the Unbuilt - Part II

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

NPTEL Video Course - Civil Engineering - NOC:Glass Processing Technology

Subject Co-ordinator - Prof. K.N. Satyanarayana

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction
- Lecture 2 - Glass as Building Material - Part I
- Lecture 3 - Glass as Building Material - Part II
- Lecture 4 - Float Glass Manufacturing - Part I
- Lecture 5 - Float Glass Manufacturing - Part II
- Lecture 6 - Glass Coating Technology - Part I
- Lecture 7 - Glass Coating Technology - Part II
- Lecture 8 - Safety in Industries - Part I
- Lecture 9 - Safety in Industries - Part II
- Lecture 10 - Safety in Glass Handling - Part I
- Lecture 11 - Safety in Glass Handling - Part II
- Lecture 12 - Process Flow- PPE
- Lecture 13 - Serviceability-Sales - Production Planning in Solutions Business - Part I
- Lecture 14 - Serviceability-Sales - Production Planning in Solutions Business - Part II
- Lecture 15 - Serviceability-Sales - Production Planning in Solutions Business - Part III
- Lecture 16 - Environment and Eco packaging
- Lecture 17 - Glass Warehouse Management - Part I
- Lecture 18 - Glass Warehouse Management - Part II
- Lecture 19 - Cutting and Snapping
- Lecture 20 - Pre-Processing-Drilling - Part I
- Lecture 21 - Pre-Processing-Drilling - Part II
- Lecture 22 - Grinding and Fabrication
- Lecture 23 - Pre-Processing - Washing
- Lecture 24 - Tempering - Part I
- Lecture 25 - Tempering - Part II
- Lecture 26 - Tempering - Part III
- Lecture 27 - Tempering - Part IV
- Lecture 28 - Tempering - Part V
- Lecture 29 - Tempering - Part VI

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

- Lecture 30 - Tempering - Part VII
- Lecture 31 - Lamination - Part I
- Lecture 32 - Lamination - Part II
- Lecture 33 - Lamination - Part III
- Lecture 34 - Insulating Glass Unit - Part I
- Lecture 35 - Insulating Glass Unit - Part II
- Lecture 36 - Insulating Glass Unit - Part III
- Lecture 37 - Insulating Glass Unit - Part IV
- Lecture 38 - Insulating Glass Unit - Part V
- Lecture 39 - Insulating Glass Unit - Part VI
- Lecture 40 - Insulating Glass Unit - Part VII
- Lecture 41 - Insulating Glass Unit - Part VIII
- Lecture 42 - Insulating Glass Unit - Part IX
- Lecture 43 - Silicone Sealant for Insulated Glass - Part I
- Lecture 44 - Silicone Sealant for Insulated Glass - Part II
- Lecture 45 - Insulating Glass Unit - Part X
- Lecture 46 - Insulating Glass Unit - Part XI
- Lecture 47 - Insulating Glass Unit - Part XII
- Lecture 48 - Processing Standards and Checks
- Lecture 49 - Quality Testing - Part I
- Lecture 50 - Quality Testing - Part II
- Lecture 51 - Quality Testing - Part III
- Lecture 52 - Quality Testing - Part IV - Video 1
- Lecture 53 - Quality Testing - Part IV - Video 2
- Lecture 54 - Quality Testing - Part V
- Lecture 55 - Quality Testing - Part VI
- Lecture 56 - Quality Testing - Part VII
- Lecture 57 - Heat soaking - Part I
- Lecture 58 - Heat soaking - Part II
- Lecture 59 - Ceramic Printing on Glass - Part I
- Lecture 60 - Ceramic Printing on Glass - Part II
- Lecture 61 - Ceramic Printing on Glass - Part III
- Lecture 62 - Ceramic Printing on Glass - Part IV
- Lecture 63 - Glass Breakage Reasons
- Lecture 64 - Internal Process Loss - Part I
- Lecture 65 - Internal Process Loss - Part II
- Lecture 66 - Internal Process Loss - Part III
- Lecture 67 - Root Cause Analysis - Part I
- Lecture 68 - Root Cause Analysis - Part II

