

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

NPTEL Video Course - Multi Disciplinary - NOC:Designing Learner-Centric MOOCs

Subject Co-ordinator - Prof.Sridhar Iyer, Prof.Sahana Murthy, Dr.Jayakrishnan M., Dr.Sameer Sahasrabudhe

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Course Introduction  
Lecture 2 - Perspectives of the Teachers and Learners  
Lecture 3 - Key Takeaways for Online Instruction  
Lecture 4 - Evolution of MOOCs  
Lecture 5 - Known Challenges  
Lecture 6 - Need of LC in MOOCs Post Pandemic  
Lecture 7 - Why LCM?  
Lecture 8 - The LCM Model  
Lecture 9 - What is an LeD?  
Lecture 10 - Chunking a Lectuer into LeD  
Lecture 11 - Introducing Reflection Spot  
Lecture 12 - Making Your Own LeD  
Lecture 13 - Deciding Appropriateness of Various Mediums to Create LeDs  
Lecture 14 - Example of Various Mediums from this course  
Lecture 15 - What is an LbD?  
Lecture 16 - Creating LbDs  
Lecture 17 - Constructive Customized Feedback in LbDs  
Lecture 18 - Giving Feedback for Open Ended Questions  
Lecture 19 - What is an LxT?  
Lecture 20 - Creating LxTs  
Lecture 21 - Creating an Assimilation Quiz  
Lecture 22 - Designing LxTs using LLMs  
Lecture 23 - Licensing and Ethical usage  
Lecture 24 - LeD : 5.1 Need of a Recap Week in a MOOC  
Lecture 25 - Do's and Don'ts - Part 1  
Lecture 26 - Do's and Don'ts - Part 2  
Lecture 27 - LxT 5.2b- A Primer on Licensing Essentials  
Lecture 28 - Recommendations for Effective LbDs  
Lecture 29 - What is an LxI

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

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- Lecture 30 - Creating LxI with Reflection Quiz
- Lecture 31 - LxI- Sharing Experiences
- Lecture 32 - LxI- How to Achieve Learner - Learner Interaction?
- Lecture 33 - LxI- Types of Focus Questions - 1
- Lecture 34 - LxI- Types of Focus Questions - 2
- Lecture 35 - Orchestrating your MOOC
- Lecture 36 - Orchestration Dynamics in LCM
- Lecture 37 - Assessment
- Lecture 38 - How to Elicit Peer-to-Peer Interaction?
- Lecture 39 - Incentivizing Participation in the Forum
- Lecture 40 - Course Design in MOOC
- Lecture 41 - From Regular Course to LCM
- Lecture 42 - LeD 8.3 LCM Lite
- Lecture 43 - Adopting LCM Model: Prof. Mandar Bhanushe

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

NPTEL Video Course - Multi Disciplinary - NOC:Introduction to Learning Analytics

Subject Co-ordinator - Prof. Ramkumar Rajendran

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Introduction to Learning Analytics  
Lecture 2 - LA, EDM and Academic Analytics  
Lecture 3 - Types of Learning Analytics - I  
Lecture 4 - Types of Learning Analytics - II  
Lecture 5 - Data Collection  
Lecture 6 - Data Collection in TELE  
Lecture 7 - Data collection in MOOC  
Lecture 8 - Multichannel Data  
Lecture 9 - Ethics and Data Privacy in LA  
Lecture 10 - Descriptive Analytics  
Lecture 11 - Data Visualization  
Lecture 12 - YouTube Analytics Dashboard  
Lecture 13 - MOOCs Analytics Dashboard  
Lecture 14 - Predictive Analytics  
Lecture 15 - Linear Regression  
Lecture 16 - Weka demo and how to read the results  
Lecture 17 - MOOC data for Course Project  
Lecture 18 - Summary of the Course

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

NPTEL Video Course - Multi Disciplinary - NOC:Designing Learner-Centric e-Learning in STEM Disciplines

Subject Co-ordinator - Prof.Sahana Murthy

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Course Preview  
Lecture 2 - What is this course about?  
Lecture 3 - Course Format\_Learner Centric MOOC (LCM)  
Lecture 4 - E-Learning in STEM  
Lecture 5 - Making online Teaching Decisions  
Lecture 6 - Challenges in e-learning  
Lecture 7 - What is Learner-centric Approach?  
Lecture 8 - Promoting Learner Engagement with Content  
Lecture 9 - Why and How to Design Interactive Videos?  
Lecture 10 - What is an LeD?  
Lecture 11 - Learning by Doing (LbD)  
Lecture 12 - Articulation and Reflection  
Lecture 13 - Construct your Own Understanding  
Lecture 14 - Contextualized Learning  
Lecture 15 - Feedback to Learners  
Lecture 16 - Collaboration and Peer Learning  
Lecture 17 - Addressing Diversity  
Lecture 18 - Putting it All Together  
Lecture 19 - Selection and Analysis of Effective Technology  
Lecture 20 - Effective Integration of Technology  
Lecture 21 - Instructional Design in e-learning  
Lecture 22 - ADDIE Process of Instructional Design  
Lecture 23 - Constructive Alignment  
Lecture 24 - Implementing constructive alignment  
Lecture 25 - Multimedia Principle and Contiguity Principle  
Lecture 26 - Modality Principle and Redundancy Principle  
Lecture 27 - Coherence Principle  
Lecture 28 - Segmenting and Personalization Principles  
Lecture 29 - Visual Communication Strategies for E-content

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- Lecture 30 - Forms of Learning
- Lecture 31 - Integrating LC Elements in E-content
- Lecture 32 - E-learning Design Process
- Lecture 33 - Closing

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

NPTEL Video Course - Multi Disciplinary - NOC:Sustainable and Affordable Sanitation Solutions for Small Towns

Subject Co-ordinator - Prof. N.C Narayanan

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Introduction to the Issue of Sanitation
- Lecture 2 - Overview of Sanitation in the country
- Lecture 3 - Centralised or Decentralised?
- Lecture 4 - Need for Participatory Planning
- Lecture 5 - Context setting for the Alappuzha Project
- Lecture 6 - Environmental Policy
- Lecture 7 - Environmental Impact Assessment 2006 and National Urban Sanitation Plan
- Lecture 8 - Environmental Governance - Challenges and Alternatives
- Lecture 9 - Municipal Solid Waste Management
- Lecture 10 - MSWM - Status, Policy, governance structure
- Lecture 11 - Integrated Municipal Solid Waste Management
- Lecture 12 - Plastic Waste Management
- Lecture 13 - Municipal Solid Waste Management in Alappuzha
- Lecture 14 - Liquid Waste Management - an Overview
- Lecture 15 - Introduction to Faecal Sludge Management
- Lecture 16 - Faecal Sludge Management for Alappuzha town
- Lecture 17 - Introduction to liquid waste treatment technologies
- Lecture 18 - Decentralized Waste Water Treatment system - An Introduction
- Lecture 19 - Case studies - Decentralised waste water treatment
- Lecture 20 - Decentralized waste water treatment systems plan for Alappuzha
- Lecture 21 - History of Sanitation in Alappuzha
- Lecture 22 - Organic waste management in Alappuzha
- Lecture 23 - Inorganic waste management - Role of Kudumbashree and Haritha Karma Sena
- Lecture 24 - Youth engagement for reclaiming canals
- Lecture 25 - Significance of institution building in reclaiming canals

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

NPTEL Video Course - Multi Disciplinary - NOC:Engineering Statistics

Subject Co-ordinator - Prof. Manjesh Kumar Hanawal

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Introduction to Probability  
Lecture 2 - Consequences of Axioms  
Lecture 3 - Interpretation of Probability  
Lecture 4 - Total Probability law and Baye's Theorem - I  
Lecture 5 - Total Probability law and Baye's Theorem - II  
Lecture 6 - Random variables and Cumulative Density Function  
Lecture 7 - Discrete and Continuous random variables - I  
Lecture 8 - Discrete and Continuous random variables - II  
Lecture 9 - Expectation and Variance  
Lecture 10 - Function of Random variables  
Lecture 11 - Generating RVs, Joint Distribution of RVs  
Lecture 12 - Joint Distribution of RVs and Marginal densities  
Lecture 13 - Covariance of Random variables  
Lecture 14 - Moment Generating Functions  
Lecture 15 - Conditional PMF and PDF  
Lecture 16 - Law of Large numbers, Central Limit Theorem  
Lecture 17 - Application of Central Limit Theorem - I  
Lecture 18 - Application of Central Limit Theorem - II  
Lecture 19 - Gamma and Chi-square distributions  
Lecture 20 - Beta distributions and Exponential families  
Lecture 21 - Random Sampling, Sample mean and Sample variance  
Lecture 22 - Sampling from Gaussian distribution and t-distribution  
Lecture 23 - Student's t- distribution  
Lecture 24 - F-distribution and its properties  
Lecture 25 - Convergence of Random variables and Consistency  
Lecture 26 - Order statistics, Median and Percentiles  
Lecture 27 - Generating random sample-Direct method  
Lecture 28 - Generating random sample-Indirect method  
Lecture 29 - Introduction to python

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- Lecture 30 - Python- Loops and Numpy library
- Lecture 31 - Sufficiency Principles and Sufficient Statistics
- Lecture 32 - Sufficient Statistics and Characterization of Sufficient Statistics
- Lecture 33 - Characterization of Sufficient Statistics and Factorization Theorem
- Lecture 34 - Example of Factorization Theorem, Minimal Sufficient Statistics
- Lecture 35 - Minimal sufficient statistics
- Lecture 36 - Test for minimal sufficient statistics with examples, Ancillary Statistics
- Lecture 37 - Likelihood Functions, Maximum Likelihood Estimator
- Lecture 38 - Method of moments, Baye's Estimator
- Lecture 39 - Evaluating Estimator, Cramer Rao Bound, Fisher Information
- Lecture 40 - Evaluating Estimator, Cramer Rao Bound, Fisher Information (Continued...)
- Lecture 41 - Hypothesis Testing, Likelihood Ratio Test
- Lecture 42 - Hypothesis Testing, Bayes Test
- Lecture 43 - Type I and II errors, Power Functions
- Lecture 44 - Type I and II errors, Power Functions (Continued...)
- Lecture 45 - Calculations of Power Functions
- Lecture 46 - Unbiased Test, Uniformly Most Powerful Test, Neyman- Pearson Lemma, Interval Estimation
- Lecture 47 - Interval Estimation
- Lecture 48 - Interval Estimation (Continued...)
- Lecture 49 - Construction of Confidence Intervals from tests
- Lecture 50 - Python- numpy and pandas functions II
- Lecture 51 - Tutorial of tests and confidence intervals
- Lecture 52 - Tutorial of tests and confidence intervals (Continued...)
- Lecture 53 - p-value, p-test of significance of a statistical test
- Lecture 54 - t-test and F-test, ANOVA
- Lecture 55 - Non-parametric test, Goodness of fit, Chi-squared test
- Lecture 56 - Distribution of Chi-squared test statistics
- Lecture 57 - Kolmogorov-Smirnov test
- Lecture 58 - Lilliefors's test and Exploratory Data Analysis, Q-Q Plot and P-P Plot
- Lecture 59 - Generating random samples using Python, Hypothesis Testing using Python
- Lecture 60 - Generating random samples using Python, Hypothesis Testing using Python (Continued...)



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

NPTEL Video Course - Multi Disciplinary - NOC: Intelligent Feedback and Control

Subject Co-ordinator - Prof. Leena Vachhani

Co-ordinating Institute - IIT - Bombay

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

Lecture 1 - Understanding PID Control  
Lecture 2 - Process Model: Experimental Methods  
Lecture 3 - Model Reduction  
Lecture 4 - Disturbance Models and PID  
Lecture 5 - PID Tuning Methods  
Lecture 6 - PID Tuning Methods (Continued...)  
Lecture 7 - Selection of PID Controller  
Lecture 8 - Designing Controllers in a Jugaad Way  
Lecture 9 - To explain why jugaad works....  
Lecture 10 - Feedforward Design  
Lecture 11 - State-space methods - Feedforward Control  
Lecture 12 - Internal Model Control (IMC)  
Lecture 13 - Overview of Control Techniques  
Lecture 14 - Multivariable Control  
Lecture 15 - Multivariable Control (Continued...)  
Lecture 16 - Decoupler Design  
Lecture 17 - Feedback Decouplers and Centralized Controllers  
Lecture 18 - Large Scale MIMO Systems  
Lecture 19 - Understanding irreducible transfer functions  
Lecture 20 - Data Driven PID Control  
Lecture 21 - Data Driven PID Control (Continued...)  
Lecture 22 - Control and Learning  
Lecture 23 - Control using Reinforcement Learning (RL)  
Lecture 24 - Reinforcement learning based control for inverted pendulum  
Lecture 25 - Policy Gradient based Reinforcement Learning  
Lecture 26 - Using MATLAB for Reinforcement Learning  
Lecture 27 - Course Summary

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

NPTEL Video Course - Multi Disciplinary - NOC:Introduction to Evolutionary Dynamics

Subject Co-ordinator - Prof. Supreet Saini

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Story of proposal of the theory of natural selection
- Lecture 2 - Natural Selection; Patrick Matthew. History of life on earth
- Lecture 3 - Where did life come from ?
- Lecture 4 - Elements of theory of natural selection
- Lecture 5 - Limitations of Darwins proposal of theory of natural selection
- Lecture 6 - Natural selection in action in ecology
- Lecture 7 - Central Dogma of Molecular Biology
- Lecture 8 - Gene expression in biology
- Lecture 9 - Numbers in E. coli
- Lecture 10 - Growth and evolution in microbial populations
- Lecture 11 - Mutations and errors in DNA replication
- Lecture 12 - How does E. coli divide ?
- Lecture 13 - How does evolution take place in sexually reproducing organisms ?
- Lecture 14 - Growth in batch culture
- Lecture 15 - How to define fitness in a batch culture ?
- Lecture 16 - Model for growth in exponential growth
- Lecture 17 - Logistic model for growth
- Lecture 18 - Growth in a chemostat
- Lecture 19 - Modeling genotype competition in a chemostat
- Lecture 20 - Mutations and their selection coefficients
- Lecture 21 - Distribution of fitness effects (DFE)
- Lecture 22 - Sequence Space and Fitness Landscape
- Lecture 23 - Epistasis and structure of landscape
- Lecture 24 - Epistasis and structure of landscape
- Lecture 25 - Landscape of antibiotic resistance
- Lecture 26 - IPsec and Virtual Private Networks (VPNs) for Network-Layer Security - Part 1
- Lecture 27 - IPsec and Virtual Private Networks (VPNs) for Network-Layer Security - Part 2
- Lecture 28 - IPsec and Virtual Private Networks (VPNs) for Network-Layer Security - Part 3
- Lecture 29 - Securing Wireless LANs - Part 1

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- Lecture 30 - Securing Wireless LANs - Part 2
- Lecture 31 - Marbles in a jar continued
- Lecture 32 - Moran Process
- Lecture 33 - Transition probability in Moran process
- Lecture 34 - Fixation probability
- Lecture 35 - Fixation probability of a neutral mutation
- Lecture 36 - Fixation probability of a beneficial mutation
- Lecture 37 - Fixation probability of a beneficial mutation (Continued...)
- Lecture 38 - Fixation probability of a beneficial mutation (Continued...)
- Lecture 39 - Time of occurrence of mutations
- Lecture 40 - Graphical representation of evolving populations
- Lecture 41 - Time of fixation of mutations
- Lecture 42 - Estimating  $t_{wait}$
- Lecture 43 - Traveling wave model of microbial evolution
- Lecture 44 - Deriving traveling wave model equations
- Lecture 45 -  $dN/dS$
- Lecture 46 -  $dN/dS$  (Continued...), and how to do an evolution experiment in lab ?
- Lecture 47 - Serial Subculture Experiment
- Lecture 48 - Evolution in Chemostat and Mutation Accumulation Experiment
- Lecture 49 - Megaplate Experiment
- Lecture 50 - Long Term Evolution Experiment (LTEE)
- Lecture 51 - Fitness trajectory with number of generations
- Lecture 52 - Second order selection - mutation rate
- Lecture 53 - Do fitness landscapes have a peak ?
- Lecture 54 - Do fitness landscapes have a peak ? (Continued...)
- Lecture 55 - Metabolic innovation in a lab evolution experiment ?
- Lecture 56 - Selection vs. Drift
- Lecture 57 - Historical Contingency in evolution
- Lecture 58 - Unicellularity to Multicellularity
- Lecture 59 - Adaptive diversification in microbial populations
- Lecture 60 - Synonymous mutations have fitness effects. Mutation Accumulation Experiments

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

NPTEL Video Course - Multi Disciplinary - NOC:Similitude and Approximations in Engineering

Subject Co-ordinator - Vijay Gupta

Co-ordinating Institute - IIT - Delhi

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

Lecture 1  
Lecture 2  
Lecture 3  
Lecture 4  
Lecture 5  
Lecture 6  
Lecture 7  
Lecture 8  
Lecture 9  
Lecture 10  
Lecture 11  
Lecture 12  
Lecture 13  
Lecture 14  
Lecture 15  
Lecture 16  
Lecture 17  
Lecture 18  
Lecture 19  
Lecture 20  
Lecture 21  
Lecture 22  
Lecture 23  
Lecture 24  
Lecture 25  
Lecture 26  
Lecture 27

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

NPTEL Video Course - Multi Disciplinary - NOC:Fundamental of Fluid Mechanics for Chemical and Biomedical Engi

Subject Co-ordinator - Unknown

Co-ordinating Institute - IIT - Guwahati

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

Lecture 1 - Introduction  
Lecture 2 - Fluid Mechanics and Chemical Engineering  
Lecture 3 - Biomedical Applications of Fluid Mechanics  
Lecture 4 - Vectors: A review  
Lecture 5 - Introductory Concepts - 1  
Lecture 6 - Introductory Concepts - 2  
Lecture 7 - Flow Visualisation  
Lecture 8 - Dimensional Analysis - Pi Theorem  
Lecture 9 - Dimensional Analysis- Ipsen Method  
Lecture 10 - Similitude  
Lecture 11 - Pressure Distribution in a Static Fluid  
Lecture 12 - Force of Submerged Surfaces  
Lecture 13 - Buoyancy  
Lecture 14 - Surface Tension  
Lecture 15 - Reynolds Transport Theorem  
Lecture 16 - Mass Conservation  
Lecture 17 - Momentum Conservation - I  
Lecture 18 - Momentum Conservation - II  
Lecture 19 - Energy Conservation  
Lecture 20 - Fluid Translation  
Lecture 21 - Fluid Rotation and Deformation  
Lecture 22 - Mass Conservation: Derivation  
Lecture 23 - Mass Conservation: Cylindrical Coordinates  
Lecture 24 - Navier Stokes Equations: Derivation  
Lecture 25 - Flow Between Two Parallel Plates  
Lecture 26 - Flow in a Falling Liquid Film  
Lecture 27 - Fully-developed flow in a circular channel  
Lecture 28 - Flow between two concentric cylinders  
Lecture 29 - Lubrication Approximation

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- Lecture 30 - Creeping Flows
- Lecture 31 - Equation of Motion in Streamline Coordinates
- Lecture 32 - Irrotational Flow
- Lecture 33 - Bernoulli's Equation and Flow Measurement
- Lecture 34 - Boundary Layers
- Lecture 35 - Momentum Integral Equation
- Lecture 36 - Flow Separation and Drag
- Lecture 37 - Introduction to Turbulence
- Lecture 38 - Turbulent Flow in a Pipe
- Lecture 39 - Turbulent Boundary Layers
- Lecture 40 - Flow in Pipes: Major Losses
- Lecture 41 - Flow in Pipes: Minor Losses
- Lecture 42 - Flow in Pipes: Types of Problems
- Lecture 43 - Cavitation and NPSH

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

NPTEL Video Course - Multi Disciplinary - NOC:Sustainable Power Generation Systems

