

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

NPTEL Video Course - Multi Disciplinary - NOC:Research Methodology

Subject Co-ordinator - Prof. Soumitro Banerjee

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - What is Science? - Part 1
- Lecture 2 - What is Science? - Part 2
- Lecture 3 - Subjective Thinking Versus Objective Thinking
- Lecture 4 - Idealism Versus Materialism
- Lecture 5 - Causality - Part 1
- Lecture 6 - Causality - Part 2
- Lecture 7 - Logical Reasoning: Inductive Logic
- Lecture 8 - Logical Reasoning: Deductive Logic - Part 1
- Lecture 9 - Logical Reasoning: Deductive Logic - Part 2
- Lecture 10 - Logical Reasoning: Syllogistic Logic - Part 1
- Lecture 11 - Logical Reasoning: Syllogistic Logic - Part 2
- Lecture 12 - Logical Reasoning: Syllogism Logic, Truth and Validity
- Lecture 13 - Historical Perspective: Emergence of Materialism and Idealism - Part 1
- Lecture 14 - Historical Perspective: Emergence of Materialism and Idealism - Part 2
- Lecture 15 - Historical Perspective: Renaissance to the Development of Mechanical Materialism - Part 1
- Lecture 16 - Historical Perspective: Renaissance to the Development of Mechanical Materialism - Part 2
- Lecture 17 - Historical Perspective: The Advent of Empiricism and the Idea of Evolution
- Lecture 18 - Historical Perspective: Science in Ancient India
- Lecture 19 - Historical Perspective: The Advent of Scientific Materialism - Part 1
- Lecture 20 - Historical Perspective: The Advent of Scientific Materialism - Part 2
- Lecture 21 - Historical Perspective: The Rise and Fall of Positivism - Part 1
- Lecture 22 - Historical Perspective: The Rise and Fall of Positivism - Part 2
- Lecture 23 - What Scientists Actually Do - Part 1
- Lecture 24 - What Scientists Actually Do - Part 2
- Lecture 25 - Falsifiability and Reproducibility - Part 1
- Lecture 26 - Falsifiability and Reproducibility - Part 2
- Lecture 27 - Proposing a Hypothesis - Part 1
- Lecture 28 - Proposing a Hypothesis - Part 2
- Lecture 29 - Elements of Scientific Measurement - Part 1

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- Lecture 30 - Elements of Scientific Measurement - Part 2
- Lecture 31 - The Central Limit Theorem and its Applications - Part 1
- Lecture 32 - The Central Limit Theorem and its Applications - Part 2
- Lecture 33 - Error Bars and Confidence Interval - Part 1
- Lecture 34 - Error Bars and Confidence Interval - Part 2
- Lecture 35 - Measurement of a Proportion - Part 1
- Lecture 36 - Measurement of a Proportion - Part 2
- Lecture 37 - Examples of Proportion Measurement
- Lecture 38 - Box and Whisker Plot
- Lecture 39 - Propagation of Errors - Part 1
- Lecture 40 - Propagation of Errors - Part 2
- Lecture 41 - Issues in Hypothesis Testing - Part 1
- Lecture 42 - Issues in Hypothesis Testing - Part 2
- Lecture 43 - Statistical Methods in Hypothesis Testing: Z-Test and T-Test - Part 1
- Lecture 44 - Statistical Methods in Hypothesis Testing: Z-Test and T-Test - Part 2
- Lecture 45 - Hypothesis Testing: The Chi-Square Test - Part 1
- Lecture 46 - Hypothesis Testing: The Chi-Square Test - Part 2
- Lecture 47 - Hypothesis Testing: The Chi-Square Test - Part 3
- Lecture 48 - Hypothesis Testing: The Chi-Square Test - Part 4
- Lecture 49 - Theoretical Research: Functional Relationships from Experimental Data - Part 1
- Lecture 50 - Theoretical Research: Functional Relationships from Experimental Data - Part 2
- Lecture 51 - Theoretical Research: Mathematical Models of Physical Systems
- Lecture 52 - Order of Magnitude Calculations
- Lecture 53 - Theoretical Research: Modeling Using Dimensional Analysis - Part 1
- Lecture 54 - Theoretical Research: Modeling Using Dimensional Analysis - Part 2
- Lecture 55 - An Example of Mathematical Modeling
- Lecture 56 - Importance of Theory-Building in Science
- Lecture 57 - Scientific Writing: Journal Papers - Part 1
- Lecture 58 - Scientific Writing: Journal Papers - Part 2
- Lecture 59 - Scientific Writing: Journal Papers - Part 3
- Lecture 60 - Scientific Writing: Journal Papers - Part 4
- Lecture 61 - Scientific Writing: PhD Thesis
- Lecture 62 - Scientific Writing: Text Stylistics
- Lecture 63 - Presentation in Scientific Conferences - Part 1
- Lecture 64 - Presentation in Scientific Conferences - Part 2
- Lecture 65 - Writing Grant Proposals - Part 1
- Lecture 66 - Writing Grant Proposals - Part 2
- Lecture 67 - Ethical Conduct in Science: Aspects of Scientific Ethics
- Lecture 68 - Ethical Conduct in Science: Research Misconduct

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- Lecture 69 - Ethical Conduct in Science: Ethics in Scientific Publication - Part 1
- Lecture 70 - Ethical Conduct in Science: Ethics in Scientific Publication - Part 2
- Lecture 71 - Ethical Conduct in Science: Cases of Scientific Misconduct - Part 1
- Lecture 72 - Ethical Conduct in Science: Cases of Scientific Misconduct - Part 2