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 69 - Post Manufacturing Expenses
- Lecture 70 - 5S in Glass Processing
- Lecture 71 - Introduction to Quality Management System - Part I
- Lecture 72 - Introduction to Quality Management System - Part II
- Lecture 73 - Glass Processing - Applications, Innovations and Futuristic Trends - Part I
- Lecture 74 - Glass Processing - Applications, Innovations and Futuristic Trends - Part II
- Lecture 75 - Sustainability on Glass Processing

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Digital Land Surveying And Mapping

Subject Co-ordinator - Prof. Jayanta Kumar Ghosh

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Introduction and Applications

Lecture 2 - Fundamentals and Operations

Lecture 3 - Overview of Digital Land Surveying

Lecture 4 - Introduction of GPS

Lecture 5 - GPS Signal (Civilian Perspective)

Lecture 6 - GPS User Segment

Lecture 7 - GPS Positioning of Control Point

Lecture 8 - Demonstration of GPS Receivers, Software and Positioning of Control Point

Lecture 9 - GPS Position

Lecture 10 - Principle of GPS Positioning and GPS Observables

Lecture 11 - Errors in GPS Observables

Lecture 12 - GPS Data Pre-processing

Lecture 13 - GPS Data Pre-processing

Lecture 14 - GPS Data Processing

Lecture 15 - GPS Data Processing

Lecture 16 - Quality Assessment of GPS Surveying

Lecture 17 - Introduction to Total Station

Lecture 18 - Parts of Total Station

Lecture 19 - Accessories of Total Station

Lecture 20 - Handling and Setting of Total Station

Lecture 21 - Measurement of Distance

Lecture 22 - Measurement of Distance Using TS

Lecture 23 - Measurement of Horizontal Angle Using TS

Lecture 24 - Measurement of Vertical Angle and Height Using TS

Lecture 25 - Errors in Total Station

Lecture 26 - Other Errors in Total Station

Lecture 27 - Errors and Quality of Surveying Measurements

Lecture 28 - Error Propagation and Survey Specifications

Lecture 29 - Basics of Vertical Representation

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Contouring
- Lecture 31 - Mapping Fundamentals
- Lecture 32 - Mapping Basics
- Lecture 33 - Mapping Software
- Lecture 34 - Automated Mapping
- Lecture 35 - Working Steps
- Lecture 36 - Establishment of Control Point
- Lecture 37 - Detailing of Digital Land Surveying
- Lecture 38 - Demonstration of Digital Land Survey Detailing
- Lecture 39 - Data Preparation and Map Making
- Lecture 40 - Overview of the Course

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

NPTEL Video Course - Civil Engineering - NOC:Digital Image Processing of Remote Sensing Data

Subject Co-ordinator - Dr.Arun K.Saraf

Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - Remote-sensing Image and How it is represented
- Lecture 2 - Different Techniques of Image Acquisition
- Lecture 3 - Why is Digital Image processing Important ?
- Lecture 4 - Image characteristics and Different Resolutions in Remote Sensing
- Lecture 5 - Electromagnetic spectrum, solar reflection, and thermal emission
- Lecture 6 - Color Representation and Transformations
- Lecture 7 - Image histograms and statistics
- Lecture 8 - Geo-referencing Techniques
- Lecture 9 - Image Enhancement Techniques part 1
- Lecture 10 - Image Enhancement Techniques part 2
- Lecture 11 - Multispectral Transform, Scatter Plot, Principal Component Analysis and Decorrelation Stretch
- Lecture 12 - Spatial Filtering Techniques
- Lecture 13 - Frequency Domain Fourier Transformation
- Lecture 14 - Basic Image Compression Techniques and Different Image File Formats
- Lecture 15 - Image Classification Techniques
- Lecture 16 - Principles of Image Interpretation
- Lecture 17 - SAR Interferometry (InSAR) Techniques
- Lecture 18 - Image Merging and Image Mosaicing Techniques
- Lecture 19 - Application of Image Analysis
- Lecture 20 - Limitations and Future of Digital Image Processing

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Applied Environmental Microbiology