Subject Co-ordinator - Dr. Pankaj Kalita

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Introductory lecturer
- Lecture 2 - Fundamentals of solar thermal collector
- Lecture 3 - Low temperature solar thermal power plant
- Lecture 4 - Medium and high temperature solar thermal power plant
- Lecture 5 - Thermal analysis of solar thermal power plant
- Lecture 6 - Fundamentals and concept of solar PV power plant
- Lecture 7 - Offgrid solar photovoltaic systems
- Lecture 8 - Offgrid solar photovoltaic systems design
- Lecture 9 - Grid connected solar photovoltaic systems
- Lecture 10 - Performance of grid connected solar photovoltaic systems
- Lecture 11 - Introduction to wind power generation
- Lecture 12 - Wind data analysis
- Lecture 13 - Performance parameters and blade geometry
- Lecture 14 - Betz limit and optimum tip speed ratio
- Lecture 15 - Design of wind farm
- Lecture 16 - Fundamentals and working principle
- Lecture 17 - Analysis of small hydro power generation
- Lecture 18 - Introduction to biomass power generation
- Lecture 19 - Biochemical conversion for electricity generation
- Lecture 20 - Thermochemical conversion of solid fuels and gasification system
- Lecture 21 - Hydrogen energy
- Lecture 22 - Fuel cells technologies - Part I
- Lecture 23 - Fuel cells technologies - Part II
- Lecture 24 - Hydrogen energy tutorial
- Lecture 25 - Fundamentals and methods of geothermal energy harvesting
- Lecture 26 - Analysis of geothermal plant and resources
- Lecture 27 - Fundamentals and working of ocean thermal energy conversion systems
- Lecture 28 - Analysis of close rankine cycle OTEC system
- Lecture 29 - Fundamentals and working of tidal energy conversion systems

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- Lecture 30 - Fundamentals and working of wave energy conversion systems
- Lecture 31 - Overview and analysis of thermal energy storage
- Lecture 32 - Fundamentals and analysis of mechanical energy storage system
- Lecture 33 - Fundamentals and analysis of electro chemical energy storage system
- Lecture 34 - Summary and numerical exercise
- Lecture 35 - Fundamentals and methodology of evaluation of energy economics
- Lecture 36 - Case study involving energy economics of biomass power generation system and LCA
- Lecture 37 - Course Summary



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

NPTEL Video Course - Multi Disciplinary - NOC:Foundation Certificate in Palliative Care

Subject Co-ordinator - Prof. Geeta Joshi, Prof. Piyush Gupta

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Course Intro  
Lecture 2 - Discussion on Course  
Lecture 3 - Faculty Intro: Dr. Geeta Joshi and Dr. Piyush Gupta  
Lecture 4 - Faculty Intro: Dr. Abhijit Dam  
Lecture 5 - Principles of Palliative Care  
Lecture 6 - Integrating Science  
Lecture 7 - Growth of Palliative Care  
Lecture 8 - Holistic Care  
Lecture 9 - Palliative Care Concepts - Interview  
Lecture 10 - National Scenario of Palliative Care  
Lecture 11 - National Scenario  
Lecture 12 - WHO Perspective  
Lecture 13 - Allopathy  
Lecture 14 - Ayush Ministry  
Lecture 15 - Ayurveda  
Lecture 16 - Ayur Siddha Nature Yoga  
Lecture 17 - Naturopathy  
Lecture 18 - NHAM  
Lecture 19 - Ayush Modules  
Lecture 20 - Unani  
Lecture 21 - Homeopathy  
Lecture 22 - PC Delivery  
Lecture 23 - PC Delivery  
Lecture 24 - Practicing PC  
Lecture 25 - Home Based PC  
Lecture 26 - Home Care  
Lecture 27 - Home Nursing  
Lecture 28 - Hospice  
Lecture 29 - Caregiver

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Lecture 30 - Caregiver  
Lecture 31 - Integrative PC  
Lecture 32 - AYUSH in PC  
Lecture 33 - Siddha in PC  
Lecture 34 - Siddha  
Lecture 35 - Siddha  
Lecture 36 - Intro Yoga  
Lecture 37 - Yoga  
Lecture 38 - Yoga and Stress  
Lecture 39 - Introduction Pain  
Lecture 40 - Classification Pain  
Lecture 41 - Pain Assessment  
Lecture 42 - Total Pain  
Lecture 43 - Hospice Total Pain  
Lecture 44 - WHO 3 Step Ladder  
Lecture 45 - Pain Management  
Lecture 46 - Cancer Pain  
Lecture 47 - Pain Assessment  
Lecture 48 - Symptom Assessment  
Lecture 49 - Holistic Symptom Management  
Lecture 50 - Constipation  
Lecture 51 - Delirium  
Lecture 52 - Dyspnea  
Lecture 53 - Hygiene Bedsores  
Lecture 54 - Pressure Sore  
Lecture 55 - Secretions  
Lecture 56 - Fungating  
Lecture 57 - Fungating Wound  
Lecture 58 - Fungating pdf  
Lecture 59 - Oral NGT Catheter  
Lecture 60 - Oral NGT Cathe pdf  
Lecture 61 - Nutrition  
Lecture 62 - Communication  
Lecture 63 - Communications  
Lecture 64 - Communication in PC  
Lecture 65 - Body Language  
Lecture 66 - Communicating Patients  
Lecture 67 - Good and Bad Communication  
Lecture 68 - Good and Bad Communication

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Lecture 69 - Communication Bridging Gap  
Lecture 70 - Overview of Psychological Reactions  
Lecture 71 - Psychological Reactions  
Lecture 72 - Psychological Aspects  
Lecture 73 - Communicating with Patient  
Lecture 74 - Breaking Bad News  
Lecture 75 - Distress and Denial  
Lecture 76 - BBN Collusion Denial  
Lecture 77 - Emotional Reactions Breaking Denial  
Lecture 78 - Communication Interview  
Lecture 79 - Psychological Aspects  
Lecture 80 - Anxiety Depression Distress  
Lecture 81 - Counsellor in PC  
Lecture 82 - Caregiver Burnout Yoga  
Lecture 83 - PC in Elderly  
Lecture 84 - Spirituality  
Lecture 85 - Spirituality and Religion  
Lecture 86 - Laws of Karma  
Lecture 87 - Last Days of Life  
Lecture 88 - Care of Dying and Bereavement  
Lecture 89 - Quality of Death  
Lecture 90 - Death  
Lecture 91 - Grief and Bereavement  
Lecture 92 - Ethics in PC  
Lecture 93 - Volunteering  
Lecture 94 - Volunteers  
Lecture 95 - Volunteers  
Lecture 96 - Community  
Lecture 97 - Community Based PC  
Lecture 98 - Community Based PC  
Lecture 99 - Network Neighborhood  
Lecture 100 - Nurse in Home Care  
Lecture 101 - Care of Dying  
Lecture 102 - Safety Precaution  
Lecture 103 - Self Care  
Lecture 104 - Respite Care  
Lecture 105 - IT in PC  
Lecture 106 - COC  
Lecture 107 - Sandhi

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Lecture 108 - Cancer Aid Society  
Lecture 109 - Alpha  
Lecture 110 - PC Services in Punjab

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

NPTEL Video Course - Multi Disciplinary - NOC:Multi-Criteria Decision Making and Applications

Subject Co-ordinator - Prof. Raghu Nandan Sengupta

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Example 01, 02, 03  
Lecture 2 - Example 03, 04, 05, 06  
Lecture 3 - Example 04, 05, 06 (Continued...)  
Lecture 4 - Example 06 (Continued...), Example 07  
Lecture 5 - Example 06 (Continued...), Example 07  
Lecture 6 - MCDM: Definitions, Theory of Choice, MCDM Axioma, Condorcet Paradox  
Lecture 7 - Theory of Choice, MCDM Axioms, Condorcet Paradox  
Lecture 8 - MCDM Axioms, Condorcet Paradox, Utility Theory  
Lecture 9 - Utility Theory, Expected value of Utility Function, Lotteries, Rational Choice, Properties of Utility Function  
Lecture 10 - Rational Choice, Properties of Utility Function, Risk Aversion, Neutrality, Seeking Properties, Expected Value  
Lecture 11 - Utility Theory Examples, Properties of Utility Function, Risk Aversion, Neutrality, Seeking Properties, Expected Value  
Lecture 12 - Properties of Utility Function, Risk Aversion, Neutrality, Seeking Properties, Marginal Utility, Expected Value  
Lecture 13 - Example of Utility Functions, Certainty Equivalent, Geometric Mean Methods, Safety First Principle, Expected Value  
Lecture 14 - Example of Utility Functions, Certainty Equivalent, Geometric Mean Methods, Safety First Principle, Expected Value  
Lecture 15 - Certainty Equivalent, Geometric Mean Methods, Safety First Principle, Stochastic Dominance, Hyperbolic Absolute Risk Aversion Function  
Lecture 16 - Geometric Mean Methods, Safety First Principle, Stochastic Dominance, Hyperbolic Absolute Risk Aversion Function  
Lecture 17 - Safety First Principle, Stochastic Dominance, Hyperbolic Absolute Risk Aversion Function  
Lecture 18 - Safety First Principle, Stochastic Dominance, Hyperbolic Absolute Risk Aversion Function  
Lecture 19 - Stochastic Dominance, Hyperbolic Absolute Risk Aversion Function  
Lecture 20 - Stochastic Dominance, Hyperbolic Absolute Risk Aversion Function  
Lecture 21 - Concept of Pareto Optimality in 2D Space, Effective Versus Inefficient Solutions, Karush Kuhn Tuckers Conditions  
Lecture 22 - Concept of Pareto Optimality in 2D Space, Effective Versus Inefficient Solutions, Karush Kuhn Tuckers Conditions  
Lecture 23 - Pareto Optimality, Property of Dominance, Strong Pareto Optimality, Weak Pareto Optimality, Concave Functions  
Lecture 24 - Concept of Pareto Optimality in 2D Space, Effective Versus Inefficient Solutions, Karush Kuhn Tuckers Conditions  
Lecture 25 - Concept of Pareto Optimality in 2D Space, Effective Versus Inefficient Solutions, Karush Kuhn Tuckers Conditions  
Lecture 26 - Concept of Pareto Optimality in 2D Space, Effective Versus Inefficient Solutions, Karush Kuhn Tuckers Conditions  
Lecture 27 - Concept of Pareto Optimality in 2D Space, Effective Versus Inefficient Solutions, Karush Kuhn Tuckers Conditions  
Lecture 28 - Scales of Measurements: Nominal Scale, Ordinal Scale, Interval Scale, Ratio Scale, Goal Programming  
Lecture 29 - Pareto Optimality, Concept of Pareto Optimality, Goal Programming

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

- Lecture 30 - Pareto Optimality, Pareto Curves, Goal Programming
- Lecture 31 - Goal Programming, Concepts of Pareto Optimality in 2D Space for LP, Concepts of Pareto Optimality in 3D Space for LP
- Lecture 32 - Concepts of Pareto Optimality in 2D Space for LP, Concepts of Pareto Optimality in 3D Space for LP
- Lecture 33 - LP Example of Goal Programming/MCDM, NLP Example of Goal Programming/MCDM
- Lecture 34 - LP Example of Goal Programming/MCDM, NLP Example of Goal Programming/MCDM (Continued...)
- Lecture 35 - LP Example of Goal Programming/MCDM, NLP Example of Goal Programming/MCDM (Continued...)
- Lecture 36 - LP Example of Goal Programming/MCDM, NLP Example of Goal Programming/MCDM (Continued...)
- Lecture 37 - Quadratic Programming, Goal Programming
- Lecture 38 - Multi Attribute Utility Theory, TOPSIS
- Lecture 39 - Multi Attribute Utility Theory, TOPSIS
- Lecture 40 - Technique For Order Preference by Similarity to Ideal Solutions (TOPSIS)
- Lecture 41 - Technique For Order Preference by Similarity to Ideal Solutions (TOPSIS)
- Lecture 42 - Technique For Order Preference by Similarity to Ideal Solutions (TOPSIS)
- Lecture 43 - Technique For Order Preference by Similarity to Ideal Solutions (TOPSIS), Elimination and Choice
- Lecture 44 - Elimination and Choice Translating Reality (ELECTRE)
- Lecture 45 - Elimination and Choice Translating Reality (ELECTRE)
- Lecture 46 - Elimination and Choice Translating Reality (ELECTRE)
- Lecture 47 - Elimination and Choice Translating Reality (ELECTRE)
- Lecture 48 - Elimination and Choice Translating Reality (ELECTRE), e-ELECTRE
- Lecture 49 - Elimination and Choice Translating Reality (ELECTRE), e-ELECTRE
- Lecture 50 - Elimination and Choice Translating Reality (ELECTRE), e-ELECTRE, VIKOR
- Lecture 51 - VIKOR (Visekriterijumska Optimizacija I Kompromisno Resenje)
- Lecture 52 - VIKOR (Visekriterijumska Optimizacija I Kompromisno Resenje)
- Lecture 53 - Analytical Hierarchy Process (AHP)
- Lecture 54 - Analytical Hierarchy Process (AHP) (Continued...)
- Lecture 55 - Analytical Hierarchy Process (AHP) (Continued...)
- Lecture 56 - Data Envelopment Analysis (DEA)
- Lecture 57 - Data Envelopment Analysis (DEA)
- Lecture 58 - Decision Tree Analysis
- Lecture 59 - Decision Tree Analysis (Continued...)
- Lecture 60 - Example in Multi Objective Decision Making

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

NPTEL Video Course - Multi Disciplinary - NOC:Basic Certificate in Palliative Care

Subject Co-ordinator - Prof. Geeta Joshi, Prof. Piyush Gupta

Co-ordinating Institute - International Institute Of Distance Learning

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

Lecture 1 - Prelude  
Lecture 2 - Prologue BCPC  
Lecture 3 - Introductory Dialogue - Week 1  
Lecture 4 - Basics of Palliative Care  
Lecture 5 - Community Participation  
Lecture 6 - Communication Skills in Palliative Care - Part I  
Lecture 7 - Communication Skills in Palliative Care - Part II  
Lecture 8 - Introductory Dialogue - Week 2  
Lecture 9 - What is Active Listening ?  
Lecture 10 - Are You Really Listening ?  
Lecture 11 - Active Listening Skills  
Lecture 12 - Communication Skills for Health Professionals  
Lecture 13 - Communication Competency in Health Professional  
Lecture 14 - Talking About Death  
Lecture 15 - Introductory Dialogue - Week 3  
Lecture 16 - Psychological Aspects in PC  
Lecture 17 - What is Psychological Distress ?  
Lecture 18 - Types of Psychological Distress  
Lecture 19 - Kessler Psychological Distress Scale  
Lecture 20 - Generalized Anxiety Disorder (GAD)  
Lecture 21 - Guilt and Regret  
Lecture 22 - Introductory Dialogue - Week 4  
Lecture 23 - Cultural Aspects in Palliative Care  
Lecture 24 - Spirituality (FAQs)  
Lecture 25 - Spiritual Distress  
Lecture 26 - Ways to Lead Spiritual Life !  
Lecture 27 - Introductory Dialogue - Week 5  
Lecture 28 - What is Stress and Burnout  
Lecture 29 - Some Tips to Manage Stress

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

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- Lecture 30 - Burnout in Health Care Professionals
- Lecture 31 - Avoiding Burnout in Health Care Professionals
- Lecture 32 - Volunteers to Prevent Burnout !
- Lecture 33 - Self Care
- Lecture 34 - Introductory Dialogue - Week 6
- Lecture 35 - Ethical Aspects of End of Life
- Lecture 36 - Impact of Bereavement on Family
- Lecture 37 - Kubler-Ross Model
- Lecture 38 - Theoretical Models of Grief and Bereavement
- Lecture 39 - Psychology of Grief and Bereavement
- Lecture 40 - Management of Grief and Bereavement
- Lecture 41 - Introductory Dialogue - Week 7
- Lecture 42 - Metastatic Bone Pain Management
- Lecture 43 - How to Prescribe ENDS ?
- Lecture 44 - Safe Use of ENDS
- Lecture 45 - Neuropathic Pain and Its Management
- Lecture 46 - Introduction to Intervention Pain Management
- Lecture 47 - Introductory Dialogue - Week 8
- Lecture 48 - Gastrointestinal Symptoms
- Lecture 49 - Respiratory Symptoms Management - Part I
- Lecture 50 - Respiratory Symptoms Management - Part II
- Lecture 51 - Delirium and Dementia
- Lecture 52 - Emergencies in Palliative Medicine
- Lecture 53 - Recent Advances in Nausea and Vomiting
- Lecture 54 - Introductory Dialogue - Week 9
- Lecture 55 - Nursing Care Plans: Case Scenario
- Lecture 56 - Bladder and Bowel Care
- Lecture 57 - Stoma Care - Part I
- Lecture 58 - Stoma Care - Part II
- Lecture 59 - Skin Care in Colostomy
- Lecture 60 - Introductory Dialogue - Week 10
- Lecture 61 - Importance of Prognostication
- Lecture 62 - Diagnosing the Dying !
- Lecture 63 - Facing Death: How to Help ?
- Lecture 64 - Subcutaneous Route
- Lecture 65 - Introductory Dialogue - Week 11
- Lecture 66 - National Health Mission (NHM)
- Lecture 67 - Aushman Bharat
- Lecture 68 - Government Schemes for Palliative Care



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- Lecture 69 - NDPS Rules 2015
- Lecture 70 - Delivery Models of Palliative Care
- Lecture 71 - Introductory Dialogue - Week 12
- Lecture 72 - Availability of ENDS and Advocacy
- Lecture 73 - Availability of ENDS and Advocacy
- Lecture 74 - Euthanasia
- Lecture 75 - Advance Directive
- Lecture 76 - History of Opium - Part I
- Lecture 77 - History of Opium - Part II
- Lecture 78 - Panel Discussion

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

NPTEL Video Course - Multi Disciplinary - NOC:Certificate in Integrative Palliative Care - III

Subject Co-ordinator - Prof. Piyush Gupta, Prof. Geeta Joshi, Prof. Yashavant Joshi

Co-ordinating Institute - International Institute of Distance Learning An Initiative of NAPCAIM

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

- Lecture 1 - Prologue CIPC
- Lecture 2 - Introductory Dialogue
- Lecture 3 - Basics of Palliative Care
- Lecture 4 - Integrative Palliative Care
- Lecture 5 - Complementary Medicine
- Lecture 6 - Community Participation in PC
- Lecture 7 - Communication Skills in Palliative Care - Part I
- Lecture 8 - Communication Skills in Palliative Care - Part II
- Lecture 9 - Introductory Dialogue
- Lecture 10 - What is Naturopathy?
- Lecture 11 - Naturopathy Basic Concepts and Principles
- Lecture 12 - Air Therapy
- Lecture 13 - Helio Therapy
- Lecture 14 - Hydro Therapy
- Lecture 15 - Mud Therapy
- Lecture 16 - Fasting Therapy
- Lecture 17 - Massage Therapy
- Lecture 18 - Magnet Therapy
- Lecture 19 - Introduction (The Integrative Role of Yoga in Palliative Care)
- Lecture 20 - Overview of Yoga in Palliative Care, Challenges and Therapeutic Role of Yoga
- Lecture 21 - Concept of Ashtang Yoga for Enhancing QOL
- Lecture 22 - Health and Diseases According to Yoga
- Lecture 23 - Role of Yoga as Preventive and Curative Approach in Palliative Care
- Lecture 24 - Ganesh Asana, Chair Surya Namaskar Practical
- Lecture 25 - Sukshma Asana Practical
- Lecture 26 - Therapeutic Role of Mudra for Mental and Emotional Health
- Lecture 27 - Yoga Interventions for Physical and Mental Health
- Lecture 28 - Role of Pratyahara in Palliative Care
- Lecture 29 - Relaxation Technique of Yoga Nidra for Palliative Care

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

- Lecture 30 - Yoga Intervention for Enhancing Spiritual Health
- Lecture 31 - Understanding Cancer and Yoga Practices for Dealing with Cancer
- Lecture 32 - Introduction (Pranic Healing)
- Lecture 33 - Role of Pranic Healing in Palliative Care
- Lecture 34 - Pranic Healing Five Elements
- Lecture 35 - Chakaras
- Lecture 36 - Twin Heart Meditation
- Lecture 37 - Forgiveness
- Lecture 38 - Gratitude
- Lecture 39 - Introductory Dialogue (Energy Healing)
- Lecture 40 - Remote Energy Healing
- Lecture 41 - Reiki
- Lecture 42 - Reiki: Symbols and Meaning
- Lecture 43 - Reiki and Pranic Healing
- Lecture 44 - Qigong
- Lecture 45 - Tai Chi
- Lecture 46 - Emotional Freedom Technique (EFT)
- Lecture 47 - Introduction (Acupressure and Acupuncture)
- Lecture 48 - Meridians - A System of Pathway !
- Lecture 49 - Acupressure: A Beginner's Guide
- Lecture 50 - Popular Acupressure Points
- Lecture 51 - Acupuncture Miracle Remedy for Everything ?
- Lecture 52 - Acupressure and Acupuncture, What is the Difference ?
- Lecture 53 - Auricular Acupuncture
- Lecture 54 - Introduction (Aroma Therapy)
- Lecture 55 - Introduction to Aroma Therapy
- Lecture 56 - Essential Oils
- Lecture 57 - Clinical Aromatherapy in Palliative Care
- Lecture 58 - Aroma Therapy - Incorporating into Daily Life !
- Lecture 59 - Aroma Therapy - Myths and FAQs
- Lecture 60 - Introduction
- Lecture 61 - Music Therapy
- Lecture 62 - Music Therapy - History and Benefits
- Lecture 63 - Music Therapy (Palliative Care)
- Lecture 64 - Tools and Activities
- Lecture 65 - Interventions and Raga
- Lecture 66 - Introduction
- Lecture 67 - Diet Therapy
- Lecture 68 - Nutrition - Does it Really Matter ?

