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

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NPTEL Video Course - Mechanical Engineering - NOC: Engineering Metrology
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 measurements and metrology
Lecture 2 - Instruments in measurement systems
Lecture 3 - Instruments in measurement systems
Lecture 4 - General concepts and definitions in metrology
Lecture 5 - Standards of measurement
Lecture 6 - Limits, Fits, and Tolerances - Part 1
Lecture 7 - Limits, Fits, and Tolerances - Part 2
Lecture 8 - Limits, Fits, and Tolerances - Part 3
Lecture 9 - Limits, Fits, and Tolerances - Part 4
Lecture 10 - Linear Measurements - Part 1
Lecture 11 - Linear Measurements - Part 2
Lecture 12 - Laboratory demonstration, Vernier Caliper
Lecture 13 - Laboratory demonstration, Dial gauge and vernier, micrometer, surface plate, feeler gauge
Lecture 14 - Angular Measurements - Part 1
Lecture 15 - Angular Measurements - Part 2
Lecture 16 - Laboratory demonstration, Vernier height gauge
Lecture 17 - Laboratory demonstration, Thread gauge, spirit level
Lecture 18 - Laboratory demonstration, Combination set, slip gauges, sine bar
Lecture 19 - Comparators - Part 1
Lecture 20 - Comparators - Part 2
Lecture 21 - Transducers - Part 1
Lecture 22 - Transducers - Part 2
Lecture 23 - Screw thread metrology
Lecture 24 - Gears metrology - Part 1
Lecture 25 - Gears metrology - Part 2
Lecture 26 - Laboratory demonstration, Gear Vernier
Lecture 27 - Surface metrology
Lecture 28 - Temperature measurements
Lecture 29 - Pressure measurements - Part 1
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Lecture 30 - Pressure measurements - Part 2
Lecture 31 - Strain measurements - Part 1
Lecture 32 - Strain measurements - Part 2
Lecture 33 - Optical measurements and Nanometrology - Part 1
Lecture 34 - Optical measurements and Nanometrology - Part 2
Lecture 35 - Optical measurements and Nanometrology - Part 3
Lecture 36 - Statistics in Metrology, an intoduction - Part 1
Lecture 37 - Statistics in Metrology, an intoduction - Part 2
Lecture 38 - Data and scales in measurements
Lecture 39 - Discrete and continuous data
Lecture 40 - Statistics for metrology, fundamental concepts - Part 1
Lecture 41 - Statistics for metrology, fundamental concepts - Part 2
Lecture 42 - Statistics for metrology, fundamental concepts - Part 3
Lecture 43 - Probability distributions for estimating measurement
Lecture 44 - Normal distribution
Lecture 45 - Statistics for proportions
Lecture 46 - Chi square distribution, and Data outlier detection
Lecture 47 - Quality Control, introduction
Lecture 48 - Quality Control, control charts for variables
Lecture 49 - Quality Control, control charts for attributes
Lecture 50 - Quality Control, critical aspects
Lecture 51 - 3D measurements, Coordinate Measuring Machine (CMM)
Lecture 52 - Laboratory demonstration, Coordinate Measuring Machine (CMM))
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