Subject Co-ordinator - Dr. Gargi Singh

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Introduction - I  
Lecture 2 - Introduction - II  
Lecture 3 - Cell Structure - I  
Lecture 4 - Cell Structure - II  
Lecture 5 - Central Dogma - I  
Lecture 6 - Central Dogma - II  
Lecture 7 - Microbial Energetics - I  
Lecture 8 - Microbial Energetics - II  
Lecture 9 - Microbial Energetics - III  
Lecture 10 - Microbial Energetics - IV  
Lecture 11 - Microbial Metabolism - I  
Lecture 12 - Microbial Metabolism - II  
Lecture 13 - Functional Diversity of Bacteria - I  
Lecture 14 - Functional Diversity of Bacteria - II  
Lecture 15 - Functional Diversity of Bacteria - III  
Lecture 16 - Microbial Ecosystem - I  
Lecture 17 - Microbial Ecosystem - II  
Lecture 18 - Microbial Ecosystem - III  
Lecture 19 - Microbial Ecosystem - IV  
Lecture 20 - Microbial Ecosystem - V  
Lecture 21 - Environmental Genomics - I  
Lecture 22 - Environmental Genomics - II  
Lecture 23 - Environmental Genomics - III  
Lecture 24 - Environmental Genomics - IV  
Lecture 25 - Environmental Genomics - V  
Lecture 26 - Microbial Symbiosis - I  
Lecture 27 - Microbial Symbiosis - II  
Lecture 28 - Virus - I  
Lecture 29 - Virus - II

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Applied Environmental Microbiology
- Lecture 31 - Techniques in Environmental Microbiology - I
- Lecture 32 - Techniques in Environmental Microbiology - II
- Lecture 33 - Bioremediation - I
- Lecture 34 - Bioremediation - II
- Lecture 35 - Bioremediation - III
- Lecture 36 - Wastewater Microbiology - I
- Lecture 37 - Wastewater Microbiology - II
- Lecture 38 - Built Microbiology
- Lecture 39 - Exposomes - I
- Lecture 40 - Exposomes - II
- Lecture 41 - Drinking Water Microbiology - I
- Lecture 42 - Drinking Water Microbiology - II
- Lecture 43 - Drinking Water Microbiology - III
- Lecture 44 - Drinking Water Microbiology - IV
- Lecture 45 - Drinking Water Microbiology - V
- Lecture 46 - Solid Waste Microbiology - I
- Lecture 47 - Solid Waste Microbiology - II
- Lecture 48 - Solid Waste Microbiology - III
- Lecture 49 - Antimicrobial Resistance - I
- Lecture 50 - Antimicrobial Resistance - II
- Lecture 51 - Epidemiology - I
- Lecture 52 - Epidemiology - II
- Lecture 53 - Biosensors - I
- Lecture 54 - Biosensors - II
- Lecture 55 - Biosensors - III
- Lecture 56 - Bioinformatics - I
- Lecture 57 - Bioinformatics - II
- Lecture 58 - Bioinformatics - III
- Lecture 59 - Bioinformatics - IV
- Lecture 60 - Bioinformatics - V



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

NPTEL Video Course - Civil Engineering - NOC:Digital Elevation Models and Applications

Subject Co-ordinator - Prof. Arun K. Saraf

Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - Concept of Digital Elevation Model and How It Is Represented
- Lecture 2 - Various Techniques to Generate Digital Elevation Model - 1
- Lecture 3 - Various Techniques to Generate Digital Elevation Model - 2
- Lecture 4 - Various Techniques to Generate Digital Elevation Model - 3
- Lecture 5 - Importance of Spatial Resolution With DEMs
- Lecture 6 - How To Assess Quality of DEM?
- Lecture 7 - Integration of DEMs With Satellite Data
- Lecture 8 - Common Derivatives of DEMs- Slope and Aspect
- Lecture 9 - Triangulated Irregular Network (TIN) and Its Derivatives
- Lecture 10 - Shaded Relief Models and Thier Applications
- Lecture 11 - DEMs Derivatives - 1
- Lecture 12 - DEMs Derivatives - 2
- Lecture 13 - DEMs Derivatives - 3
- Lecture 14 - DEMs Derivatives - 4
- Lecture 15 - DEM Based Surface Hydrologic Modelling - 1
- Lecture 16 - DEM Based Surface Hydrologic Modelling - 2
- Lecture 17 - DEM and DAM Simulation and Its Application In Ground Water Hydrology
- Lecture 18 - Applications of DEMs In Solar and Wind Energy Potential Estimations
- Lecture 19 - Applications of DEMs in Viewshed and Flood Hazard Mapping
- Lecture 20 - DEMs Sources, Limitations and Future of Digital Elevation Models