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

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- Lecture 69 - Eat Natural Food! Boost Your Energy Naturally!
- Lecture 70 - Stop Eating Junk Food!
- Lecture 71 - Role of Nutrition Palliative Care
- Lecture 72 - Dispelling Nutrition Myths! Unveiling the Truth for Better Health
- Lecture 73 - Nutrition At the End of Life!
- Lecture 74 - Introduction (Expressive Art Therapy)
- Lecture 75 - Expressive Art Therapy
- Lecture 76 - Art Therapy
- Lecture 77 - Sand Play Therapy: A Healing Journey
- Lecture 78 - Colour Therapy
- Lecture 79 - Writing Therapy
- Lecture 80 - Introduction
- Lecture 81 - Religiosity, Spirituality and Palliative Medicine
- Lecture 82 - Exploring the Science Behind Spirituality
- Lecture 83 - Loving Yourself
- Lecture 84 - Spiritual Distress
- Lecture 85 - Panel Discussion: Death and Dying
- Lecture 86 - Introduction (First Aid)
- Lecture 87 - Introduction to First Aid
- Lecture 88 - Purpose of First Aid Training
- Lecture 89 - Emergency Procedure
- Lecture 90 - Cardiopulmonary Resuscitation CPR
- Lecture 91 - Making a Splint
- Lecture 92 - Recovery Position
- Lecture 93 - Emergency Scene Management (ESM)

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

NPTEL Video Course - Multi Disciplinary - NOC:Fuzzy Logic and Neural Networks

Subject Co-ordinator - Prof. Dilip Kumar Pratihari

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction to Fuzzy Sets  
Lecture 2 - Introduction to Fuzzy Sets (Continued...)  
Lecture 3 - Introduction to Fuzzy Sets (Continued...)  
Lecture 4 - Introduction to Fuzzy Sets (Continued...)  
Lecture 5 - Introduction to Fuzzy Sets (Continued...)  
Lecture 6 - Introduction to Fuzzy Sets (Continued...)  
Lecture 7 - Applications of Fuzzy Sets  
Lecture 8 - Applications of Fuzzy Sets (Continued...)  
Lecture 9 - Applications of Fuzzy Sets (Continued...)  
Lecture 10 - Applications of Fuzzy Sets (Continued...)  
Lecture 11 - Applications of Fuzzy Sets (Continued...)  
Lecture 12 - Applications of Fuzzy Sets (Continued...)  
Lecture 13 - Applications of Fuzzy Sets (Continued...)  
Lecture 14 - Applications of Fuzzy Sets (Continued...)  
Lecture 15 - Applications of Fuzzy Sets (Continued...)  
Lecture 16 - Applications of Fuzzy Sets (Continued...)  
Lecture 17 - Optimization of Fuzzy Reasoning and Clustering Tool  
Lecture 18 - Optimization of Fuzzy Reasoning and Clustering Tool (Continued...)  
Lecture 19 - Optimization of Fuzzy Reasoning and Clustering Tool (Continued...)  
Lecture 20 - Optimization of Fuzzy Reasoning and Clustering Tool (Continued...)  
Lecture 21 - Some Examples of Neural Networks  
Lecture 22 - Some Examples of Neural Networks (Continued...)  
Lecture 23 - Some Examples of Neural Networks (Continued...)  
Lecture 24 - Some Examples of Neural Networks (Continued...)  
Lecture 25 - Some Examples of Neural Networks (Continued...)  
Lecture 26 - Some Examples of Neural Networks (Continued...)  
Lecture 27 - Some Examples of Neural Networks (Continued...)  
Lecture 28 - Some Examples of Neural Networks (Continued...)  
Lecture 29 - Some Examples of Neural Networks (Continued...)

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

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- Lecture 30 - Some Examples of Neural Networks (Continued...)
- Lecture 31 - Optimal Designs of Neural Networks
- Lecture 32 - Optimal Designs of Neural Networks (Continued...)
- Lecture 33 - Neuro-Fuzzy System
- Lecture 34 - Neuro-Fuzzy System (Continued...)
- Lecture 35 - Neuro-Fuzzy System (Continued...)
- Lecture 36 - Neuro-Fuzzy System (Continued...)
- Lecture 37 - Concepts of Soft Computing and Expert Systems
- Lecture 38 - Concepts of Soft Computing and Expert Systems (Continued...)
- Lecture 39 - A Few Applications
- Lecture 40 - A Few Applications (Continued...)
- Lecture 41 - A Few Applications (Continued...)
- Lecture 42 - A Few Applications (Continued...)

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

NPTEL Video Course - Multi Disciplinary - NOC:Entrepreneurship Essentials

Subject Co-ordinator - Prof. Manoj Kumar Mondal

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Economic Contributions of Entrepreneurs  
Lecture 2 - Definition, Motivation and Types of Entrepreneurship  
Lecture 3 - Vision, Mission and Values  
Lecture 4 - Entrepreneurial Qualities  
Lecture 5 - Two Inspiring Stories  
Lecture 6 - Myths and Realities around Entrepreneurship  
Lecture 7 - Causes of Failure of Startups  
Lecture 8 - Why Startups Fail (Continued...)  
Lecture 9 - Forms of Legal Entities  
Lecture 10 - Factors Driving Competitive Advantages  
Lecture 11 - Marketing for Startups - I  
Lecture 12 - Marketing for Startups - II  
Lecture 13 - Marketing for Startups - III  
Lecture 14 - Marketing Research  
Lecture 15 - Marketing Research (Continued...)  
Lecture 16 - Business Model Canvas  
Lecture 17 - Value Proposition Canvas  
Lecture 18 - Illustration of Business Model Canvas  
Lecture 19 - Features of Winning Business Models  
Lecture 20 - Business Model Innovation  
Lecture 21 - Identifying Opportunities Based on Trend  
Lecture 22 - Circle of Competence and Effectuation  
Lecture 23 - Lean Startup - I  
Lecture 24 - Lean Startup - II  
Lecture 25 - Lean Startup - III  
Lecture 26 - Design and Innovation - I  
Lecture 27 - Design and Innovation - II  
Lecture 28 - Design and Innovation - III  
Lecture 29 - Design and Innovation - IV

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- Lecture 30 - Design and Innovation - V
- Lecture 31 - Introduction to Financial Statements
- Lecture 32 - Introduction to Financial Statements (Continued...)
- Lecture 33 - Introduction to Financial Statements (Continued...)
- Lecture 34 - Introduction to Financial Statements (Continued...)
- Lecture 35 - Introduction to Financial Statements (Continued...)
- Lecture 36 - Introduction to Financial Statements (Continued...)
- Lecture 37 - Introduction to Financial Statements (Continued...)
- Lecture 38 - Depreciation and Amortization and Treatment of Capital Gain or Loss from Sale of Fixed Asset
- Lecture 39 - Cost, Volume, Profit
- Lecture 40 - Cost, Volume, Profit
- Lecture 41 - Founding Team and Early Recruits
- Lecture 42 - Business Plan - I
- Lecture 43 - Business Plan - II
- Lecture 44 - Pitching the Business Plan - I
- Lecture 45 - Pitching the Business Plan - II
- Lecture 46 - Funding New Venture - I
- Lecture 47 - Funding New Venture - II
- Lecture 48 - Funding New Venture - III
- Lecture 49 - Funding New Venture - IV
- Lecture 50 - Funding New Venture - V
- Lecture 51 - Some Dos and Dents
- Lecture 52 - Go-To-Market Strategies - I
- Lecture 53 - Go-To-Market Strategies - II
- Lecture 54 - Capital Budgeting Decisions
- Lecture 55 - Capital Budgeting Decisions (Continued...)
- Lecture 56 - Start up Valuation - I
- Lecture 57 - Start up Valuation - II
- Lecture 58 - Human Resource Management - I
- Lecture 59 - Human Resource Management - II
- Lecture 60 - Growth Strategies



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

NPTEL Video Course - Multi Disciplinary - NOC:Roadmap for Patent Creation

Subject Co-ordinator - Prof. Gouri Gargate

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Roadmap for patent creation - Introduction  
Lecture 2 - Roadmap for patent creation - Property and IP  
Lecture 3 - Roadmap for patent creation - IPR  
Lecture 4 - Roadmap for patent creation - IP and future areas  
Lecture 5 - Roadmap for patent creation - Patent - Introduction  
Lecture 6 - Patent searching and analysis  
Lecture 7 - Patent-Definition  
Lecture 8 - Novelty  
Lecture 9 - Non obviousness  
Lecture 10 - Industrial application  
Lecture 11 - Parts of patent document  
Lecture 12 - Terminologies and codes used in a patent document  
Lecture 13 - How to read a patent ? - I  
Lecture 14 - How to read a patent ? - II  
Lecture 15 - How to read a patent ? - III  
Lecture 16 - Roadmap for patent creation - IP identification tool  
Lecture 17 - Roadmap for patent creation - Patentability tool  
Lecture 18 - Roadmap for patent creation - IP audit framework  
Lecture 19 - Roadmap for patent creation - Public patent databases  
Lecture 20 - Roadmap for patent creation - Capsule version  
Lecture 21 - Types of patent  
Lecture 22 - Patent filing procedure in India  
Lecture 23 - Patent timelines - India and PCT  
Lecture 24 - Inventions not patent in India  
Lecture 25 - Indicators for patentability  
Lecture 26 - Use of patent database for research/project topic identification  
Lecture 27 - Importance of laboratory notebook  
Lecture 28 - In which technical category my invention falls - IPC  
Lecture 29 - Patent - Statutory differences between India, Europe and USA

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- Lecture 30 - Identification of inventor and applicant and their rights
- Lecture 31 - Developing your own IP system
- Lecture 32 - When to publish and when to patent (confidentiality)
- Lecture 33 - Statutory exceptions (anticipation)
- Lecture 34 - Procedure for patent filing (Forms and fees)
- Lecture 35 - Interaction with IP attorney (Initial drafting, FER reply and hearing)
- Lecture 36 - Research/project planning
- Lecture 37 - Post patent filing requirements
- Lecture 38 - Patent commercialization
- Lecture 39 - Capsule version

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

NPTEL Video Course - Multi Disciplinary - NOC:Accreditation and Outcome based Learning

Subject Co-ordinator - Prof. Shyamal Kumar Das Mandal

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction

Lecture 2 - Challenges and Needs of 21st Century Education

Lecture 3 - Accreditation

Lecture 4 - Accreditation (Continued...)

Lecture 5 - Outcome based Learning

Lecture 6 - Important Steps in Outcome based education

Lecture 7 - Introduction to Taxonomies of Learning and Cognitive Domains of Learning

Lecture 8 - Psychomotor Domain and Affective Domain of Learning

Lecture 9 - Instructional Objectives or Outcome

Lecture 10 - Need and Use of Instructional Objectives or Outcome

Lecture 11 - Example of Different Instructional Objectives or Outcome and their Cognitive Level

Lecture 12 - Outcome-based Curriculum Design

Lecture 13 - Outcome-based Curriculum Design (Continued...)

Lecture 14 - Outcome-based Curriculum Design software framework

Lecture 15 - Course outcome, Module outcome and lecture/unit outcome and teaching learning process

Lecture 16 - Mapping of outcome based curriculum with Graduate attribute

Lecture 17 - Introduction to Assessment and Evaluation

Lecture 18 - Formative Assessment and Summative Assessments

Lecture 19 - Test Item analysis

Lecture 20 - Test Item analysis (Continued...)

Lecture 21 - Evaluation Rubrics

Lecture 22 - Mission and Vision, Program Educational Objectives (PEOs), Program Outcome (PO) and their Consis

Lecture 23 - Mapping of course outcome and Program Outcome

Lecture 24 - Attainment of Program outcome and course outcome

Lecture 25 - Calculation of direct attainment

Lecture 26 - Calculation of Indirect Attainment

Lecture 27 - Introduction to Tutoed Video Instruction (TVI)

Lecture 28 - TVI Learning Improvement Data - as reported in literature

Lecture 29 - Use of TVI as ELNET-3L program

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

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- Lecture 30 - Lessons on Good Teaching from ELNET-3L
- Lecture 31 - Evaluation of Teaching Quality
- Lecture 32 - Evaluation of Teaching Quality - A Research Proposal
- Lecture 33 - Evaluation of Teaching Quality - A Research Proposal (Continued...)
- Lecture 34 - Evaluation of Teaching Quality - A Research Proposal (Continued...)
- Lecture 35 - Assessment and Evaluation - to Improve Teaching
- Lecture 36 - Item Analysis - Theory and Practice
- Lecture 37 - Learning Styles and Learning Approaches
- Lecture 38 - Good Teaching Attributes and Characteristics
- Lecture 39 - Teacher Effectiveness Research
- Lecture 40 - Teacher Effectiveness Research (Continued...)
- Lecture 41 - Teaching Learning Process using Outcome based Education

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

NPTEL Video Course - Multi Disciplinary - NOC:Introduction to Environmental Engineering and Science - Fundamentals

Subject Co-ordinator - Prof. Brajesh Kumar Dubey

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Sustainability Concepts - Innovations and Challenges  
Lecture 2 - Sustainability Concepts - Innovations and Challenges  
Lecture 3 - Basics and Sustainability Concepts and Evolution  
Lecture 4 - Engineering for Sustainability  
Lecture 5 - Life Cycle Thinking and Circular Economy  
Lecture 6 - Mass Concentration Units  
Lecture 7 - Partial Pressure Units  
Lecture 8 - Other Types of Units  
Lecture 9 - Units (Continued...), Qualitative and Quantitative Measurements  
Lecture 10 - Quantitative Measurements Basics  
Lecture 11 - Ecology  
Lecture 12 - Energy Flow and Ecological Concepts  
Lecture 13 - Population  
Lecture 14 - Population, Consumption and Biodiversity  
Lecture 15 - Environmental Chemistry  
Lecture 16 - Mass Balance and Reactor Systems  
Lecture 17 - Mass Balance in Continuous Reactor / Continuous Stirred Tank Reactor (CSTR) and Plug Flow Reactor  
Lecture 18 - Plug Flow Reactor and Energy Flow  
Lecture 19 - Energy Balance and Earth Overshoot Day  
Lecture 20 - Mass Transport Processes  
Lecture 21 - Oxygen Demand in Environmental Systems  
Lecture 22 - BOD Examples, Oxygen Levels in Surface Waters, COD  
Lecture 23 - Environmental Health Basics and SDGs  
Lecture 24 - Field Applications  
Lecture 25 - Nutrient Cycle  
Lecture 26 - Environmental Risk  
Lecture 27 - Risk Assessment Steps and EIA Introduction  
Lecture 28 - Environmental Risk Assessments with Concepts of EIA and LCA  
Lecture 29 - Environmental Risk Assessments with Concepts of EIA and LCA (Continued...)

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

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- Lecture 30 - Environmental Risk Assessments with Concepts of EIA and LCA (Continued...)
- Lecture 31 - Water Quantity
- Lecture 32 - Water Availability and Usage
- Lecture 33 - Population Forecasting
- Lecture 34 - Water Quality
- Lecture 35 - Water Quality (Continued...)
- Lecture 36 - Plain Sedimentation
- Lecture 37 - Coagulation
- Lecture 38 - Review of Sedimentation and Rapid Sand Filtration
- Lecture 39 - Disinfection and Water Supply
- Lecture 40 - Water Treatment Plant Visit
- Lecture 41 - Wastewater collection and characterization
- Lecture 42 - Sewerage System and Sewage Characteristics
- Lecture 43 - BOD Concepts and Preliminary Treatment of Wastewater
- Lecture 44 - Wastewater Treatment - I
- Lecture 45 - Activated Sludge Process and Sludge Disposal
- Lecture 46 - Introduction to Solid Waste Management
- Lecture 47 - Introduction to Solid Waste Management (Continued...)
- Lecture 48 - Components of Solid Waste Management
- Lecture 49 - Collection and Treatment
- Lecture 50 - Waste Disposal and Summary
- Lecture 51 - Basics of Air Pollution Issues - Global and Local
- Lecture 52 - Air Pollutants and Air Pollution Index
- Lecture 53 - Global Warming and Climate Change
- Lecture 54 - Air Pollution Models
- Lecture 55 - SDGs, Noise and Soil Pollution
- Lecture 56 - Present Issues and Few Case Studies
- Lecture 57 - Case Study - Solid Waste Management
- Lecture 58 - Case Study - Industrial Pollution and Disasters
- Lecture 59 - Case Study - Global Food Waste Initiatives
- Lecture 60 - Case Study - Global Food Waste and Resource Recovery

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

NPTEL Video Course - Multi Disciplinary - NOC:Biophotonics

Subject Co-ordinator - Prof. Basudev Lahiri

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction to Biophotonics - Part I  
Lecture 2 - Introduction to Biophotonics - Part II  
Lecture 3 - Introduction to Biophotonics - Part III  
Lecture 4 - Nature of Light - Part I (As Wave)  
Lecture 5 - Nature of Light - Part II (As Particle)  
Lecture 6 - Fact of Matter - Part I  
Lecture 7 - Fact of Matter - Part II  
Lecture 8 - Basic of Light-Matter Interaction  
Lecture 9 - Molecular Materials  
Lecture 10 - Introduction to Fluorescence  
Lecture 11 - The Cell  
Lecture 12 - The Central Dogma  
Lecture 13 - Genetic Code  
Lecture 14 - Building Blocks  
Lecture 15 - Remaining Topics  
Lecture 16 - Light-Matter Interactions in Molecules (Basic of Spectroscopy)  
Lecture 17 - Light-Matter Interactions in Molecules (Basic of Spectroscopy) (Continued...)  
Lecture 18 - Interaction of Light with Cells  
Lecture 19 - Interaction of Light with Tissues  
Lecture 20 - Photoprocesses in Biopolymers  
Lecture 21 - Laser Principles and Operation  
Lecture 22 - Types of Lasers  
Lecture 23 - Nonlinear Optical Processes  
Lecture 24 - In Vivo Photoexcitation  
Lecture 25 - Examples and Applications  
Lecture 26 - Introduction  
Lecture 27 - Microscopy Techniques  
Lecture 28 - Near Field Microscopy and Optical Coherence Tomography  
Lecture 29 - Fluorophores and Fluorescence Microscopy Techniques

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

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- Lecture 30 - The Future: AFM-IR
- Lecture 31 - Biosensing Background
- Lecture 32 - Optical Fiber Sensors
- Lecture 33 - Metamaterials
- Lecture 34 - Metamaterials as Biosensors
- Lecture 35 - Biosensing with Optical Nano-antennas
- Lecture 36 - Introduction to Photodynamic Therapy (PDT)
- Lecture 37 - Application of Photodynamic Therapy (PDT)
- Lecture 38 - Light Irradiation for Photodynamic Therapy (PDT)
- Lecture 39 - Real Life Examples of Photodynamic Therapy (PDT)
- Lecture 40 - Future of PDT and Photothermal Therapy (PTT)
- Lecture 41 - Laser Based Tissue Engineering
- Lecture 42 - Laser Tissue Contouring: Dermatological Application
- Lecture 43 - Laser Tissue Welding and Tissue Regeneration
- Lecture 44 - Laser Tissue Contouring: Ophthalmic Application
- Lecture 45 - Laser in Dentistry
- Lecture 46 - Tools for Micromanipulation
- Lecture 47 - The Optical/Laser Tweezer
- Lecture 48 - Design of Optical Tweezers
- Lecture 49 - Optical Scissors
- Lecture 50 - Selected Examples of Application
- Lecture 51 - Introduction to nanotechnology
- Lecture 52 - Processes of Nanotechnology
- Lecture 53 - Nano-Lithography: The Art of Small
- Lecture 54 - Thin Film Deposition
- Lecture 55 - Bionanophotonics Applications
- Lecture 56 - Introduction to Optogenetics
- Lecture 57 - Controlling the Brain with Light
- Lecture 58 - Optical Neuroimaging and Tomography
- Lecture 59 - Functional Near Infrared Spectroscopy (fNIRS) of the Brain
- Lecture 60 - Summary and Revisiting Few topics



