

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

NPTEL Video Course - Mechanical Engineering - NOC:Product Design and Manufacturing

Subject Co-ordinator - Dr. Amandeep Singh, Prof. J. Ramkumar

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction to product design and Manufacturing
- Lecture 2 - Introduction to product design and Manufacturing (Continued...)
- Lecture 3 - Fundamentals of Manufacturing towards Product Development
- Lecture 4 - Fundamentals of Manufacturing towards Product Development (Continued...)
- Lecture 5 - Engineering Design Process
- Lecture 6 - Product design morphology
- Lecture 7 - Product characteristics
- Lecture 8 - Elements of Visual Design - Part 1
- Lecture 9 - Elements of Visual Design - Part 2
- Lecture 10 - Elements of Visual Design - Part 3
- Lecture 11 - Translating Customer Needs
- Lecture 12 - Translating Customer Needs
- Lecture 13 - Value Engineering, an introduction
- Lecture 14 - Value Engineering Methodology - Part 1
- Lecture 15 - Value Engineering Methodology - Part 2, FAST diagramming
- Lecture 16 - Value Engineering Methodology - Part 3
- Lecture 17 - Value Engineering, case study
- Lecture 18 - Materials Selection - Part 1
- Lecture 19 - Materials Selection - Part 2
- Lecture 20 - Manufacturing Process Selection - Part 1
- Lecture 21 - Manufacturing Process Selection - Part 2
- Lecture 22 - Product Costing
- Lecture 23 - Design for Manufacturing
- Lecture 24 - Design for Assembly
- Lecture 25 - Design for Maintenance
- Lecture 26 - Design for Environment - Part 1
- Lecture 27 - Design for Environment - Part 2
- Lecture 28 - Quality Control
- Lecture 29 - Quality Assurance

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- Lecture 30 - Patent - Part 1
- Lecture 31 - Patent - Part 2
- Lecture 32 - Creativity techniques - Part 1
- Lecture 33 - Creativity techniques - Part 2
- Lecture 34 - Frugal Innovation
- Lecture 35 - Rapid Prototyping, an introduction
- Lecture 36 - Rapid Prototyping Modelling
- Lecture 37 - Rapid Prototyping Processes - Part 1
- Lecture 38 - Rapid Prototyping Processes - Part 2
- Lecture 39 - Laboratory demonstration; 3D printing - Part 1
- Lecture 40 - Laboratory demonstration; 3D printing - Part 2
- Lecture 41 - Laboratory demonstration; 3D printing - Part 3
- Lecture 42 - Plant Layout Planning - Part 1
- Lecture 43 - Plant Layout Planning - Part 2
- Lecture 44 - Laboratory demonstration; Plant Simulation - Part 1
- Lecture 45 - Laboratory demonstration; Plant Simulation - Part 2
- Lecture 46 - Laboratory demonstration; Plant Simulation - Part 3
- Lecture 47 - Computer Integrated Manufacturing - Part 1
- Lecture 48 - Computer Integrated Manufacturing - Part 2
- Lecture 49 - Reverse Engineering
- Lecture 50 - Managing Competitiveness