

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

NPTEL Video Course - Mechanical Engineering - NOC:Engineering Mechanics Statics and Dynamics

Subject Co-ordinator - Prof. Mahesh Panchagnula

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to the course  
Lecture 2 - Newton's laws  
Lecture 3 - Equilibrium  
Lecture 4 - Example 1 - Statics  
Lecture 5 - Example 2 - Rigid Body Systems  
Lecture 6 - Example 3 - Rigid Body Systems  
Lecture 7 - Structural Systems with rigid bodies  
Lecture 8 - Types of 1-D Structural Elements  
Lecture 9 - Axial members  
Lecture 10 - Analysis of the truss system  
Lecture 11 - Stability of Structural systems  
Lecture 12 - Beams - Example 1  
Lecture 13 - Beams - BMD and SFD  
Lecture 14 - Beams - Loading, Shear and Bending Moment Relations  
Lecture 15 - Static Friction  
Lecture 16 - Friction - Solving Problems  
Lecture 17 - Particle Kinematics - 1  
Lecture 18 - Particle Kinematics - 2 (Example)  
Lecture 19 - Particle Kinematics - Curvilinear Coordinates  
Lecture 20 - Rigid Body Kinematics  
Lecture 21 - Rotational Motion (Example 1)  
Lecture 22 - Rotational Motion (Example 2)  
Lecture 23 - Dynamics (Introduction)  
Lecture 24 - Dynamics - Example 1  
Lecture 25 - Dynamics - Example 2  
Lecture 26 - Dynamics - Example 3  
Lecture 27 - Dynamics - Example 4  
Lecture 28 - Center of Percussion - Example  
Lecture 29 - Impulse / Momentum - Example 1

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- Lecture 30 - Impulse / Momentum - Example 2
- Lecture 31 - Impulse / Momentum - Example 3
- Lecture 32 - Impulse / Momentum - Example 4
- Lecture 33 - Work Energy Methods - Example 1
- Lecture 34 - Work Energy Methods - Example 2
- Lecture 35 - Work Energy Methods - Example 3