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

NPTEL Video Course - Multi Disciplinary - NOC:Vacuum Technology and Process Application

Subject Co-ordinator - Prof. V. Vasudeva Rao

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction to Vacuum, Natural Vacuum
- Lecture 2 - History of Vacuum Technology
- Lecture 3 - Kinetic Theory of Gases, Physical Parameters of Vacuum and Regions of Vacuum
- Lecture 4 - Vacuum Process Applications - I
- Lecture 5 - Vacuum Process Applications - II
- Lecture 6 - Pumping Speed and Throughput Concepts
- Lecture 7 - Rotary Vacuum Pump
- Lecture 8 - Diffusion Pump
- Lecture 9 - Roots Vacuum Pump
- Lecture 10 - Rotary Piston Pump
- Lecture 11 - Liquid Ring Pump
- Lecture 12 - Steam Jet Ejector
- Lecture 13 - Diaphragm Pump
- Lecture 14 - Claw Pump
- Lecture 15 - Screw Pump
- Lecture 16 - Scroll Pump, Sorption Concepts and Pumps
- Lecture 17 - Ion Pumping-Sputter Ion Pump
- Lecture 18 - Turbomolecular Pump
- Lecture 19 - Cryopumps
- Lecture 20 - Selection Criteria of Vacuum Pumps
- Lecture 21 - Primary vs Secondary Gauges, U Tube/McLeod gauges (Primary)
- Lecture 22 - Bourdon/Capacitance Gauges (Mechanical Deflection)
- Lecture 23 - Thermo-couple/Pirani gauges (Thermal Conductivity)
- Lecture 24 - Spinning Rotor/Ionization/Bayard Alpert Gauges
- Lecture 25 - Penning/ Inverted Magnetron gauges, Gauge calibration
- Lecture 26 - Vacuum Materials (Metals, Glasses, Ceramics, Greases and Oils)
- Lecture 27 - Vacuum Components (Flanges, Couplings, Seals, Valves)
- Lecture 28 - Vacuum Chamber Design
- Lecture 29 - Fabrication Techniques for Vacuum Systems

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

- Lecture 30 - Testing of Vacuum Systems for Mechanical Failures, Gas Leaks and Outgassing
- Lecture 31 - Gas Flow at Low Pressures, Conductance and Effective Pumping Speed Concepts
- Lecture 32 - Conductance Calculations in Viscous Flow Region
- Lecture 33 - Molecular Flow
- Lecture 34 - Transition and Choked Flows
- Lecture 35 - Conductance and Pump Down Calculations in Vacuum Systems
- Lecture 36 - Design Aspects of Vacuum Systems for Different Applications - Part I
- Lecture 37 - Design Aspects of Vacuum Systems for Different Applications - Part II
- Lecture 38 - Design of a Vacuum Furnace for Metallurgical Processing
- Lecture 39 - Leak Detection in Vacuum Systems
- Lecture 40 - Magnetic Deflection Leak Detector and Quadrupole Residual Gas Analyzer
- Lecture 41 - Vacuum Processes in Chemical and Pharmaceutical Industries
- Lecture 42 - Vacuum for Food Processing
- Lecture 43 - Vacuum Technology in the Packaging Industry
- Lecture 44 - Vacuum in Wood Industry
- Lecture 45 - Vacuum Systems for Medical and Dental Applications
- Lecture 46 - Vacuum for Desalination of Sea Water and Treatment of Waste Water
- Lecture 47 - Vacuum Technology for Power Sector
- Lecture 48 - Vacuum Technology In Oil and Gas Industries
- Lecture 49 - Vacuum Technology in LNG industry
- Lecture 50 - Vacuum Technology for Cryogenic Applications
- Lecture 51 - Vacuum Technology in High Speed Transportation (Hyperloop and Maglev)
- Lecture 52 - Vacuum technology for Metallurgical applications
- Lecture 53 - Vacuum Technology for Analytical Instruments
- Lecture 54 - Vacuum based coating units for thin film deposition
- Lecture 55 - Vacuum for solar energy (Thermal and PV)
- Lecture 56 - Vacuum Technology for semiconductor chip manufacturing
- Lecture 57 - Vacuum Technology for Display Systems
- Lecture 58 - Vacuum Technology for Nuclear Applications - Part I
- Lecture 59 - Vacuum Technology for Nuclear Applications - Part II
- Lecture 60 - Vacuum technology for Space Applications

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

NPTEL Video Course - Multi Disciplinary - NOC:Basics of Health Promotion and Education Intervention

Subject Co-ordinator - Prof. Sweety Suman Jha, Prof.Chandrashekhar Taklikar, Prof. Madumita Dobe, Prof. Arist

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Brief history of public health  
Lecture 2 - Scope and Evolution of Health Promotion and Education  
Lecture 3 - Ottawa Charter  
Lecture 4 - Principles of health promotion  
Lecture 5 - Settings and audiences for health promotion  
Lecture 6 - Concepts of Health Behavior  
Lecture 7 - Health Risk Behavior Vs Health Promotion Behavior  
Lecture 8 - Concepts of Health Communication - Part I  
Lecture 9 - Concepts of Health Communication - Part II  
Lecture 10 - Health Literacy  
Lecture 11 - Information Education and Communication (IEC)  
Lecture 12 - Behavior Change Communication (BCC) - Part I  
Lecture 13 - Behavior Change Communication (BCC) - Part II  
Lecture 14 - Social and Behavior Change Communication (SBCC) - Part I  
Lecture 15 - Social and Behavior Change Communication (SBCC) - Part II  
Lecture 16 - Need Assessment for Health Promotion  
Lecture 17 - Approaches for Health Promotion and Behavior Change  
Lecture 18 - Models of Individual Health Behavior  
Lecture 19 - Models of Inter-Personal Health Behaviour  
Lecture 20 - Community and Group Models of Health Behavior Change  
Lecture 21 - Planning HPE Intervention - Part I  
Lecture 22 - Planning HPE Intervention - Part II  
Lecture 23 - Implementing HPE Intervention - Part I  
Lecture 24 - Implementing HPE Intervention - Part II  
Lecture 25 - Monitoring HPE Intervention  
Lecture 26 - Principles of Designing Messages  
Lecture 27 - Processes and Approaches of Designing Messages - Part I  
Lecture 28 - Processes and Approaches of Designing Messages - Part II  
Lecture 29 - Overview of Pretesting

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

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- Lecture 30 - Pretesting of Health Promotion and Education Tools
- Lecture 31 - Health Education Methods - Part I
- Lecture 32 - Health Education Methods - Part II
- Lecture 33 - Health Education Material - Part I
- Lecture 34 - Health Education Material - Part II
- Lecture 35 - Technology-based approaches to health behavior change
- Lecture 36 - Evaluation of Theory-based HPE Interventions - Part I
- Lecture 37 - Evaluation of Theory-based HPE Interventions - Part II
- Lecture 38 - Analyzing Health Behavior Change Data
- Lecture 39 - RE-AIM Framework for Health Promotion Program Evaluation
- Lecture 40 - Health Impact Assessment

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

NPTEL Video Course - Multi Disciplinary - NOC:Basics of Mental Health and Clinical Psychiatry

Subject Co-ordinator - Prof. Arijita Banerjee, Prof. Sumit Kumar

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction to Neuroanatomy  
Lecture 2 - Cerebellum  
Lecture 3 - Basal Ganglia  
Lecture 4 - Thalamus and Hypothalamus  
Lecture 5 - Cerebral Cortex  
Lecture 6 - Synapse and Neurotransmitters - 1  
Lecture 7 - Synapse and Neurotransmitters - 2  
Lecture 8 - Limbic System  
Lecture 9 - Physiology of Emotions  
Lecture 10 - Reticular Formation  
Lecture 11 - Electrical activity of brain  
Lecture 12 - Descriptive Psychopathology  
Lecture 13 - Principles of Personality Development  
Lecture 14 - Schizophrenia  
Lecture 15 - Mood Disorders - 1  
Lecture 16 - Mood Disorders - 2  
Lecture 17 - Anxiety Disorders - I  
Lecture 18 - Anxiety Disorders - II  
Lecture 19 - Eating Disorders  
Lecture 20 - Physiology of sleep  
Lecture 21 - Sleep Disorders  
Lecture 22 - Learning and Memory - 1  
Lecture 23 - Learning and Memory - 2  
Lecture 24 - Neurocognitive Disorders - I  
Lecture 25 - Neurocognitive Disorders - II  
Lecture 26 - Substance - I  
Lecture 27 - Substance - II  
Lecture 28 - Physiology of sensations  
Lecture 29 - Psychosomatic Illness

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

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- Lecture 30 - Emergency Psychiatry
- Lecture 31 - Child Psychiatry - I
- Lecture 32 - Child Psychiatry - II
- Lecture 33 - Psychotherapy - I
- Lecture 34 - Psychotherapy - II
- Lecture 35 - Psychological Tests
- Lecture 36 - Anti-psychotic drugs
- Lecture 37 - Antidepressants
- Lecture 38 - Mood Stabilizer
- Lecture 39 - Anti-anxiety drugs
- Lecture 40 - Forensic Psychiatry

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

NPTEL Video Course - Multi Disciplinary - NOC:Introduction to Reliability Engineering

Subject Co-ordinator - Prof. Neeraj Kumar Goyal

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction to Reliability Engineering  
Lecture 2 - Introduction to Reliability Engineering  
Lecture 3 - Introduction to Reliability Engineering  
Lecture 4 - Probability Basics  
Lecture 5 - Probability Basics (Continued...)  
Lecture 6 - Constant Failure Rate Model - I  
Lecture 7 - Constant Failure Rate Model - II  
Lecture 8 - Constant Failure Rate Model - III  
Lecture 9 - Two Parameter Exponential Distribution  
Lecture 10 - Weibull Distribution (2 Parmeter)  
Lecture 11 - Burn-in Screening for Weibull  
Lecture 12 - Weibull Distribution  
Lecture 13 - Normal Distribution  
Lecture 14 - Lognormal Distribution  
Lecture 15 - System Reliability Modelling  
Lecture 16 - System Reliability Modelling (Continued...)  
Lecture 17 - System Reliability Modelling (Continued...)  
Lecture 18 - System Reliability Modelling (Continued...)  
Lecture 19 - System Reliability Modelling (Continued...)  
Lecture 20 - System Reliability Modelling (Continued...)  
Lecture 21 - Markov Analysis  
Lecture 22 - Markov Analysis (Continued...)  
Lecture 23 - Markov Analysis (Continued...)  
Lecture 24 - Markov Analysis (Continued...)  
Lecture 25 - Markov Analysis (Continued...)  
Lecture 26 - Failure Data Analysis: Non-Parametric Approach  
Lecture 27 - Failure Data Analysis: Non-Parametric Approach (Continued...)  
Lecture 28 - Failure Data Analysis: Non-Parametric Approach (Continued...)  
Lecture 29 - Failure Data Analysis: Non-Parametric Approach (Continued...)

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

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- Lecture 30 - Failure Data Analysis (Parametric)
- Lecture 31 - Failure data analysis (Parametric) (Continued...)
- Lecture 32 - Failure data analysis (Parametric) (Continued...)
- Lecture 33 - Goodness of fit
- Lecture 34 - Goodness of Fit (GoF) Tests
- Lecture 35 - Goodness of Fit (GoF) Tests (Continued...)
- Lecture 36 - Maintainability and Availability
- Lecture 37 - Maintainability and Availability (Continued...)
- Lecture 38 - Maintainability and Availability (Continued...)
- Lecture 39 - Maintainability and Availability (Continued...)
- Lecture 40 - Summary of the course Introduction to Reliability Engineering



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

NPTEL Video Course - Multi Disciplinary - NOC:Nanobio Technology Enabled Point-of-Care Devices

Subject Co-ordinator - Prof. Gorachand Dutta

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction  
Lecture 2 - Biosensors and its Application  
Lecture 3 - Translational Research and Nano Biosensing  
Lecture 4 - Nanomaterials for Healthcare Biosensing  
Lecture 5 - Signal Amplification for Ultrasensitive Biosensors  
Lecture 6 - Signal Amplification for Ultrasensitive Biosensors (Continued...)  
Lecture 7 - Signal Amplification for Ultrasensitive Biosensors (Continued...)  
Lecture 8 - Signal Amplification for Ultrasensitive Biosensors (Continued...)  
Lecture 9 - Different Measurement Techniques for Electrochemical Biosensors  
Lecture 10 - Limit of Detection and Wash-Free Detection for Biosensors  
Lecture 11 - Wash-Free Detection for Biosensors (Continued...)  
Lecture 12 - Label-Free Detection for Biosensors  
Lecture 13 - Label-free detection and Multiplex Biosensors  
Lecture 14 - Multiplex Biosensors (Continued...)  
Lecture 15 - Strategy for Electrochemical Detection and Tuning of Electrocatalytic Activities  
Lecture 16 - Enhanced electrocatalytic activity for biosensors  
Lecture 17 - Strategy for Electrochemical Detection and Tuning of Electrocatalytic Activities  
Lecture 18 - Strategy for Electrochemical Detection and Tuning of Electrocatalytic Activities  
Lecture 19 - Strategy for Electrochemical Detection and Tuning of Electrocatalytic Activities  
Lecture 20 - Strategy for Electrochemical Detection and Tuning of Electrocatalytic Activities  
Lecture 21 - Strategy for Electrochemical Detection and Tuning of Electrocatalytic Activities  
Lecture 22 - Strategy for Electrochemical Detection and Tuning of Electrocatalytic Activities  
Lecture 23 - Effect of pretreatment on PCB and biosensor development  
Lecture 24 - Impact of surface Roughness of PCB and PCB for Glucose sensors  
Lecture 25 - Tutorial on Biosensors Fabrication  
Lecture 26 - Tutorial on Biosensors Fabrication (Continued...)  
Lecture 27 - Tutorial on Biosensors Fabrication (Continued...)  
Lecture 28 - Tutorial on Biosensors Fabrication (Continued...)  
Lecture 29 - Tutorial on Biosensors Fabrication (Continued...)

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

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- Lecture 30 - Tutorial on Biosensors Fabrication (Continued...)
- Lecture 31 - Self-Powered Biosensors
- Lecture 32 - Biosensors for Safety and Security
- Lecture 33 - Research Proposal and Ethical Clearance
- Lecture 34 - Special Chemistry for Biosensing
- Lecture 35 - Tutorial - 2
- Lecture 36 - Tutorial - 3
- Lecture 37 - Tutorial - 4
- Lecture 38 - Lab Demonstration - 1
- Lecture 39 - Lab Demonstration - 2
- Lecture 40 - Lab Demonstration - 3

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

NPTEL Video Course - Multi Disciplinary - NOC:Adolescent Health and Well-Being : A Holistic Approach

Subject Co-ordinator - Dr. Sumana Samanta, Dr. Parmeshwar Satpathy

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Adolescent Health Statistics
- Lecture 2 - Introduction to Nutrition and Dietetics
- Lecture 3 - Role of Macronutrients
- Lecture 4 - Role of Micronutrients
- Lecture 5 - Basics of Adolescent Mental Health
- Lecture 6 - Physiological and Psychological changes during Adolescence
- Lecture 7 - Special Nutritional Requirements in Adolescents
- Lecture 8 - Malnutrition in Adolescents and their effects in Adult life
- Lecture 9 - Adolescent Immunization
- Lecture 10 - High risk behaviour in Adolescents
- Lecture 11 - Nutrition Care Process
- Lecture 12 - Dietary Counseling and Nutrition Planning
- Lecture 13 - Common Micronutrient Deficiency in Adolescents
- Lecture 14 - Eating Disorders in Adolescents
- Lecture 15 - National Initiatives related to Adolescents
- Lecture 16 - Behavior Modification for Weight Management
- Lecture 17 - Adolescents And Physical Activity
- Lecture 18 - Combating Special Situations
- Lecture 19 - Legislations for Adolescents
- Lecture 20 - Innovations for Holistic Well-being of Adolescents

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

NPTEL Video Course - Multi Disciplinary - NOC:Research Methods in Health Promotion

Subject Co-ordinator - Dr. Arista Lahiri, Dr. Sweety Suman Jha, Prof. Madhumita Dobe

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Basics of Health Promotion
- Lecture 2 - Basic Principles of Health Promotion
- Lecture 3 - The Health Promotion Research Process
- Lecture 4 - Process of Health Promotion Research: Integrity and Rigor
- Lecture 5 - Ethics in Health Promotion Research
- Lecture 6 - Health Behavior and Health Behavior Change
- Lecture 7 - Theory, Research and Behavior Change Techniques
- Lecture 8 - Intervention Mapping
- Lecture 9 - Ecological Models of Health Behavior
- Lecture 10 - Social Science Techniques
- Lecture 11 - Precede-Proceed Model
- Lecture 12 - Models of Individual Health Behavior - I
- Lecture 13 - Models of Individual Health Behavior - II
- Lecture 14 - Models of Interpersonal Health Behavior
- Lecture 15 - Community and Group Models of Health Behavior Change
- Lecture 16 - Research design and techniques
- Lecture 17 - Observational research designs
- Lecture 18 - Experimental Research Designs
- Lecture 19 - Experimental Research Designs: Issues and Challenges
- Lecture 20 - Measurements in Health promotion
- Lecture 21 - Qualitative methods in Health Promotion - Part I
- Lecture 22 - Qualitative Methods in Health Promotion - Part II
- Lecture 23 - Qualitative Methods in Health Promotion - Part III
- Lecture 24 - Qualitative Methods in Health Promotion - Part IV
- Lecture 25 - Qualitative Methods in Health Promotion - Part V
- Lecture 26 - Introduction to Mixed Methods Research
- Lecture 27 - The Convergent Design
- Lecture 28 - The Explanatory Sequential Design
- Lecture 29 - The Exploratory Sequential Design (Continued...)

