

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

NPTEL Video Course - Mechanical Engineering - NOC:Nature and Property of Materials

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Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - History and Evolution of Materials
- Lecture 2 - Classification of Materials
- Lecture 3 - Advanced and Exotic Materials
- Lecture 4 - Mechanical Properties of Materials - I
- Lecture 5 - Mechanical Properties of Materials - II
- Lecture 6 - Mechanical Properties of Materials - III
- Lecture 7 - Bonding between atoms
- Lecture 8 - The Role of Crystal Structure - I
- Lecture 9 - The Role of Crystal Structure - II
- Lecture 10 - The Role of Crystal Structure - III
- Lecture 11 - Metals - I (Ferrous alloys)
- Lecture 12 - Metals - II (Non-Ferrous alloys)
- Lecture 13 - Metals - III (Strengthening and Degradation)
- Lecture 14 - Ceramics - I
- Lecture 15 - Ceramics - II
- Lecture 16 - Polymers
- Lecture 17 - Polymeric Structure
- Lecture 18 - Effects of Glass transition temperature
- Lecture 19 - Polymer Mechanical properties
- Lecture 20 - Composites - I
- Lecture 21 - Composites - II
- Lecture 22 - Composites - III
- Lecture 23 - Smart Materials - I (Introduction)
- Lecture 24 - Smart Materials - II (Piezoelectricity)
- Lecture 25 - Smart Materials - III (Magnetostriction)
- Lecture 26 - Smart Materials - IV (Smart Polymers)
- Lecture 27 - Smart Materials - V (SMA)
- Lecture 28 - Materials Selection in Engineering Design
- Lecture 29 - Numerical

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

- Lecture 30 - Numerical
- Lecture 31 - Numerical
- Lecture 32 - Numerical
- Lecture 33 - Optical Properties
- Lecture 34 - Optical Fiber
- Lecture 35 - Thermal Properties
- Lecture 36 - Numerical
- Lecture 37 - Electric Properties - I
- Lecture 38 - Electric Properties - II
- Lecture 39 - Magnetic Properties
- Lecture 40 - Laboratory demonstration