

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

NPTEL Video Course - Metallurgy and Material Science - NOC:Fundamentals of Material Processing - Part 2

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Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction to Metal Working
- Lecture 2 - Continuum Mechanics
- Lecture 3 - Stress Invariants
- Lecture 4 - Strain Tensors and Mohr circle for strains
- Lecture 5 - Yield Stress Criterion
- Lecture 6 - Effective Stress and Strain
- Lecture 7 - Work Hardening and Flow Behaviour
- Lecture 8 - Effect of Strain Rate
- Lecture 9 - Combined Effect of Strain, Strain Rate and Temperature
- Lecture 10 - Effect of Temperature
- Lecture 11 - Cold, Warm and Hot Working
- Lecture 12 - Mechanics of Metal Working
- Lecture 13 - Wire Drawing
- Lecture 14 - Wire Drawing (Continued...)
- Lecture 15 - Hodographs
- Lecture 16 - Upper-Bound Analysis
- Lecture 17 - Plane Strain Indentation
- Lecture 18 - Strain Calculation Models and Friction
- Lecture 19 - Types of Friction
- Lecture 20 - Effect of Friction in Rolling
- Lecture 21 - Vacuum Technology
- Lecture 22 - Vacuum Technology (Continued...)
- Lecture 23 - Thermal Evaporation
- Lecture 24 - Thermal Evaporation (Continued...)
- Lecture 25 - Thermal Evaporation (Continued...)
- Lecture 26 - Plasma Physics
- Lecture 27 - Plasma Physics (Continued...)
- Lecture 28 - Sputtering
- Lecture 29 - Sputtering (Continued...)

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- Lecture 30 - Sputtering (Continued...)
- Lecture 31 - Chemical Vapor Deposition
- Lecture 32 - Chemical Vapor Deposition (Continued...)
- Lecture 33 - Chemical Vapor Deposition (Continued...)
- Lecture 34 - Chemical Vapor Deposition (Continued...)
- Lecture 35 - Epitaxy, Molecular Beam Epitaxy and Atomic Layer Deposition
- Lecture 36 - Adsorption and Nucleation
- Lecture 37 - Thin Film Growth
- Lecture 38 - Kinetics of Thin Film Growth
- Lecture 39 - Thin Film Morphology- Zone Structure Model
- Lecture 40 - Thin Film Characterization
- Lecture 41 - Thin Film Characterization