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

- Lecture 30 - The Embedded Design
- Lecture 31 - Different study tools and their application in health promotion research
- Lecture 32 - Formulating an appropriate study tool (Quantitative data collection tools)
- Lecture 33 - Validity and reliability of study tools in quantitative research - Part I
- Lecture 34 - Validity and reliability of study tools in quantitative research - Part II
- Lecture 35 - Formulating an appropriate study tool(Qualitative data collection tools)
- Lecture 36 - Designing messages - Part I
- Lecture 37 - Designing messages - Part II
- Lecture 38 - Materials and Methods of Intervention Delivery - Part I
- Lecture 39 - Materials and Methods of Intervention Delivery - Part II
- Lecture 40 - Pretesting of an intervention tool
- Lecture 41 - BCC and SBCC - Part I
- Lecture 42 - BCC and SBCC - Part II
- Lecture 43 - BCC and SBCC - Part III
- Lecture 44 - BCC and SBCC - Part IV
- Lecture 45 - BCC and SBCC - Part V
- Lecture 46 - Community-Based Participatory Research in context to Health Promotion - Part I
- Lecture 47 - Community-Based Participatory Research in context to Health Promotion - Part II
- Lecture 48 - Community-Based Participatory Research in context to Health Promotion - Part III
- Lecture 49 - Community-Based Participatory Research in context to Health Promotion - Part IV
- Lecture 50 - Community-Based Participatory Research in context to Health Promotion - Part V
- Lecture 51 - Quantitative analytical methods - Part I
- Lecture 52 - Quantitative analytical methods - Part II
- Lecture 53 - Quantitative analytical methods - Part III
- Lecture 54 - Analysis of Qualitative data
- Lecture 55 - Analyzing Mixed Methods data
- Lecture 56 - Developing a research proposal in health promotion
- Lecture 57 - Report writing in health Promotion: An Overview
- Lecture 58 - Report writing: quantitative research in health promotion - Part I
- Lecture 59 - Report writing: quantitative research in health promotion - Part II
- Lecture 60 - Report Writing: Qualitative and Mixed Methods research

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

NPTEL Video Course - Multi Disciplinary - NOC:Urban Ecological Heritagescapes through Interactive Governance:

Subject Co-ordinator - Prof. Jenia Mukherjee

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Urban Heritage - Global Conventions and Declarations
- Lecture 3 - Historical Urban Landscape (HUL) - Approach, Toolkit, and Actions
- Lecture 4 - Urban Heritage - The Indian Context
- Lecture 5 - SDG(s) 11(.4) - Transdisciplinary Possibilities, Pathways, and Actions
- Lecture 6 - Historicizing lakes of Bangalore - social-ecological perspectives
- Lecture 7 - Urban environmentalisms - lake-based and rights-based
- Lecture 8 - Example 1: The Jakkur Lake
- Lecture 9 - Example 2: The Puttenahalli Lake
- Lecture 10 - Example 3: The Kaikondrahalli Lake
- Lecture 11 - Kolkata's heritage - Applying the urban ecological heritage lens
- Lecture 12 - Kolkata and EKW - conveying the co-evolutionary narrative
- Lecture 13 - Living Systems infrastructure of Kolkata
- Lecture 14 - Case study 1: The Nalban and Goltala Fisheries
- Lecture 15 - Case study 2: Baro Chaynavi Cooperative
- Lecture 16 - Case study 3: Jhagrashisha
- Lecture 17 - EKW as heritage - Lessons from a Practical Empirical Implementation Project - I
- Lecture 18 - EKW as heritage - Lessons from a Practical Empirical Implementation Project - I
- Lecture 19 - Conclusions

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

NPTEL Video Course - Multi Disciplinary - NOC:Experimental Robotics

Subject Co-ordinator - Prof. Dilip Kumar Pratihara

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction  
Lecture 2 - Experiment 1: Teaching of Serial Manipulator  
Lecture 3 - Experimentation I  
Lecture 4 - Experiment 1: Teaching of Serial Manipulator (Continued...)  
Lecture 5 - Experiment 2: Control of Tracked Mobile Manipulator  
Lecture 6 - Experimentation II  
Lecture 7 - Experiment 2: Control of Tracked Mobile Manipulator (Continued...)  
Lecture 8 - Experiment 3: Path and Gait Planning of Six-legged Robot  
Lecture 9 - Experimentation III  
Lecture 10 - Experiment 3: Path and Gait Planning of Six-legged Robot (Continued...)  
Lecture 11 - Experiment 4: Navigation of Drone  
Lecture 12 - Experimentation IV  
Lecture 13 - Experimentation IV (Continued...)  
Lecture 14 - Experiment 5: Path and Gait Planning of 25 dof NAO Humanoid Robot  
Lecture 15 - Experimentation V  
Lecture 16 - Experiment 5: Path and Gait Planning of 25 dof NAO Humanoid Robot (Continued...)  
Lecture 17 - Current Trends in Robotics Research  
Lecture 18 - Summary of the Course

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

NPTEL Video Course - Multi Disciplinary - NOC:Medical Law

Subject Co-ordinator - Prof. Narendran Thiruthy, Prof. Chaitanya Mittal

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Interface between Medical Profession and Law
- Lecture 2 - Role of Medical practitioners in Justice Administration
- Lecture 3 - Dos and Don'ts of Doctors
- Lecture 4 - Dos and Don'ts for Legal Practitioners
- Lecture 5 - Knowledge exchange between Medical and Legal Practitioners
- Lecture 6 - Consent in Law
- Lecture 7 - Types of Consent in Medical Field
- Lecture 8 - Ethics in Medical Profession
- Lecture 9 - Importance of Documentation in Medical practice
- Lecture 10 - Legal Implications of Improper Documentation
- Lecture 11 - Legal Responsibilities of Medical Practitioners
- Lecture 12 - Medical Negligence and Legal Implications
- Lecture 13 - Legal Implications of Medical Malpractice
- Lecture 14 - Landmark Judgments on Medical Negligence
- Lecture 15 - Testimony of Doctors in Medical Negligence
- Lecture 16 - Healthcare Policy and Law
- Lecture 17 - Clinical Establishment Law
- Lecture 18 - Legal liability of Hospitals/Clinical Establishments
- Lecture 19 - Legal responsibility in Diagnostics
- Lecture 20 - Penalties for non-compliance
- Lecture 21 - Role of IPR in promoting medical innovation and technologies
- Lecture 22 - Health Policy formulation and Role of IPR
- Lecture 23 - Intellectual Property and Access to Medicine
- Lecture 24 - Neglected diseases and Role of IPR
- Lecture 25 - Patenting Therapeutic Practices and Techniques
- Lecture 26 - Duties of Doctor in Courts
- Lecture 27 - Evidence Law and Medical experts
- Lecture 28 - Admissibility of Forensic Evidence
- Lecture 29 - Various Legal procedures in Medical practice

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

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- Lecture 30 - Collection, preservation and dispatch of Forensic Evidence
- Lecture 31 - Ethical insight into different aspects of Surrogacy practice
- Lecture 32 - Surrogacy Regulation in India
- Lecture 33 - Assisted Reproductive Technology Regulation in India
- Lecture 34 - Pre-Conception and Pre-Natal Diagnostic
- Lecture 35 - Penalties for non-compliance
- Lecture 36 - Ethical Issues in Organ Transplantation
- Lecture 37 - Law governing organ transplantation
- Lecture 38 - Comparative Law on Organ Transplantation
- Lecture 39 - Medico-Legal Issues in Clinical Trials
- Lecture 40 - Regulatory Law for Clinical Trials in India

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

NPTEL Video Course - Multi Disciplinary - NOC:An Overview on Maternal Health Antenatal, Intranatal and Postnatal

Subject Co-ordinator - Prof. Barnali Ghosh

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Overview of Obstetrics  
Lecture 2 - Anatomy of Vulva or pudendum  
Lecture 3 - Anatomy of Vagina  
Lecture 4 - Anatomy of Cervix and Uterus  
Lecture 5 - Anatomy of Uterus  
Lecture 6 - Anatomy of fallopian tubes and ovary  
Lecture 7 - Anatomy of pelvic floor and perineum  
Lecture 8 - Gametogenesis  
Lecture 9 - Fertilisation and Embryogenesis  
Lecture 10 - Implantation  
Lecture 11 - Placentation (normal and abnormal)  
Lecture 12 - Placentation (normal and abnormal) (Continued...)  
Lecture 13 - Umbilical cord and Fetal membranes - Part 1  
Lecture 14 - Umbilical cord and Fetal membranes - Part 2  
Lecture 15 - FETUS (physiology and circulation)  
Lecture 16 - Physiological changes in pregnancy - Part 1  
Lecture 17 - Physiological changes in pregnancy - Part 2  
Lecture 18 - Physiological changes in pregnancy - Part 3  
Lecture 19 - Hormones in pregnancy  
Lecture 20 - Hormones in pregnancy (Continued...)  
Lecture 21 - Diagnosis of pregnancy - 1  
Lecture 22 - Diagnosis of Pregnancy - 2  
Lecture 23 - Obstetrical Examination  
Lecture 24 - Obstetrical Examination on antenatal mother (Clinical Study)  
Lecture 25 - Maternal Pelvis & Foetal Skull - Part 1  
Lecture 26 - Fetal Skull  
Lecture 27 - Pre-conceptional counselling and care  
Lecture 28 - Nutrition in Pregnancy  
Lecture 29 - Antenatal Care - Part 1

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

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- Lecture 30 - Antenatal Care - Part 2
- Lecture 31 - Antenatal Care - Part 3
- Lecture 32 - Antenatal Assessment of Fetal Well-Being - Part 1
- Lecture 33 - Antenatal Assessment of Fetal Well-Being - Part 2
- Lecture 34 - Antenatal Assessment of Fetal Well-Being - Part 3
- Lecture 35 - Prenatal Screening and Diagnosis of aneuploidies
- Lecture 36 - Invasive and non-invasive Prenatal Diagnostic Test
- Lecture 37 - Invasive and non-invasive Prenatal Diagnostic Test (Continued...)
- Lecture 38 - Fetal Imaging and Amniotic Fluid Study
- Lecture 39 - Fetal Imaging and Amniotic Fluid Study
- Lecture 40 - Teratology, Teratogens and feto-toxic agents - Part 1
- Lecture 41 - Teratology, Teratogens and feto-toxic agents - Part 2
- Lecture 42 - Normal Labour - Stages and cause of onset
- Lecture 43 - Physiology of Labor
- Lecture 44 - Events of Normal Labour
- Lecture 45 - Mechanism of Normal Labour
- Lecture 46 - Mechanism of Normal Labour (Continued...)
- Lecture 47 - Clinical course of Labour
- Lecture 48 - Monitoring of Normal Labour - Part 1
- Lecture 49 - Monitoring of Normal Labour - Part 2
- Lecture 50 - Labour Analgesia
- Lecture 51 - Labour Analgesia (Continued...)
- Lecture 52 - Abnormal Labour
- Lecture 53 - Intrapartum Fetal Monitoring - Partogram
- Lecture 54 - Intrapartum Fetal Monitoring - Cardiotocography (CTG)
- Lecture 55 - Intrapartum Fetal Monitoring - Cardiotocography (CTG) (Continued...)
- Lecture 56 - Induction and Augmentation of Labour
- Lecture 57 - WHO Labour Guide
- Lecture 58 - Episiotomy
- Lecture 59 - Instrumental Vaginal Delivery
- Lecture 60 - Obstetric anal sphincter injuries OASIS
- Lecture 61 - Lower Segment Caesarean Section
- Lecture 62 - Normal Puerperal changes
- Lecture 63 - Management of Puerperium
- Lecture 64 - Post-Natal care and postpartum contraception
- Lecture 65 - Maternal Health Indicators and demographic scenario
- Lecture 66 - Government health programmes related to Maternal Health
- Lecture 67 - Government health programmes related to Maternal Health (Continued...)
- Lecture 68 - Comprehensive Abortion Care (MTP Amendment Act 2021)

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

NPTEL Video Course - Multi Disciplinary - NOC:Recommender Systems

Subject Co-ordinator - Prof. Mamata Jenamani

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Recommender system and its business value  
Lecture 2 - Types of recommender system - I  
Lecture 3 - Types of recommender system - II  
Lecture 4 - Data Collection  
Lecture 5 - Data Description  
Lecture 6 - Data preprocessing  
Lecture 7 - Dimensionality Reduction  
Lecture 8 - Introduction to machine learning - I  
Lecture 9 - Introduction to machine learning - II  
Lecture 10 - Introduction to machine learning - III  
Lecture 11 - Distance and Similarity  
Lecture 12 - Distance and Similarity (Continued...)  
Lecture 13 - User-Based Approach  
Lecture 14 - Item-Based Approach  
Lecture 15 - Additional Topics in Neighbourhood Based Approach  
Lecture 16 - Association rule based model  
Lecture 17 - UV Decomposition  
Lecture 18 - The latent factor model  
Lecture 19 - Basic latent factor models  
Lecture 20 - Other advanced models  
Lecture 21 - Introduction to content based recommender system: Foundations  
Lecture 22 - Feature Engineering - I  
Lecture 23 - Feature Engineering - II  
Lecture 24 - Feature Engineering - III  
Lecture 25 - Feature Engineering - IV  
Lecture 26 - Decision Trees for content based recommendation  
Lecture 27 - Naïve Bayes classifier for content based recommendation  
Lecture 28 - kNN Classifier for Recommender System  
Lecture 29 - Rule based classification

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- Lecture 30 - Regression methods and conclusions
- Lecture 31 - Introduction to evaluation of recommender system
- Lecture 32 - Resampling methods
- Lecture 33 - Evaluation metrics for accuracy
- Lecture 34 - Drawing reliable conclusions - I
- Lecture 35 - Drawing reliable conclusions - II
- Lecture 36 - Hybrid recommender systems
- Lecture 37 - Knowledge based recommender systems
- Lecture 38 - Context-Sensitive recommender systems
- Lecture 39 - Structural Recommendations in Networks
- Lecture 40 - Trust aware recommender systems

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

NPTEL Video Course - Multi Disciplinary - NOC:Comprehensive Molecular Diagnostics and Advanced Gene Expression

Subject Co-ordinator - Prof. Arindam Ghosh, Prof. Aritri Bir

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Foundation of Molecular Biology  
Lecture 2 - DNA Replication and Repair Mechanism  
Lecture 3 - Transcription (RNA Synthesis)  
Lecture 4 - Protein Synthesis (Translation)  
Lecture 5 - Nucleic Acid Isolation and Detection Methods  
Lecture 6 - PCR (Polymerase Chain Reaction) Fundamentals  
Lecture 7 - Realtime PCR - Part 1  
Lecture 8 - Realtime PCR - Part 2  
Lecture 9 - Variations of the PCR - Part 1  
Lecture 10 - Variations of the PCR - Part 2  
Lecture 11 - DNA Cloning and Recombinant DNA technology - I  
Lecture 12 - DNA Cloning and Recombinant DNA technology - II  
Lecture 13 - DNA Cloning and Recombinant DNA technology - III  
Lecture 14 - Genome Editing Technologies - I  
Lecture 15 - Genome Editing Technologies - II  
Lecture 16 - DNA Microarray  
Lecture 17 - FISH (Fluorescence in situ Hybridization)  
Lecture 18 - Methods to study DNA-protein interaction - I  
Lecture 19 - Methods to study DNA-protein interaction - II  
Lecture 20 - Epigenetics and DNA methylation analysis  
Lecture 21 - DNA Sequencing - Part 1 - Maxam Gilbert Sequencing  
Lecture 22 - DNA Sequencing - Part 2 - Sanger Sequencing  
Lecture 23 - Next Generation Sequencing - Part 1  
Lecture 24 - Next Generation Sequencing - Part 2  
Lecture 25 - Next Generation Sequencing - Part 3  
Lecture 26 - Overview, Importance, Methods in Proteomics  
Lecture 27 - Proteomic Techniques - High performance liquid chromatography (HPLC)  
Lecture 28 - Proteomic Techniques - Mass Spectrometry  
Lecture 29 - Proteomic Techniques - Differential in-gel electrophoresis

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

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- Lecture 30 - Proteomic Techniques - Protein Microarray
- Lecture 31 - Label-based Protein Quantification Technologies - Part 1
- Lecture 32 - Label-based Protein Quantification Technologies - Part 2
- Lecture 33 - Label free methods of protein quantification
- Lecture 34 - Next Generation Proteomics
- Lecture 35 - Proteomic Data Analysis and Bioinformatic Tools
- Lecture 36 - Syndromic Panels and Multiplex Assay : Molecular identification of Microorganism
- Lecture 37 - Molecular Diagnostics in Antimicrobial Resistance Testing
- Lecture 38 - RNA Sequencing: Role in Infectious diseases - I
- Lecture 39 - RNA Sequencing: Role in Infectious diseases - II
- Lecture 40 - Point of Care (POC) diagnostics in Infectious diseases
- Lecture 41 - Molecular genetics in tumorigenesis
- Lecture 42 - Liquid biopsies in cancer detection
- Lecture 43 - Digital PCR in Cancer detection
- Lecture 44 - Mutation Detection Methods
- Lecture 45 - Isothermal Nucleic Acid Amplification
- Lecture 46 - Genetic Testing and Inherited Disorders - Part 1
- Lecture 47 - Genetic Testing and Inherited Disorders - Part 2
- Lecture 48 - Prenatal diagnostics and NIPT
- Lecture 49 - Reproductive genetics and genetic counselling
- Lecture 50 - Genetic counselling and patient education
- Lecture 51 - Serial Analysis of Gene Expression
- Lecture 52 - Metabolomics in Molecular Diagnostics
- Lecture 53 - Immunoassay and Luminex Multiplex Assay
- Lecture 54 - Molecular diagnostics in Metabolic, Cardiovascular and Gastrointestinal disorders
- Lecture 55 - Molecular diagnostics in Endocrine, Neurodegenerative and Transplantation disorders
- Lecture 56 - Pharmacogenomics and Personalized Medicine
- Lecture 57 - Quality control (QC) in molecular diagnostics
- Lecture 58 - Ethical concerns in molecular diagnostics
- Lecture 59 - Artificial Intelligence and Machine learning in Genomics
- Lecture 60 - Integration of Multiomics Data in Molecular Diagnostics

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

NPTEL Video Course - Multi Disciplinary - NOC:Thin Film Technology

Subject Co-ordinator - Prof. Samit K Ray

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - General Introduction  
Lecture 2 - Thin Film Materials and Components  
Lecture 3 - Semiconductor Films and Heterostructures  
Lecture 4 - Chemical Methods  
Lecture 5 - Physical Vapor Deposition (PVD) : Thermal Evaporation  
Lecture 6 - Thermal Evaporation  
Lecture 7 - Sources of Thermal Evaporation  
Lecture 8 - Evaporation of Elements and Compounds  
Lecture 9 - Compound Evaporation and Thickness Uniformity  
Lecture 10 - Film Thickness Monitoring and Control  
Lecture 11 - Pulsed Laser Deposition  
Lecture 12 - Sputtering Process and Mechanism  
Lecture 13 - Plasma Discharge and DC Sputtering  
Lecture 14 - RF Sputtering Process  
Lecture 15 - Magnetron Sputtering  
Lecture 16 - Sputtering of Binary Alloys and Compounds  
Lecture 17 - Ion Beam and Hybrid Deposition  
Lecture 18 - Introduction to CVD Process  
Lecture 19 - Thermal CVD Process  
Lecture 20 - Gas Transport and Growth Kinetics  
Lecture 21 - CVD Processes and Systems  
Lecture 22 - Plasma Enhanced CVD (PECVD)  
Lecture 23 - Liquid Phase Epitaxy  
Lecture 24 - Vapor Phase Epitaxy - Compound Semiconductors  
Lecture 25 - Metal-Organic CVD (MOCVD)  
Lecture 26 - Introduction and Film Purity  
Lecture 27 - MBE System and Growth Mechanism  
Lecture 28 - Effusion Source and Growth Rate  
Lecture 29 - Insitu Growth Monitoring - RHEED Oscillation

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- Lecture 30 - Atomic Layer Deposition / Atomic Layer Epitaxy
- Lecture 31 - Thin Film Growth Modes
- Lecture 32 - Homogeneous Nucleation
- Lecture 33 - Heterogeneous Nucleation
- Lecture 34 - Stranski-Krastanov (2D-3D) Growth Mode
- Lecture 35 - SiGe Strained Layer Epitaxy (2D) and Ge Islands (3D)
- Lecture 36 - Thickness Measurement
- Lecture 37 - Thickness Measurement - Interference Method
- Lecture 38 - Thickness and Optical Constants - Ellipsometry
- Lecture 39 - Mechanical Properties - Film Porosity and Adhesion
- Lecture 40 - Mechanical Properties & Residual Stress
- Lecture 41 - Electron Beam Techniques - SEM
- Lecture 42 - Scanning Electron Microscopy
- Lecture 43 - Microprobe and Transmission Electron Microscopy
- Lecture 44 - Transmission Electron Microscopy
- Lecture 45 - Scanning Probe Microscopy
- Lecture 46 - X-ray Photoelectron Spectroscopy
- Lecture 47 - Auger Electron Spectroscopy
- Lecture 48 - Secondary Ion Mass Spectrometry (SIMS)
- Lecture 49 - Different SIMS Techniques and Depth Profile Analysis
- Lecture 50 - Rutherford Backscattering Spectrometry (RBS)
- Lecture 51 - Basic Device Fabrication Techniques
- Lecture 52 - Metal-Oxide-Semiconductor (MOS) Capacitor
- Lecture 53 - n-MOSFET and CMOS FET Devices
- Lecture 54 - Scaled Si MOSFET Devices
- Lecture 55 - Heterostructure FET and Bipolar Transistors
- Lecture 56 - Optoelectronic Materials and Devices
- Lecture 57 - Light Emitting Devices
- Lecture 58 - Photodetector Devices
- Lecture 59 - Photovoltaic Devices
- Lecture 60 - Nanotechnology and Photonic Devices

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

NPTEL Video Course - Multi Disciplinary - NOC:An Integrated Approach to Common Childhood Diseases and Development

Subject Co-ordinator - Prof. Nabarun Karmakar, Prof. Soumi Kundu, Prof. Parama Banerjee