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

NPTEL Video Course - Civil Engineering - NOC:Environmental Engineering-Chemical Processes

Subject Co-ordinator - Prof. Bhanu Prakash Vellanki

Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - Introduction, Fundamentals of Equilibrium and Kinetics
- Lecture 2 - Equilibrium-Process Feasibility, Gibbs Energy-Standard Condition
- Lecture 3 - Gibbs Free Energy-Non Standard Conditions - I
- Lecture 4 - Gibbs Free Energy-Non Standard Conditions - II
- Lecture 5 - Phase Equilibrium
- Lecture 6 - Component Balance
- Lecture 7 - Reaction Kinetics
- Lecture 8 - Rate of Reaction - I
- Lecture 9 - Rate of Reaction - II, Types of Reactors
- Lecture 10 - Mass Balance on different types of Reactors
- Lecture 11 - Material Balance for Complex Reactions
- Lecture 12 - Material Balance for Reversible Reactions
- Lecture 13 - Determination of Kinetic Equations
- Lecture 14 - Acid-Base Reactions
- Lecture 15 - Acid Dissociation Constant, Strength of Acid
- Lecture 16 - Ionization Fractions
- Lecture 17 - Introduction to VMINTEQ
- Lecture 18 - Estimation of pH using VMINTEQ
- Lecture 19 - Mixing Problems
- Lecture 20 - Inverse Dose Problems
- Lecture 21 - logC-pH Diagram
- Lecture 22 - Carbonate System
- Lecture 23 - Carbonate System
- Lecture 24 - VMINTEQ
- Lecture 25 - VMINTEQ
- Lecture 26 - VMINTEQ
- Lecture 27 - Buffer Intensity
- Lecture 28 - Alkalinity
- Lecture 29 - Alkalinity

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- Lecture 30 - Acidity and its Applications
- Lecture 31 - Alkalinity and Acidity
- Lecture 32 - Mixing of Two Solutions and Conservative Quantities - I
- Lecture 33 - Mixing of Two Solutions and Conservative Quantities - II
- Lecture 34 - Carbonate and Non-Carbonate Alkalinity
- Lecture 35 - Anaerobic Digester
- Lecture 36 - Aqueous Complexes
- Lecture 37 - Aqueous Complexes
- Lecture 38 - Aqueous Complexes of Aluminium (Al)
- Lecture 39 - Aqueous Complexes of Mercury (Hg)
- Lecture 40 - Precipitation and Dissolution
- Lecture 41 - Applications of Precipitation and Dissolution
- Lecture 42 - Different Stages in Precipitation, Equilibrium of Precipitation - I
- Lecture 43 - Equilibrium of Precipitation - II
- Lecture 44 - Examples Related to Equilibrium of Precipitation
- Lecture 45 - Other Examples of Equilibrium of Precipitation
- Lecture 46 - Solubility and Competitive Precipitation
- Lecture 47 - Predominance Area Diagram and Introduction to Redox Processes
- Lecture 48 - Redox Reactions and its Applications
- Lecture 49 - Balancing of Redox and Development of Half Reaction
- Lecture 50 - Kinetics of Redox Processes
- Lecture 51 - Equilibrium of Redox - I
- Lecture 52 - Equilibrium of Redox - II and Reaction Feasibility
- Lecture 53 - Reaction Feasibility Based on  $P_e$  - I
- Lecture 54 - Reaction Feasibility Based on  $P_e$  - II
- Lecture 55 - Effect of Complexation on Redox
- Lecture 56 - Effect of Complexation and Solid Phase on Redox
- Lecture 57 - Reaction Feasibility based on  $E_h$
- Lecture 58 - Introduction to Electrochemical cell ( $E_{cell}$ )
- Lecture 59 - Applications of  $E_{cell}$
- Lecture 60 -  $\log C$ - $P_e$  and  $pH$ - $P_e$  Diagram

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

## 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)



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

---

- 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)

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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

---

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

[www.digimat.in](http://www.digimat.in)

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

---

- 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