

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

NPTEL Video Course - Civil Engineering - NOC:Applied Seismology for Engineers

Subject Co-ordinator - Prof. Abhishek Kumar

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Plate tectonics and continental drift theory
- Lecture 2 - Fault Plane Solution - Part 1
- Lecture 3 - Fault Plane Solution - Part 2
- Lecture 4 - Fault Plane Solution (Stereonet)
- Lecture 5 - Seismic gaps
- Lecture 6 - Analogy of active and inactive fault
- Lecture 7 - Seismic waves and their use in locating EQ epicentre
- Lecture 8 - EQ Intensity, magnitude and wave attenuation
- Lecture 9 - Seismic source characterization and seismic activity
- Lecture 10 - Earthquake catalogue preparation and seismic activity parameters
- Lecture 11 - Ground motion simulation models and GMPEs
- Lecture 12 - Deterministic seismic hazard analysis (DSHA)
- Lecture 13 - Probabilistic seismic hazard analysis (PSHA)
- Lecture 14 - One Dimensional equation of motion: P wave
- Lecture 15 - One Dimensional equation of motion: S wave
- Lecture 16 - Solution to 1D equation of motion: S wave
- Lecture 17 - Local Site Effect (LSE) and Ground Response Analysis - Part I
- Lecture 18 - Local Site Effect (LSE) and Ground Response Analysis - Part II
- Lecture 19 - Ground Response Analysis - Part III
- Lecture 20 - Ground Response Analysis - Part IV
- Lecture 21 - State Criteria for Liquefaction - Part 1
- Lecture 22 - State Criteria for Liquefaction - Part 2
- Lecture 23 - Initiation of Liquefaction
- Lecture 24 - Assessment of Liquefaction Potential
- Lecture 25 - Paleoliquefaction
- Lecture 26 - Seismic Microzonation
- Lecture 27 - Landslides: Introduction and classification
- Lecture 28 - Seismic vulnerability and risk - Part 1
- Lecture 29 - Seismic vulnerability and risk - Part 2

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Lecture 30 - Seismic vulnerability and risk - Part 3