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Neonatal screening in India - Clinical Aspect
- Lecture 2 - Neonatal Screening - Biochemical Aspect - Part I
- Lecture 3 - Neonatal Screening - Biochemical Aspect - Part II
- Lecture 4 - Neonatal Screening - Biochemical Aspect - Part III
- Lecture 5 - India Newborn Action Plan (INAP)
- Lecture 6 - Congenital Adrenal Hyperplasia - Biochemical Aspect
- Lecture 7 - Congenital Adrenal Hyperplasia
- Lecture 8 - Congenital and Acquired hypothyroidism
- Lecture 9 - National Program for Hemoglobinopathies
- Lecture 10 - Common Genetic Disorders in children
- Lecture 11 - Congenital Hearing Disorders
- Lecture 12 - Congenital Ophthalmological Disorders
- Lecture 13 - Congenital Orthopedic Disorders
- Lecture 14 - Congenital Structural Disorders
- Lecture 15 - Malnutrition in Indian Children
- Lecture 16 - Clinical features and management of Protein Energy Malnutrition
- Lecture 17 - Medico-Social aspects and Prevention of Malnutrition in India
- Lecture 18 - Integrated Child Developmental Services (ICDS)
- Lecture 19 - Community Nutrition Programs
- Lecture 20 - Vitamin A
- Lecture 21 - Vitamin A disorders in Children
- Lecture 22 - Vitamin B 1, 2, 3
- Lecture 23 - Vitamin B 6, 9
- Lecture 24 - Vitamin B 9, 12
- Lecture 25 - Vitamin C
- Lecture 26 - Vitamin B and C disorders in Children
- Lecture 27 - Vitamin D
- Lecture 28 - Vitamin D disorders in Children
- Lecture 29 - Iodine

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

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- Lecture 30 - National program for Vitamin A and Iodine deficiency disorders
- Lecture 31 - Iron
- Lecture 32 - Iron (Anaemia)
- Lecture 33 - Anemia in Children - Part I
- Lecture 34 - Anemia in Children - Part II
- Lecture 35 - Anemia Mukht Bharat
- Lecture 36 - Universal Immunization Program and Mission Indradhanush
- Lecture 37 - Vaccine preventable disease - Part I
- Lecture 38 - Vaccine preventable disease - Part II
- Lecture 39 - Vaccine preventable disease - Part III
- Lecture 40 - IAP immunization schedule and VPD surveillance
- Lecture 41 - NVBDCP - Part I
- Lecture 42 - NVBDCP - Part II
- Lecture 43 - NVBDCP - Part III (Program aspect)
- Lecture 44 - National program for TB and Leprosy
- Lecture 45 - National program for AIDS and Hepatitis
- Lecture 46 - Pneumonia
- Lecture 47 - Diarrhea
- Lecture 48 - IMNCI - Part I
- Lecture 49 - IMNCI - Part II
- Lecture 50 - RMNCH+A
- Lecture 51 - Common Congenital Heart Diseases
- Lecture 52 - Rheumatic Heart Disease
- Lecture 53 - Childhood Asthma
- Lecture 54 - Seizures in Childhood
- Lecture 55 - Nephrotic syndrome
- Lecture 56 - Developmental Delay and Cerebral Palsy
- Lecture 57 - Common behavioral and psychiatric Disorders in Childhood - Part I
- Lecture 58 - Common behavioral and psychiatric Disorders in Childhood - Part II
- Lecture 59 - Learning and Developmental Disorders in Children
- Lecture 60 - School Health Programme and Rashtriya Bal Swasthya Karyakram (RBSK)

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

NPTEL Video Course - Multi Disciplinary - NOC:Sustainable Mining and Geoinformation

Subject Co-ordinator - Prof. B. K. Prusty, Prof. M. D. Behera

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Fundamental of geoinformation  
Lecture 2 - Optical remote sensing  
Lecture 3 - LiDAR Remote Sensing  
Lecture 4 - Microwave remote sensing  
Lecture 5 - Thermal/Column Concentration  
Lecture 6 - Geographic Information System (GIS)  
Lecture 7 - Global Navigation Satellite System (GNSS)  
Lecture 8 - 3-Dimensional Terrain Modeling  
Lecture 9 - Cloud Computing  
Lecture 10 - Internet of Things (IoT)  
Lecture 11 - Exploration Mapping  
Lecture 12 - Environmental Management  
Lecture 13 - Restoration Monitoring  
Lecture 14 - Contamination Mapping and Geo-Assessments  
Lecture 15 - Volume Measurement and Geospatial Techniques  
Lecture 16 - Subsidence Detection  
Lecture 17 - Topographic and Slope Analysis  
Lecture 18 - Disaster Management  
Lecture 19 - Heat Detection and Monitoring  
Lecture 20 - Gas and Particulate Matter Monitoring  
Lecture 21 - Minerals, Mining and Society - I  
Lecture 22 - Minerals, Mining and Society - II  
Lecture 23 - Mining and Its Environmental Impacts - I  
Lecture 24 - Mining and Its Environmental Impacts - II  
Lecture 25 - Environmental Impact Assessment for Mining Projects - I  
Lecture 26 - Environmental Impact Assessment for Mining Projects - II  
Lecture 27 - Sustainable Development for Mining Industry - I  
Lecture 28 - Sustainable Development for Mining Industry - II  
Lecture 29 - SDF for Mining Industry - I

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

- Lecture 30 - SDF for Mining Industry - II
- Lecture 31 - Fundamental: Geoinformation and SDGs in Mining
- Lecture 32 - SDG 1 and 2 [No Poverty and Zero Hunger]
- Lecture 33 - SDG 3, 4 and 5
- Lecture 34 - SDG 6 [Clean Water and Sanitation]
- Lecture 35 - SDG 7, 8 and 9
- Lecture 36 - SDG 11
- Lecture 37 - SDG 12, 13
- Lecture 38 - SDG 14, 15, 17
- Lecture 39 - Life Cycle and Associated Environmental Impacts
- Lecture 40 - Sustainability Performance Monitoring
- Lecture 41 - Land Acquisition and Rehabilitation and Resettlement Act - I
- Lecture 42 - Land Acquisition and Rehabilitation and Resettlement Act - II
- Lecture 43 - Land Acquisition, R and R Act - III
- Lecture 44 - Mine Closure Plan - I
- Lecture 45 - Mine Closure Plan - II
- Lecture 46 - Challenges Towards SD In Mining Industry
- Lecture 47 - Sustainable Development in Mining Legislation - NMP 2019
- Lecture 48 - Sustainable Development in Mining Legislation - II
- Lecture 49 - Life Cycle Analysis
- Lecture 50 - Life Cycle Analysis for Mining Industry
- Lecture 51 - Circular Economy for Mining Industry - I
- Lecture 52 - Circular Economy for Mining Industry - II
- Lecture 53 - Circular Economy for Mining Industry - III
- Lecture 54 - Carbon footprints of mining industry
- Lecture 55 - Net Zero and Decarbonisation of Mining Industry
- Lecture 56 - Sustainability Reporting for Mining Industry - I
- Lecture 57 - Sustainability Reporting for Mining Industry - II
- Lecture 58 - Sustainability Assessment for Indian Mines
- Lecture 59 - CSR for Sustainable Development
- Lecture 60 - Sustainable Development in Mining Industry - Case Study

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

NPTEL Video Course - Multi Disciplinary - NOC:Neuroscience of Human Movement

Subject Co-ordinator - Prof. Varadhan

Co-ordinating Institute - IIT - Madras

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

Lecture 0 - Neuroscience of Human Movement  
Lecture 1 - Membrane Physiology - Part 1  
Lecture 2 - Membrane Physiology - Part 2  
Lecture 3 - Nernst Equation  
Lecture 4 - Goldman Equation  
Lecture 5 - Action Potential - Part 1  
Lecture 6 - Action Potential - Part 2  
Lecture 7 - Action Potential - Part 3  
Lecture 8 - Action Potential - Part 4  
Lecture 9 - Action Potential - Part 5  
Lecture 10 - Review of Action Potential and Neurotransmitters  
Lecture 11 - Neuromuscular Junction  
Lecture 12 - Disorders of Neuromuscular Junction  
Lecture 13 - Skeletal Muscles - Part 1  
Lecture 14 - Skeletal Muscles - Part 2  
Lecture 15 - Skeletal Muscles - Part 3  
Lecture 16 - Skeletal Muscles - Part 4  
Lecture 17 - Muscle force production  
Lecture 18 - Motor Units - Part 1  
Lecture 19 - Motor Units - Part 2  
Lecture 20 - Motor Units - PIC and EMG  
Lecture 21 - Receptors - Part 1  
Lecture 22 - Receptors - Part 2  
Lecture 23 - Spine and Spinal Cord  
Lecture 24 - Excitation and Inhibition within Spinal Cord - Part 1  
Lecture 25 - Excitation and Inhibition within Spinal Cord - Part 2  
Lecture 26 - Monosynaptic Reflexes - Part 1  
Lecture 27 - Monosynaptic Reflexes - Part 2  
Lecture 28 - Monosynaptic Reflexes - Part 3

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- Lecture 29 - Oligosynaptic and Polysynaptic Reflexes - Part 1
- Lecture 30 - Oligosynaptic and Polysynaptic Reflexes - Part 2
- Lecture 31 - Pre-Programmed Reactions - Part 1
- Lecture 32 - Pre-Programmed Reactions - Part 2
- Lecture 33 - Spinal Cord Injuries and Central Pattern Generators
- Lecture 34 - Animal Preparations for Neuroscience Experiments
- Lecture 35 - Overview of motor control system
- Lecture 36 - Terminology
- Lecture 37 - Primary Motor Cortex - Part 2
- Lecture 38 - Primary Motor Cortex - Part 3
- Lecture 39 - Primary Motor Cortex - Part 4
- Lecture 40 - Primary Motor Cortex - Part 5
- Lecture 41 - Primary Motor Cortex - Part 6
- Lecture 42 - Primary Motor Cortex - Part 7
- Lecture 43 - Primary Motor Cortex - Part 8
- Lecture 44 - Primary Motor Cortex - Part 9
- Lecture 45 - Primary Motor Cortex - Part 10
- Lecture 46 - Primary Motor Cortex - Part 11
- Lecture 47 - Primary Motor Cortex - Part 12
- Lecture 48 - Primary Motor Cortex - Part 13
- Lecture 49 - Primary Motor Cortex - Part 14
- Lecture 50 - Primary Motor Cortex - Part 15
- Lecture 51 - Cerebellum - Part 1
- Lecture 52 - Cerebellum - Part 2
- Lecture 53 - Cerebellum - Part 3
- Lecture 54 - Cerebellum - Part 4
- Lecture 55 - Cerebellum - Part 5
- Lecture 56 - Cerebellum - Part 6
- Lecture 57 - Cerebellum - Part 7
- Lecture 58 - Cerebellum - Part 8
- Lecture 59 - Cerebellum - Part 9
- Lecture 60 - Cerebellum - Part 10
- Lecture 61 - Cerebellum - Part 11
- Lecture 62 - Cerebellum - Part 12
- Lecture 63 - Basal Ganglia - Part 1
- Lecture 64 - Basal Ganglia - Pathways
- Lecture 65 - Basal Ganglia - Inputs
- Lecture 66 - Basal Ganglia - Outputs
- Lecture 67 - Basal Ganglia - Various Functions

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- Lecture 68 - Basal Ganglia - Motor Functions
- Lecture 69 - Basal Ganglia - Motor Functions.
- Lecture 70 - Basal Ganglia - Dopamine and Acetylcholine
- Lecture 71 - Basal Ganglia - Disorders
- Lecture 72 - Parkinson's Disease - Intro
- Lecture 73 - Parkinson's Disease - Rate Model, Pathophysiology
- Lecture 74 - Parkinson's Disease - Current therapeutic approaches and the future
- Lecture 75 - Basal Ganglia - Various Disorders
- Lecture 76 - Neuropsychiatric disorders due to BG dysfunction
- Lecture 77 - Parietal and Premotor Cortex - Part 1
- Lecture 78 - Parietal and Premotor Cortex - Part 2
- Lecture 79 - Parietal and Premotor Cortex - Part 3
- Lecture 80 - Parietal and Premotor Cortex - Part 4
- Lecture 81 - Parietal and Premotor Cortex - Part 5
- Lecture 82 - Parietal and Premotor Cortex - Part 6



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

NPTEL Video Course - Multi Disciplinary - NOC:Manage TB

Subject Co-ordinator - Dr. M S Jawahar, Dr.V.V.Banu Rekha, Prof. Mohan Natrajan

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - How is TB affecting public health Globally and Nationally
- Lecture 2 - Epidemiology of TB-Session - 1
- Lecture 3 - Epidemiology of TB-Session - 2
- Lecture 4 - Pathogenesis of TB-Session - 1
- Lecture 5 - Pathogenesis of TB-Session - 2
- Lecture 6 - Clinical manifestations of TB-Session - 1
- Lecture 7 - Clinical manifestations of TB-Session - 2
- Lecture 8 - Clinical manifestations of TB-Session - 3
- Lecture 9 - Bacteriological Diagnosis of Tuberculosis - Smear and Culture
- Lecture 10 - Demonstration of processing of sputum specimen for culture for diagnosis of tuberculosis
- Lecture 11 - Demonstration of sputum smear examination for diagnosis of tuberculosis
- Lecture 12 - Demonstration of solid culture method for diagnosis of tuberculosis
- Lecture 13 - Demonstration of liquid culture method for diagnosis of tuberculosis in sputum
- Lecture 14 - Phenotypic drug susceptibility testing in Tuberculosis
- Lecture 15 - Demonstration of drug susceptibility testing of first line anti-TB drugs by liquid culture
- Lecture 16 - Molecular Diagnosis of Tuberculosis-Session - 1
- Lecture 17 - Molecular Diagnosis of Tuberculosis-Session - 2
- Lecture 18 - Demonstration of Xpert MTB-RIF assay for diagnosis of tuberculosis from sputum specimens
- Lecture 19 - Demonstration of Line Probe Assay (LPA) (Direct detection of tuberculosis and resistance to isoniazid)
- Lecture 20 - Radiology in diagnosis of Tuberculosis-Session - 1
- Lecture 21 - Radiology in diagnosis of Tuberculosis-Session - 2
- Lecture 22 - Radiology in diagnosis of Tuberculosis-Session - 3
- Lecture 23 - Radiology in diagnosis of Tuberculosis-Session - 4
- Lecture 24 - Approach to diagnosis of Pulmonary TB
- Lecture 25 - Case Discussion-Approach to diagnosis of TB in a person with presumptive pulmonary TB
- Lecture 26 - Case Discussion-Approach to diagnosis of pulmonary TB in a patient with negative sputum smear for acid fast bacilli
- Lecture 27 - Approach to diagnosis of Extra-pulmonary TB
- Lecture 28 - Case Discussion-Approach to diagnosis of TB in a person with swelling in the neck
- Lecture 29 - Case Discussion-Approach to diagnosis of TB spine

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

- Lecture 30 - Diagnosis of Childhood Tuberculosis-Session - 1
- Lecture 31 - Diagnosis of Childhood Tuberculosis-Session - 2
- Lecture 32 - Video demonstration of gastric fluid aspiration technique in a child
- Lecture 33 - Case Discussion-Approach to diagnosis of TB in a child with presumptive pulmonary TB
- Lecture 34 - Case Discussion-Approach to diagnosis of TB meningitis in a child
- Lecture 35 - Drugs for treating Tuberculosis and Principles of Chemotherapy-Session - 1
- Lecture 36 - Drugs for treating Tuberculosis and Principles of Chemotherapy-Session - 2
- Lecture 37 - Treatment of Drug Sensitive Pulmonary Tuberculosis
- Lecture 38 - Case discussion-Approach to treatment of drug sensitive TB
- Lecture 39 - Management of drug resistant Tuberculosis-Session - 1
- Lecture 40 - Management of drug resistant Tuberculosis-Session - 2
- Lecture 41 - Case discussion-Approach to treatment of Multi-drug resistant TB (MDR-TB)/ Extensively drug resistant TB
- Lecture 42 - Management of Extra-pulmonary Tuberculosis-Session - 1
- Lecture 43 - Management of Extra-pulmonary Tuberculosis-Session - 2
- Lecture 44 - Panel discussion-Practical difficulties in the management of Extra-pulmonary TB
- Lecture 45 - Management of patients with HIV-TB coinfection-Session - 1
- Lecture 46 - Management of patients with HIV-TB coinfection-Session - 2
- Lecture 47 - Case discussion-Approach to management of HIV-TB
- Lecture 48 - Management of TB in special situations
- Lecture 49 - Case discussion-Approach to management of TB in pregnancy
- Lecture 50 - Treatment of Pediatric Tuberculosis-Session - 1
- Lecture 51 - Treatment of Pediatric Tuberculosis-Session - 2
- Lecture 52 - Management of Adverse effects to anti-TB drugs-Session - 1
- Lecture 53 - Management of Adverse effects to anti-TB drugs-Session - 2
- Lecture 54 - Case discussion-Approach to management of jaundice during anti-TB treatment
- Lecture 55 - Case discussion-Approach to management of skin rashes during anti-TB treatment
- Lecture 56 - Non-tuberculous Mycobacteria- Diagnosis and Clinical management-Session - 1
- Lecture 57 - Non-tuberculous Mycobacteria - Diagnosis and Clinical Management Session - 2
- Lecture 58 - Newer Anti-TB drugs and regimens-Session - 1
- Lecture 59 - Newer Anti-TB drugs and regimens-Session - 2
- Lecture 60 - Management of Latent TB Infection-Session - 1
- Lecture 61 - Management of Latent TB Infection-Session - 2
- Lecture 62 - Airborne infection control in tuberculosis-Session - 1
- Lecture 63 - Airborne infection control in tuberculosis-Session - 2
- Lecture 64 - Vaccine for Tuberculosis-Session - 1
- Lecture 65 - Vaccine for Tuberculosis-Session - 2
- Lecture 66 - Services offered by Revised National TB Control Programme (RNTCP)-Session - 1
- Lecture 67 - Services offered by Revised National TB Control Programme (RNTCP)-Session - 2
- Lecture 68 - Services offered by Revised National TB Control Programme (RNTCP)-Session - 3

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

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- Lecture 69 - Services offered by Revised National TB Control Programme (RNTCP)-Session - 4
- Lecture 70 - Tuberculosis notification-Session - 1
- Lecture 71 - Tuberculosis notification-Session - 2
- Lecture 72 - Addressing Social Barriers in Tuberculosis Control-Session - 1
- Lecture 73 - Addressing Social Barriers in Tuberculosis Control-Session - 2
- Lecture 74 - Standards for TB Care in India-Session - 1
- Lecture 75 - Standards for TB Care in India-Session - 2
- Lecture 76 - Global Tuberculosis Control Strategies

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

NPTEL Video Course - Multi Disciplinary - NOC:Ecology and Environment

Subject Co-ordinator - Dr. Abhijit P. Deshpande

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Sustainability  
Lecture 2 - Dams  
Lecture 3 - Dams  
Lecture 4 - Adayar River  
Lecture 5 - Adayar River  
Lecture 6 - Urbanisation in Western Ghats and Biodiesel  
Lecture 7 - Use And Throw Plastic  
Lecture 8 - Nano Materials Information Technology  
Lecture 9 - Definition of Health Risk  
Lecture 10 - Transport Of Pollutants in the Environment  
Lecture 11 - Assesment of Risk  
Lecture 12 - Remediation and Liability  
Lecture 13 - Remendiation and Liability  
Lecture 14 - Life Cycle Analysis  
Lecture 15 - Energy and Environment module - 1  
Lecture 16 - Energy and Environment module - 2  
Lecture 17 - Energy and Environment module - 3  
Lecture 18 - Energy and Environment module - 4  
Lecture 19 - Energy and Environment module - 5  
Lecture 20 - Energy and Environment module - 6  
Lecture 21 - Energy and Environment module - 7  
Lecture 22 - Drinking Water Supply  
Lecture 23 - Drinking Water Supply  
Lecture 24 - Water Quality Standards And Philosophy of Water Treatment  
Lecture 25 - Water Treatment  
Lecture 26 - Wastewater Management in Developing Urban Environments  
Lecture 27 - Wastewater Recycling  
Lecture 28 - Sustainable Water Management In Urban Areas - Part 1  
Lecture 29 - Sustainable Water Management In Urban Areas - Part 2

