

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

NPTEL Video Course - Ocean Engineering - NOC:Computer Methods Of Structural Analysis of Offshore Structures

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to structural analysis - Part 1  
Lecture 2 - Introduction to structural analysis - Part 2  
Lecture 3 - System of linear equations - Part 1  
Lecture 4 - System of linear equations - Part 2  
Lecture 5 - Matrices - Part 1  
Lecture 6 - Matrices - Part 2  
Lecture 7 - Beam Element 1 - Part 1  
Lecture 8 - Beam Element 1 - Part 2  
Lecture 9 - Beam Element 2 - Part 1  
Lecture 10 - Beam Element 2 - Part 2  
Lecture 11 - Stiffness matrix of beam element - Part 1  
Lecture 12 - Stiffness matrix of beam element - Part 2  
Lecture 13 - Stiffness method of analysis of planar orthogonal structures - Part 1  
Lecture 14 - Stiffness method of analysis of planar orthogonal structures - Part 2  
Lecture 15 - Example on continuous beam - Part 1  
Lecture 16 - Example on continuous beam - Part 2  
Lecture 17 - Example - II - Part 1  
Lecture 18 - Example - II - Part 2  
Lecture 19 - Example - II (Continued...)  
Lecture 20 - Example - III - Part 1  
Lecture 21 - Example - III - Part 2  
Lecture 22 - Planar non-orthogonal frame - Part 1  
Lecture 23 - Planar non-orthogonal frame - Part 2  
Lecture 24 - Non-orthogonal structures - II  
Lecture 25 - Planar non-orthogonal frame  
Lecture 26 - Non-orthogonal structures - III - Part 1  
Lecture 27 - Non-orthogonal structures - III - Part 2  
Lecture 28 - Example problem  
Lecture 29 - Example problem

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- Lecture 30 - Planar non-orthogonal frame using computer code - Part 1
- Lecture 31 - Planar non-orthogonal frame using computer code - Part 2
- Lecture 32 - Planar non-orthogonal frame - Example 3 - Part 1
- Lecture 33 - Planar non-orthogonal frame - Example 3 - Part 2
- Lecture 34 - Planar truss system
- Lecture 35 - Planar truss system examples - Part 1
- Lecture 36 - Planar truss system examples - Part 2
- Lecture 37 - 3D structures - analysis by stiffness method - Part 1
- Lecture 38 - 3D structures - analysis by stiffness method - Part 2
- Lecture 39 - 3D structures - transformation matrix - Part 1
- Lecture 40 - 3D structures - transformation matrix - Part 2
- Lecture 41 - Y-Z-X transformation for 3d analysis
- Lecture 42 - Z-Y-X transformation for 3d analysis - Part 1
- Lecture 43 - Z-Y-X transformation for 3d analysis - Part 2
- Lecture 44 - Analysis of space frames - Example 1 - Part 1
- Lecture 45 - Analysis of space frames - Example 1 - Part 2
- Lecture 46 - Analysis of space frames - Example 1 - Part 3
- Lecture 47 - Analysis of space frame structures
- Lecture 48 - 3d analysis of space frames - Example 1 - Part 1
- Lecture 49 - 3d analysis of space frames - Example 1 - Part 2
- Lecture 50 - 3d analysis - Example 2 - Part 1
- Lecture 51 - 3d analysis - Example 2 - Part 2
- Lecture 52 - 3d truss analysis
- Lecture 53 - Special elements
- Lecture 54 - Non-prismatic members - Part 1
- Lecture 55 - Non-prismatic members - Part 2
- Lecture 56 - Offshore structures - 1 - Part 1
- Lecture 57 - Offshore structures - 1 - Part 2
- Lecture 58 - Offshore structures - 2 - Part 1
- Lecture 59 - Offshore structures - 2 - Part 2
- Lecture 60 - Offshore structures - 3 - Part 1
- Lecture 61 - Offshore structures - 3 - Part 2
- Lecture 62 - Offshore compliant structures - 1 - Part 1
- Lecture 63 - Offshore compliant structures - 1 - Part 2
- Lecture 64 - Offshore compliant structures - 2 - Part 1
- Lecture 65 - Offshore compliant structures - 2 - Part 2
- Lecture 66 - New generation platforms - Part 1
- Lecture 67 - New generation platforms - Part 2
- Lecture 68 - Environmental loads - 1 - Part 1

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- Lecture 69 - Environmental loads - 1 - Part 2
- Lecture 70 - Wave spectra - Part 1
- Lecture 71 - Wave spectra - Part 2
- Lecture 72 - Wind loads - Part 1
- Lecture 73 - Wind loads - Part 2
- Lecture 74 - Wind loads - 2 - Part 1
- Lecture 75 - Wind loads - 2 - Part 2
- Lecture 76 - Ice load and Earthquake load - Part 1
- Lecture 77 - Ice load and Earthquake load - Part 2
- Lecture 78 - Dynamic analysis - 1 - Part 1
- Lecture 79 - Dynamic analysis - 1 - Part 2
- Lecture 80 - Dynamic analysis - 2 - Part 1
- Lecture 81 - Dynamic analysis - 2 - Part 2
- Lecture 82 - Dynamic analysis - 3 - Part 1
- Lecture 83 - Dynamic analysis - 3 - Part 2
- Lecture 84 - Computer methods of dynamic analysis - Part 1
- Lecture 85 - Computer methods of dynamic analysis - Part 2
- Lecture 86 - Damping estimate - Part 1
- Lecture 87 - Damping estimate - Part 2
- Lecture 88 - Damping estimate - 2 - Part 1
- Lecture 89 - Damping estimate - 2 - Part 2
- Lecture 90 - Newmark's method - Part 1
- Lecture 91 - Newmark's method - Part 2
- Lecture 92 - Articulated towers - Part 1
- Lecture 93 - Articulated towers - Part 2
- Lecture 94 - Tension leg platforms - Part 1
- Lecture 95 - Tension leg platforms - Part 2
- Lecture 96 - Tension leg platforms - 2 - Part 1
- Lecture 97 - Tension leg platforms - 2 - Part 2
- Lecture 98 - New generation offshore structures - Part 1
- Lecture 99 - New generation offshore structures - Part 2
- Lecture 100 - Triceratops-2 - Part 1
- Lecture 101 - Triceratops-2 - Part 2
- Lecture 102 - Random process - 1 - Part 1
- Lecture 103 - Random process - 1 - Part 2
- Lecture 104 - Random process - 2 - Part 1
- Lecture 105 - Random process - 2 - Part 2
- Lecture 106 - Response spectrum - Part 1
- Lecture 107 - Response spectrum - Part 2

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- Lecture 108 - Return period and Stochastic process - Part 1
- Lecture 109 - Return period and Stochastic process - Part 2
- Lecture 110 - Stochastic modelling - Part 1
- Lecture 111 - Stochastic modelling - Part 2
- Lecture 112 - Fatigue damage - 1 - Part 1
- Lecture 113 - Fatigue damage - 1 - Part 2
- Lecture 114 - Fatigue damage - 2 - Part 1
- Lecture 115 - Fatigue damage - 2 - Part 2
- Lecture 116 - Fatigue estimate of offshore platform - Part 1
- Lecture 117 - Fatigue estimate of offshore platform - Part 2
- Lecture 118 - Live Session