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

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- Lecture 30 - Ground Water Contamination
- Lecture 31 - Groundwater - Sanitation Nexus
- Lecture 32 - Chasing Sustainability - The Challenge - Part 1
- Lecture 33 - Chasing Sustainability - The Challenge - Part 2
- Lecture 34 - Developing Frame Works Of Action
- Lecture 35 - Developing Frame Works Of Action
- Lecture 36 - Social And sanitation
- Lecture 37 - Promoting Policies For Eco-Productive Cities in the global House - Part 1
- Lecture 38 - Promoting Policies For Eco-Productive Cities in the global House - Part 2
- Lecture 39 - The need to study ecology
- Lecture 40 - Ecosystem functions and services
- Lecture 41 - What is studied in ecology?
- Lecture 42 - Ecological footprint
- Lecture 43 - Energy and Material flow in ecosystems and ecological efficiency
- Lecture 44 - Energy flow, productivity and Biodiversity
- Lecture 45 - Biodiversity, population and ecological principles

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

NPTEL Video Course - Multi Disciplinary - NOC:Current Regulatory Requirements for Conducting Clinical Trials

Subject Co-ordinator - Prof. Nandini K Kumar, Prof. Sucheta Banerjee Kurundkar, Prof. A. B. Ramteke

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - C1 - L00

Lecture 2 - C1 - Introduction Assorted Interviews

Lecture 3 - C1 - L01

Lecture 4 - C1 - L02

Lecture 5 - C1 - L03

Lecture 6 - C1 - L04

Lecture 7 - C1 - L05

Lecture 8 - C1 - L06

Lecture 9 - C1 - L07

Lecture 10 - C1 - L08

Lecture 11 - C1 - L09

Lecture 12 - C1 - L10A

Lecture 13 - C1 - L10B

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

NPTEL Video Course - Multi Disciplinary - NOC:Regulatory Requirements for Medical Devices and IVD kits in India

Subject Co-ordinator - Prof. A. B. Ramteke, Prof. Malay Mitra

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - C2 - Introduction Assorted Interviews

Lecture 2 - C2 - L00

Lecture 3 - C2 - L01

Lecture 4 - C2 - L02

Lecture 5 - C2 - L03

Lecture 6 - C2 - L04

Lecture 7 - C2 - L05

Lecture 8 - C2 - L06

Lecture 9 - C2 - L07

Lecture 10 - C2 - L08

Lecture 11 - C2 - L09

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

NPTEL Video Course - Multi Disciplinary - NOC:Numerical Methods for Engineers

Subject Co-ordinator - Dr. Niket S.Kaisare

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction  
Lecture 2 - Overview of Learning Modules  
Lecture 3 - Course Plan  
Lecture 4 - Tutorial  
Lecture 5 - Errors and Approximations  
Lecture 6 - Truncation and Round-Off Errors  
Lecture 7 - Binary Numbers  
Lecture 8 - Floating Point  
Lecture 9 - Floating Point in Binary system  
Lecture 10 - Iterative Method  
Lecture 11 - Direct Method  
Lecture 12 - Sequential Method  
Lecture 13 - Linear Algebra  
Lecture 14 - Introduction to Linear Equations  
Lecture 15 - Rank Condition for Solving Linear Equations  
Lecture 16 - Motivating Gauss Elimination  
Lecture 17 - Gauss Elimination  
Lecture 18 - Tutorial Recap  
Lecture 19 - Back Substitution to find solution  
Lecture 20 - Gauss Jordan and LU Decomposition  
Lecture 21 - Partial Pivoting in Gauss Elimination  
Lecture 22 - Analysis of Gauss Elimination  
Lecture 23 - Tri-Diagonal Systems  
Lecture 24 - Thomas Algorithm for Tri-Diagonal Systems  
Lecture 25 - Gauss Siedel Method  
Lecture 26 - Analysis of Gauss Siedel Method  
Lecture 27 - Gauss Siedel vs. Jacobi Methods  
Lecture 28 - Bonus  
Lecture 29 - Summary

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

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Lecture 30 - Introduction to Nonlinear Equations  
Lecture 31 - Bisection Method  
Lecture 32 - Analysis of Bisection Method  
Lecture 33 - Bonus  
Lecture 34 - Regula-Falsi Method  
Lecture 35 - Bonus  
Lecture 36 - Regula-Falsi vs. Secant Method  
Lecture 37 - Bonus  
Lecture 38 - Some special cases  
Lecture 39 - Fixed-Point Iteration  
Lecture 40 - Newton-Raphson Method  
Lecture 41 - Analysis of Fixed-Point Iteration  
Lecture 42 - Analysis of Newton-Raphson  
Lecture 43 - Problems with Newton-Raphson  
Lecture 44 - Multi-Variable Fixed-Point Iteration  
Lecture 45 - Multi-Variable Newton-Raphson  
Lecture 46 - Out of Syllabus  
Lecture 47 - Out of Syllabus  
Lecture 48 - Summary  
Lecture 49 - Introduction  
Lecture 50 - Linear Regression in One Variable  
Lecture 51 - Recap  
Lecture 52 - Bonus  
Lecture 53 - Linear Regression in Multiple Variables  
Lecture 54 - Matrix Method for Multi-Linear Regression  
Lecture 55 - Polynomial Regression  
Lecture 56 - Functional Regression  
Lecture 57 - Bonus  
Lecture 58 - Interpolation  
Lecture 59 - Bonus  
Lecture 60 - Lagrange Interpolating Polynomials  
Lecture 61 - Newton's Forward Difference Polynomial  
Lecture 62 - Newton's Divided Differences  
Lecture 63 - Interpolation Examples  
Lecture 64 - Bonus  
Lecture 65 - Summary  
Lecture 66 - Numerical Differentiation  
Lecture 67 - Numerical Differentiation Formula and Analysis  
Lecture 68 - Derivation using Method of undetermined coefficients

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

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Lecture 69 - Three-point differentiation formulae  
Lecture 70 - Bonus  
Lecture 71 - Truncation vs. Round-Off Errors  
Lecture 72 - Numerical Differentiation Examples  
Lecture 73 - Summary of Numerical Differentiation  
Lecture 74 - Numerical Integration  
Lecture 75 - Trapezoidal rule and Derivation  
Lecture 76 - Simpson's Rules for Integration  
Lecture 77 - Bonus  
Lecture 78 - Error Analysis for Simpson's Rules  
Lecture 79 - Numerical Integration Examples  
Lecture 80 - Bonus  
Lecture 81 - Summary of Newton Cotes Formulae  
Lecture 82 - Richardson's Extrapolation  
Lecture 83 - Gauss Quadrature  
Lecture 84 - Summary of Numerical Integration  
Lecture 85 - Introduction to ODE-IVP  
Lecture 86 - Motivation using an Example (Bonus)  
Lecture 87 - Euler's Methods and Second-Order Methods  
Lecture 88 - Second-Order Runge-Kutta Methods  
Lecture 89 - Summary of RK-2  
Lecture 90 - Higher order RK Methods  
Lecture 91 - Bonus  
Lecture 92 - Bonus  
Lecture 93 - Summary and Recap  
Lecture 94 - Introduction to Predictor-Corrector Methods  
Lecture 95 - Stability of Implicit Methods  
Lecture 96 - Stability Analysis of Euler's Methods  
Lecture 97 - Extension to multiple variables  
Lecture 98 - Local vs. Global Truncation Errors  
Lecture 99 - Richardson's Extrapolation  
Lecture 100 - Stiff System of ODEs  
Lecture 101 - Adaptive Step-sizing  
Lecture 102 - Adaptive step-sizing and Embedded Methods  
Lecture 103 - Bonus  
Lecture 104 - Summary and Recap (Weeks 10 and 11)  
Lecture 105 - Introduction to ODE-BVP  
Lecture 106 - Shooting Method  
Lecture 107 - Finite Difference Method

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

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- Lecture 108 - Solution using Shooting Method
- Lecture 109 - Algorithm for Shooting Method
- Lecture 110 - Problems with Shooting Method
- Lecture 111 - Solving ODE-BVP using Finite Difference Method
- Lecture 112 - Microsoft Excel based Solution
- Lecture 113 - Recap of Week-12 (ODE-BVP)

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

NPTEL Video Course - Multi Disciplinary - Basic Course in Biomedical Research

Subject Co-ordinator - Dr. Sanjay Mehendale

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction to health research
- Lecture 2 - Formulating research question
- Lecture 3 - Literature review
- Lecture 4 - Measures of disease frequency
- Lecture 5 - Descriptive study designs
- Lecture 6 - Analytical study designs
- Lecture 7 - Experimental study designs
- Lecture 8 - Validity of epidemiological studies
- Lecture 9 - Qualitative research methods
- Lecture 10 - Measurement of study variables
- Lecture 11 - Sampling methods
- Lecture 12 - Calculating sample size and power
- Lecture 13 - Selection of study population
- Lecture 14 - Study plan and project management
- Lecture 15 - Designing data collection tools
- Lecture 16 - Principles of data collection
- Lecture 17 - Data management
- Lecture 18 - Overview of data analysis
- Lecture 19 - Ethical framework for health research
- Lecture 20 - Conducting clinical trails
- Lecture 21 - Preparing a concept paper for research projects
- Lecture 22 - Elements of a protocol for research studies

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

NPTEL Video Course - Multi Disciplinary - NOC:Thermodynamics

Subject Co-ordinator - Prof. Anand T. N. C

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Basic concepts and definitions - Part 1  
Lecture 2 - Basic concepts and definitions - Part 2  
Lecture 3 - Basic concepts and definitions - Part 3  
Lecture 4 - Tutorial problems on exact and inexact differential  
Lecture 5 - Basic concepts and definitions - Part 4  
Lecture 6 - Work - Part 1  
Lecture 7 - Work - Part 2  
Lecture 8 - Work - Part 3  
Lecture 9 - Work - Part 4  
Lecture 10 - Work - Part 5  
Lecture 11 - Tutorial problem on 'Work' - Part 1  
Lecture 12 - Tutorial problem - Part 2  
Lecture 13 - Tutorial problem on 'Work' - Part 3  
Lecture 14 - Tutorial problem on 'Work' - Part 4  
Lecture 15 - Zeroth law of thermodynamics  
Lecture 16 - Methods of temperature measurement  
Lecture 17 - Modes of heat transfer  
Lecture 18 - Tutorial problem on 'Modes of heat transfer'  
Lecture 19 - Tutorial problem on 'Methods of temperature measurement'  
Lecture 20 - First law of thermodynamics  
Lecture 21 - Tutorial problem  
Lecture 22 - Tutorial problem  
Lecture 23 - Heat and work interactions for a system  
Lecture 24 - Tutorial problem - Part 1  
Lecture 25 - Pure substance  
Lecture 26 - Tutorial problem - Part 2  
Lecture 27 - Ideal gas - Part 1  
Lecture 28 - Ideal gas - Part 2  
Lecture 29 - Tutorial problem - Part 3

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Lecture 30 - Tutorial problem - Part 4  
Lecture 31 - Tutorial problem - Part 5  
Lecture 32 - Specific heats at constant pressure and constant volume  
Lecture 33 - Tutorial problem - Part 6  
Lecture 34 - Tutorial problem - Part 7  
Lecture 35 - Ideal gas - Part 3  
Lecture 36 - Ideal gas - Part 4  
Lecture 37 - Ideal gas - Part 5  
Lecture 38 - Tutorial problem - Part 1  
Lecture 39 - Tutorial problem - Part 2  
Lecture 40 - Tutorial problem - Part 3  
Lecture 41 - Tutorial problem - Part 4  
Lecture 42 - Beyond ideal gases - Part 1  
Lecture 43 - Beyond ideal gases - Part 2  
Lecture 44 - Two phase system - Part 1  
Lecture 45 - Two phase system - Part 2  
Lecture 46 - Two phase system  
Lecture 47 - Tutorial problems (2 numbers)  
Lecture 48 - Tutorial problem - Part 1  
Lecture 49 - Tutorial problem - Part 2  
Lecture 50 - Tutorial problem - Part 3  
Lecture 51 - Tutorial problems on two-phase systems (2 numbers)  
Lecture 52 - Tutorial problem (1 number)  
Lecture 53 - Rate equation of the first law of thermodynamics for a control mass and a control volume  
Lecture 54 - Energy equation for a steady-state, steady-flow process in selected engineering devices  
Lecture 55 - Tutorial problems (3 numbers)  
Lecture 56 - Tutorial problem - Part 1  
Lecture 57 - Tutorial problem - Part 2  
Lecture 58 - Quasi-static process revisited  
Lecture 59 - Second law of thermodynamics  
Lecture 60 - Second law of thermodynamics  
Lecture 61 - Second law of thermodynamics  
Lecture 62 - Second law of thermodynamics  
Lecture 63 - Second law of thermodynamics  
Lecture 64 - Second law of thermodynamics  
Lecture 65 - Tutorial problems (2 numbers)  
Lecture 66 - Tutorial problem (1 number)  
Lecture 67 - Tutorial problem (1 number)  
Lecture 68 - Tutorial problem (2 numbers)

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Lecture 69 - Second law of thermodynamics  
Lecture 70 - Entropy - Part 1  
Lecture 71 - Tutorial problem (1 number)  
Lecture 72 - Entropy - Part 2  
Lecture 73 - Entropy - Part 3  
Lecture 74 - Entropy - Part 4  
Lecture 75 - Tutorial problem (1 number)  
Lecture 76 - Tutorial problem (1 number)  
Lecture 77 - Tutorial problems (2 numbers)  
Lecture 78 - Entropy - Part 5  
Lecture 79 - Entropy - Part 6  
Lecture 80 - Entropy - Part 7  
Lecture 81 - Exergy - Part 1  
Lecture 82 - Exergy - Part 2  
Lecture 83 - Exergy - Part 3  
Lecture 84 - Thermodynamics cycles  
Lecture 85 - Tutorial problem (1 number)  
Lecture 86 - Thermodynamics cycles  
Lecture 87 - Tutorial problem (1 number)  
Lecture 88 - Thermodynamics cycles  
Lecture 89 - Tutorial problem (1 number)

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

NPTEL Video Course - Multi Disciplinary - NOC:Regulatory Requirements for Medical Devices including in Vitro

Subject Co-ordinator - Prof. Malay Mitra, Prof. Aseem Sahu, Prof. Arun B.Ramteke

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Courses Overview

Lecture 2 - Medical device and in vitro diagnostics

Lecture 3 - Medical Device Rules, 2017

Lecture 4 - Classification of medical devices

Lecture 5 - Labelling of medical devices and in vitro diagnostics

Lecture 6 - Standards of medical device, quality assurance and testing

Lecture 7 - Regulatory requirements of biocompatibility of medical devices and ISO 10993

Lecture 8 - Clinical investigation of medical devices, regulation of investigational medical devices

Lecture 9 - Quality assurance and quality management system

Lecture 10 - How to obtain a licence to manufacture a medical device?

Lecture 11 - ISO 14971 (Medical devices)

Lecture 12 - Inspection of medical device and IVD establishments

Lecture 13 - Import and export of medical devices and IVDs

Lecture 14 - Medical device regulation



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

NPTEL Video Course - Multi Disciplinary - NOC:Current Regulatory Requirements for Conducting Clinical Trials

Subject Co-ordinator - Prof. Nandini K Kumar, Prof. Y. K. Gupta, Prof. D. K. Sable, Prof. Arun B. Ramteke, Pr

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Courses Overview

Lecture 2 - Overview of Indian regulatory system

Lecture 3 - Overview of Drugs and Cosmetics Act and Rules thereunder

Lecture 4 - Overview of New Drugs and Clinical Trials Rules, 2019

Lecture 5 - Pre-Clinical Data Requirements

Lecture 6 - Rules Governing Clinical Trials

Lecture 7 - Phases of clinical trial, forms, and fees

Lecture 8 - Regulatory pathway and data requirements for NDCT, 2019

Lecture 9 - BA/BE study and study centers

Lecture 10 - Guidelines to conduct BA/BE studies

Lecture 11 - Ethics Committee registration and re-registration

Lecture 12 - Ethical Considerations

Lecture 13 - Good Clinical Practice

Lecture 14 - Requirements for import/manufacture of new drug/IND for conducting clinical trials in India

Lecture 15 - Requirements for import/manufacture of new drug/IND for sale/ distribution and unapproved new dr

Lecture 16 - Important issues

Lecture 17 - Special concern

Lecture 18 - Clinical trial related guidelines (NDCT Rules)

Lecture 19 - Content of Proposed Clinical Trial Protocol

Lecture 20 - Content of a Clinical Trial Report

Lecture 21 - Post Marketing Assessment and Clinical Trial Compensation

Lecture 22 - Common observations during submission of CT/BA/BE protocol

Lecture 23 - Common observations during CT/BA/BE centre inspections

Lecture 24 - Drug development process

Lecture 25 - Salient feature of NDCT 2019 - what's new in NDCT?

Lecture 26 - Online Submission 23A

Lecture 27 - Online Submission (CTRI)

Lecture 28 - Tables Given in NDCT 2019 and its Content

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

NPTEL Video Course - Multi Disciplinary - NOC:Model Predictive Control: Theory and Applications

Subject Co-ordinator - Dr. Niket S.Kaisare

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Course Background: Model Predictive Control  
Lecture 2 - Course Outline  
Lecture 3 - Additional MATLAB Video - Array Operations  
Lecture 4 - Additional MATLAB Video - Array Operations  
Lecture 5 - Recap: Linear Algebra  
Lecture 6 - Recap: Differential and Difference Equations  
Lecture 7 - Recap: Process Control Basics  
Lecture 8 - Introduction to Model Predictive Control  
Lecture 9 - MPC: Salient Features  
Lecture 10 - MPC: Historical Perspective  
Lecture 11 - Vectors and Matrices  
Lecture 12 - Vector Spaces  
Lecture 13 - Linear Operation  
Lecture 14 - Null and Image Spaces  
Lecture 15 - Eigenvalues and Eigenvectors  
Lecture 16 - Eigenvalue Decomposition and Tutorial  
Lecture 17 - Recap of Week-2  
Lecture 18 - Model Classification  
Lecture 19 - Discrete-Time Models Overview  
Lecture 20 - Discrete-Time Models  
Lecture 21 - Finite Impulse Response Models  
Lecture 22 - Finite Step Response Models  
Lecture 23 - Recap and Plan for Week-4  
Lecture 24 - State Space and Step Response Models  
Lecture 25 - Nonlinear Models and Model Linearization  
Lecture 26 - Model Types and Model Conversion  
Lecture 27 - Model Conversion - 2  
Lecture 28 - Model Conversion: TF to SS  
Lecture 29 - How to handle MIMO systems

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- Lecture 30 - Discretization of State-Space Models
- Lecture 31 - Introduction to Dynamic Matrix Control (DMC)
- Lecture 32 - The DMC Algorithm: Future Predictions
- Lecture 33 - The DMC Algorithm: Objective and Constraints
- Lecture 34 - The DMC Algorithm: Optimization
- Lecture 35 - Coding for DMC Algorithm: Setup
- Lecture 36 - Coding for DMC Algorithm: Populate Matrices
- Lecture 37 - Recap of DMC Algorithm
- Lecture 38 - Extensions of DMC Algorithm
- Lecture 39 - LTI Models and Coordinate Transform
- Lecture 40 - LTI Models: Stability
- Lecture 41 - LTI Models: Controllability
- Lecture 42 - LTI Models: Conditions for controllability
- Lecture 43 - Tutorial by Arvind (Recap of Controllability)
- Lecture 44 - LTI Models: Observability
- Lecture 45 - Linear Control: Introduction
- Lecture 46 - Pole Placement Controller
- Lecture 47 - Linear Quadratic Regulator: Batch Solution
- Lecture 48 - LQR: Dynamic Programming Solution
- Lecture 49 - State Estimation: Introduction
- Lecture 50 - Stochastic Processes and Random Variables
- Lecture 51 - State Estimation: Pole Placement Observer
- Lecture 52 - Kalman Filter: Terminology
- Lecture 53 - Kalman Filter: Derivation
- Lecture 54 - Recap of Modules 7-9
- Lecture 55 - Recap and Plan for this week
- Lecture 56 - Linear Quadratic Gaussian
- Lecture 57 - LQG Derivation and Separation Principle
- Lecture 58 - Setpoint Tracking in LQ Control
- Lecture 59 - Disturbance Rejection in LQ Control
- Lecture 60 - Disturbance Modeling for Estimation
- Lecture 61 - Estimation with Disturbance Modeling
- Lecture 62 - Recap and Plan for this week
- Lecture 63 - State-Space MPC: Deterministic case
- Lecture 64 - Extension to Measured Disturbances
- Lecture 65 - Offset-Free State Space MPC
- Lecture 66 - Comparison of State-Space MPC with DMC
- Lecture 67 - State-Space MPC: Disturbance Modeling
- Lecture 68 - Disturbance Modeling: Background and Setup

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

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- Lecture 69 - Stochastic Output-Feedback State-Space MPC
- Lecture 70 - Bonus Video: Disturbance Modeling for State Space MPC
- Lecture 71 - Self-Guided Tutorial of MPC Toolbox
- Lecture 72 - Help Session: Using MPC Toolbox
- Lecture 73 - Recap of LQ Control and Linear MPC
- Lecture 74 - Linear MPC - Key Features and Results
- Lecture 75 - Practical Issues: Inferential Control
- Lecture 76 - Practical Issues: Measurement Delay
- Lecture 77 - Other Practical Issues
- Lecture 78 - Some Classical Examples of MPC

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

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

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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

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

NPTEL Video Course - Multi Disciplinary - NOC:Management of Medical Emergencies in Dental Practice

Subject Co-ordinator - Multifaculty

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Vasovagal Syncope
- Lecture 2 - Vasovagal Syncope - Clinical Scenario
- Lecture 3 - Postural Hypotension
- Lecture 4 - Postural Hypotension - Clinical Scenario
- Lecture 5 - Hyperventilation
- Lecture 6 - Hyperventilation - Clinical Scenario
- Lecture 7 - Asthma - Status Asthmaticus - Part 1
- Lecture 8 - Asthma - Status Asthmaticus - Part 2
- Lecture 9 - Asthma - Clinical Scenario
- Lecture 10 - Chest Pain Of Cardiac Origin - Myocardial Infarction And Angina Pectoris - Part 1
- Lecture 11 - Chest Pain Of Cardiac Origin - Myocardial Infarction And Angina Pectoris - Part 2
- Lecture 12 - Chest Pain - Clinical Scenario
- Lecture 13 - Acute Adrenal Insufficiency
- Lecture 14 - Acute Adrenal Insufficiency - Clinical Scenario
- Lecture 15 - Diabetes Mellitus
- Lecture 16 - Diabetes Mellitus - Clinical Scenario
- Lecture 17 - Throid Dysfunction
- Lecture 18 - Allergies/Hypersensitivity Reaction - Part 1
- Lecture 19 - Allergies/Hypersensitivity Reaction - Part 2
- Lecture 20 - Epilepsy- Status Epilepticus
- Lecture 21 - Chronic Kidney Disease
- Lecture 22 - Hepatic Dysfunction
- Lecture 23 - Basic Life Support - Part 1
- Lecture 24 - Basic Life Support - Part 2



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

NPTEL Video Course - Multi Disciplinary - NOC:Basic Course in Ornithology

Subject Co-ordinator - Prof. Mousumi Ghosh, Prof. Manjari Jain, Prof. R Jayapal, Prof. Anand Krishnan, Prof.

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to Ornithology  
Lecture 2 - Diversity and Classification - Part 1  
Lecture 3 - Diversity and Classification - Part 2  
Lecture 4 - Evolution and Speciation - Part 1  
Lecture 5 - Evolution and Speciation - Part 2  
Lecture 6 - Anatomy  
Lecture 7 - Physiology  
Lecture 8 - Colour  
Lecture 9 - Life History  
Lecture 10 - Foraging Behaviour  
Lecture 11 - Mating and Breeding Behaviour  
Lecture 12 - Social Behaviour  
Lecture 13 - Methods of Science and Research Questions  
Lecture 14 - Vocal Behaviour: Mechanisms - Part 1  
Lecture 15 - Vocal Behaviour: Mechanisms - Part 2  
Lecture 16 - Vocal Behaviour: Ecology and Evolution - Part 1  
Lecture 17 - Vocal Behaviour: Ecology and Evolution - Part 2  
Lecture 18 - Vocal Mimicry in Birds  
Lecture 19 - Basics of Research Design  
Lecture 20 - Bird Migration - LIVE Guest Lecture  
Lecture 21 - Bird Populations: Concepts  
Lecture 22 - Bird Communities: Concepts - Part 1  
Lecture 23 - Bird Communities: Concepts - Part 2  
Lecture 24 - Interactive Session by Dr Mousumi Ghosh (NCF) and Dr Umesh Srinivasan (IISc)  
Lecture 25 - Studying bird populations and communities - Part 1  
Lecture 26 - Studying bird populations and communities - Part 2  
Lecture 27 - Mixed Species Flocks - Live Session  
Lecture 28  
Lecture 29 - Introduction to Data Visualisation Analysis - Part 1

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

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- Lecture 30 - Introduction to Data Visualisation Analysis - Part 2
- Lecture 31 - Basic Course in Ornithology - Guest Session on Avian Diseases
- Lecture 32 - Biogeography
- Lecture 33 - Macroecology
- Lecture 34 - Macroecology - Case Study - LIVE
- Lecture 35 - Week 10 Interactive session with Dr VV Robin and Dr Umesh Srinivasan
- Lecture 36 - Bird Conservation - Concepts
- Lecture 37 - Avian Conservation: Case study 1
- Lecture 38 - Avian Conservation: Case study 2
- Lecture 39 - Avian Conservation: Case study 3
- Lecture 40 - Avian Conservation: Case study 4
- Lecture 41 - Avian Conservation: Case study 5
- Lecture 42
- Lecture 43 - Molecular Techniques - Part 1
- Lecture 44 - Molecular Techniques - Part 2

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

NPTEL Video Course - Multi Disciplinary - NOC:Oral Biology

Subject Co-ordinator - Multifaculty

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Craniofacial anatomy - Part 1  
Lecture 2 - Craniofacial anatomy - Part 2  
Lecture 3 - Tooth and It's Supporting Structures - Part 1  
Lecture 4 - Tooth and It's Supporting Structures - Part 2  
Lecture 5 - Specialised mucosa  
Lecture 6 - Saliva-Composition and functions  
Lecture 7 - Saliva Diagnostics  
Lecture 8 - Stem cells in the oro-dental region  
Lecture 9 - Stem cell isolation  
Lecture 10 - Mineralization dynamics - Part 1  
Lecture 11 - Mineralization dynamics - Part 2  
Lecture 12 - TMJ Anatomy and Function  
Lecture 13 - Oral defense mechanisms  
Lecture 14 - Mucosal and regional immunology  
Lecture 15 - Oral microbiome  
Lecture 16 - Evaluation of Oral microbiome  
Lecture 17 - Dysbiosis  
Lecture 18 - Molecular mechanisms in oral cancer  
Lecture 19 - Flow cytometry in cell and molecular biology  
Lecture 20 - Basics of Biomaterial science and engineering  
Lecture 21 - Biomimetics - Part 1  
Lecture 22 - Biomimetics - Part 2  
Lecture 23 - Biomaterials - Polymers  
Lecture 24 - Biomaterials - Metals  
Lecture 25 - Biomaterials - Ceramics and Colloids  
Lecture 26 - 3-D Bioprinting  
Lecture 27 - Protein mediated biomaterials  
Lecture 28 - Immune response to biomaterials  
Lecture 29 - Biomaterial Applications

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

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Lecture 30 - Biocompatible assays

Lecture 31 - Immunoassay

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

NPTEL Video Course - Multi Disciplinary - NOC:Introduction to Biomimicry

Subject Co-ordinator - Prof. Sivakumar Srinivasan, Prof. Satya Seshadri, Prof. Mrinalini, Prof. Shiva Subrama

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Course overview  
Lecture 2 - What is biomimicry ?  
Lecture 3 - Why is biomimicry important ?  
Lecture 4 - Nature's unifying patterns - Introduction  
Lecture 5 - Case study  
Lecture 6 - How to do biomimicry ?  
Lecture 7 - Learning resources - Biomimicry Institute  
Lecture 8 - Skills, attitudes and mindset for a biomimic  
Lecture 9 - Course activity  
Lecture 10 - Recap of Week 1  
Lecture 11 - What are we mimicking ?  
Lecture 12 - Function and Strategy  
Lecture 13 - Approaches to biomimicry  
Lecture 14 - From Problem to Solution  
Lecture 15 - Using the UNSDG to identify challenges  
Lecture 16 - Recap of Week 2  
Lecture 17 - Step 1 - Define the problem  
Lecture 18 - Step 2 - Biologize the problem  
Lecture 19 - Step 3 - Discover strategies in nature  
Lecture 20 - Applying the Biomimicry Design Spiral  
Lecture 21 - Step 4 - Abstract design strategies from nature  
Lecture 22 - Step 5 - Emulate nature's strategies in your solution  
Lecture 23 - Step 6 - Evaluate feasibility  
Lecture 24 - How to apply the biomimicry process ?  
Lecture 25 - Recap of Week 4  
Lecture 26 - Nature's Unifying Patterns I  
Lecture 27 - Systems Thinking - Introduction  
Lecture 28 - Systems Thinking - Understanding consequences  
Lecture 29 - Nature's Unifying Patterns II

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

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- Lecture 30 - Tools - Mind mapping
- Lecture 31 - Using biomimicry to design a solution
- Lecture 32 - Recap of Week 6
- Lecture 33 - Developing creative confidence
- Lecture 34 - Learning from the biomimicry process
- Lecture 35 - The need for creativity in our lives
- Lecture 36 - Unlocking your creativity
- Lecture 37 - Taking your biomimicry ideas to market
- Lecture 38 - The journey so far
- Lecture 39 - Finding the hero in you
- Lecture 40 - Course wrap-up

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

NPTEL Video Course - Multi Disciplinary - NOC:Electrocardiogram - Interpretation and Application in Clinical

Subject Co-ordinator - Multi-faculty

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction - Electrocardiogram - Interpretation and application in clinical practice

Lecture 2 - Basic Conduction of Heart

Lecture 3 - ECG Lead system

Lecture 4 - Recording of a Standard ECG (Lead placements and measurements)

Lecture 5 - Waveforms, Intervals and Segments

Lecture 6 - Vector Electrocardiography

Lecture 7 - From Action Potentials to Arrhythmias

Lecture 8 - Pathophysiology, Myocardial Ischemia / Injury

Lecture 9 - Myocardial Infarction (MI), Pathophysiology

Lecture 10 - Drug effects on ECG

Lecture 11 - Patient identification, preparation and interpretation of ECG

Lecture 12 - Sinus rhythms and Bradyarrhythmias

Lecture 13 - Approach to tachyarrhythmias

Lecture 14 - AV Blocks and Bundle Branch Block

Lecture 15 - Chamber enlargement and Heart Failure

Lecture 16 - Electrolyte Abnormalities on ECG

Lecture 17 - Recognizing signs and ECG changes in Myocardial Ischemia/Injury

Lecture 18 - ECG changes in myocardial infarction

Lecture 19 - Miscellaneous ECG findings and cardiac arrest

Lecture 20 - Pacemaker Rhythms

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

NPTEL Video Course - Multi Disciplinary - NOC:One Health

Subject Co-ordinator - Multi Faculty

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction to the One Health Concept and National and International health/public health agencies
- Lecture 2 - Global Health vs One Health
- Lecture 3 - Basics of Research Ethics
- Lecture 4 - Integrated human and animal disease surveillance systems
- Lecture 5 - Emerging infectious diseases
- Lecture 6 - Process of disease emergence and assessment of the risk factors
- Lecture 7 - Mechanisms of pathogen cross over across species boundaries
- Lecture 8 - Importance of disease detection, Identification and monitoring in public health
- Lecture 9 - Introduction to disease vectors and basics of Medical Entomology
- Lecture 10 - The factors influencing an emerging disease
- Lecture 11 - Antimicrobial resistance a global threat and Importance of antibiotic stewardship program
- Lecture 12 - Introduction of Food safety and food borne diseases
- Lecture 13 - What are zoonotic diseases and its role in our changing world
- Lecture 14 - The integration of human, animal and ecosystem health in control and prevention of these diseases
- Lecture 15 - Community engagement for zoonotic disease control in humans and animals through One Health
- Lecture 16 - Basics of Epidemiological Studies
- Lecture 17 - Rapid Response system, Disaster Management and Outbreak Investigation Plans
- Lecture 18 - Basic statistical methods and their application and the measurement of disease frequency
- Lecture 19 - Principles of survey design and the concepts of sampling and Mixed method research
- Lecture 20 - Introduction to health policy
- Lecture 21 - Risk Communication and Pandemic Preparedness
- Lecture 22 - Role of community in disease control and ways for community engagement
- Lecture 23 - Uses of different types of media for communication



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

NPTEL Video Course - Multi Disciplinary - NOC:Canning Technology, Value Addition of Seafood (Fish Processing)

Subject Co-ordinator - Dr. Abhilash Sasidharan, Dr. Maya Raman

Co-ordinating Institute - KUFOS Panangad

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

Lecture 1 - Course overview Canning technology and Value addition of sea food  
Lecture 2 - Introduction and the concept of canning technology  
Lecture 3 - History of canning technology - Part 1  
Lecture 4 - History of canning technology - Part 2  
Lecture 5 - Canning Technology and Value Addition Containers and their Properties - Part 1  
Lecture 6 - Canning Technology and Value Addition Containers and their Properties - Part 2  
Lecture 7 - Canning Technology and Value Addition Containers and their Properties - Part 3  
Lecture 8 - Canning Technology and Value Addition Containers and their Properties - Part 4  
Lecture 9 - Canning Technology and Value Addition - Canning process - Part 1  
Lecture 10 - Canning Technology and Value Addition - Canning process - Part 2  
Lecture 11 - Canning Technology and Value Addition - Thermal process calculations - Part 1  
Lecture 12 - Canning Technology and Value Addition - Thermal process calculations - Part 2  
Lecture 13 - Microbiology and spoilage of canned food - Part 1  
Lecture 14 - Microbiology and spoilage of canned food - Part 2  
Lecture 15 - Process of seafood canning - Part 1  
Lecture 16 - Process of seafood canning - Part 2  
Lecture 17 - Seafood pre-processing - Part 1  
Lecture 18 - Seafood pre-processing - Part 2  
Lecture 19 - Additives - Part 1  
Lecture 20 - Additives - Part 2  
Lecture 21 - SOP for seafood canning - Part 1  
Lecture 22 - SOP for seafood canning - Part 2  
Lecture 23 - SOP for seafood canning - Part 3  
Lecture 24 - Nutritional quality of seafood  
Lecture 25 - Muscle structure of seafood  
Lecture 26 - Spoilage in seafood  
Lecture 27 - Preservation methods  
Lecture 28 - Value addition in thermally processed foods  
Lecture 29 - Quality standards for seafood value added products - Part 1

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

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Lecture 30 - Quality standards for seafood value added products - Part 2

Lecture 31 - Quality standards for seafood value added products - Part 3

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

NPTEL Video Course - Multi Disciplinary - NOC:Food Packaging Technology

Subject Co-ordinator - Dr. Jenny Ann John, Dr. Maya Raman

Co-ordinating Institute - KUFOS Panangad

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

Lecture 1 - Course overview  
Lecture 2 - Introduction  
Lecture 3 - Paper as packaging material - Part 1  
Lecture 4 - Paper as packaging material - Part 2  
Lecture 5 - Paper as packaging material - Part 3  
Lecture 6 - Glass as packaging material  
Lecture 7 - Metal as packaging material - Part 1  
Lecture 8 - Metal as packaging material - Part 2  
Lecture 9 - Plastic as packaging material - Part 1  
Lecture 10 - Plastic as packaging material - Part 2  
Lecture 11 - Introduction to packaging system  
Lecture 12 - Product characteristics and packaging requirements  
Lecture 13 - Rigid, semi-rigid, flexible packaging forms - Part 1  
Lecture 14 - Rigid, semi-rigid, flexible packaging forms - Part 2  
Lecture 15 - Designing of packaging material  
Lecture 16 - Testing of packaging material - Part 1  
Lecture 17 - Testing of packaging material - Part 2  
Lecture 18 - Testing of packaging material - Part 3  
Lecture 19 - Testing of packaging material - Part 4  
Lecture 20 - Testing of package performance  
Lecture 21 - Principles developing safe and protective packing  
Lecture 22 - Transport worthiness test - Part 1  
Lecture 23 - Transport worthiness test - Part 2  
Lecture 24 - Transport worthiness test - Part 3  
Lecture 25 - Safety aspects of food packaging  
Lecture 26 - Packaging accessories and advances in packaging  
Lecture 27 - Active packaging - Part 1  
Lecture 28 - Active packaging - Part 2  
Lecture 29 - MA and Aseptic packaging

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- Lecture 30 - Edible packaging - Part 1
- Lecture 31 - Edible packaging - Part 2
- Lecture 32 - Vacuum packing machine
- Lecture 33 - CA and MA packing machine
- Lecture 34 - Gas packing machine
- Lecture 35 - Seal and shrink packing machine
- Lecture 36 - Form fill sealing machine
- Lecture 37 - Aseptic packaging systems
- Lecture 38 - Retort pouches
- Lecture 39 - Bottling machine - Part 1
- Lecture 40 - Bottling machine - Part 2
- Lecture 41 - Carton making machine
- Lecture 42 - Package printing machines - Part 1
- Lecture 43 - Package printing machines - Part 2

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

NPTEL Video Course - Multi Disciplinary - NOC:Vulnerability Studies: An Introduction

Subject Co-ordinator - Prof. Pramod K Nayar

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction

Lecture 2 - Fragility

Lecture 3 - Resilience

Lecture 4 - Interpreting Vulnerability, precarity of work and Access Equality for Equal Opportunity - Part I

Lecture 5 - Interpreting Vulnerability, precarity of work and Access Equality for Equal Opportunity - Part II

Lecture 6 - Social Vulnerability and Group Vulnerability

Lecture 7 - Willed Vulnerability - Endurance Sports

Lecture 8 - Illness, Storytelling and Embodiment

Lecture 9 - Illness, Storytelling and Embodiment Reading - Audre Lorde's : The Cancer Journals

Lecture 10 - Group Discussion - Vulnerable Bodies

Lecture 11 - The Aesthetics of Vulnerability - I

Lecture 12 - The Aesthetics of Vulnerability - II Traumatic Materialism

Lecture 13 - The Aesthetics of Vulnerability - III Melodrama

Lecture 14 - Vulnerability Aesthetics The Sublime

Lecture 15 - The Aesthetics of Vulnerability - Discussion

Lecture 16 - Biopolitics, biopower and vulnerability - I

Lecture 17 - Biopolitics, biopower and vulnerability - II

Lecture 18 - Pandemics and Biopolitics

Lecture 19 - Biopolitics and vulnerable populations in Contemporary Literature

Lecture 20 - Discussion on Biopolitics

Lecture 21 - Ecoprecarity

Lecture 22 - Ecodystopia - I

Lecture 23 - Ecodystopia - II

Lecture 24 - Discussion on Ecoprecarity and Ecodystopias - I

Lecture 25 - Discussion on Ecoprecarity and Ecodystopias - II

Lecture 26 - Aging and Vulnerability in Literature

Lecture 27 - Aging and Vulnerability - 2

Lecture 28 - Aging and Vulnerability - 3

Lecture 29 - Discussion on Vulnerability and Aging - 1

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

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- Lecture 30 - Discussion on Vulnerability and Aging - 2
- Lecture 31 - Childhood and Vulnerability - 1
- Lecture 32 - Childhood and Vulnerability - 2
- Lecture 33 - Childhood and Vulnerability - 3
- Lecture 34 - Discussion on Childhood and Vulnerability - I
- Lecture 35 - Discussion on Childhood and Vulnerability - II
- Lecture 36 - Imperial Vulnerability - I
- Lecture 37 - Imperial Vulnerability - II
- Lecture 38 - Posthuman Vulnerability
- Lecture 39 - Contemporary Genres of Resilience - The Graphic Novel - I
- Lecture 40 - Contemporary Genres of Resilience - The Graphic Novel - II

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

NPTEL Video Course - Multi Disciplinary - NOC:Pulmonary Function Tests - Interpretation and Application in Clinical Practice

Subject Co-ordinator - Multi-Faculty

Co-ordinating Institute - Chettinad Hospital and Research Institute

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

- Lecture 1 - Functional Anatomy of the Respiratory Tract
- Lecture 2 - Mechanics of Respiration - Section 1
- Lecture 3 - Mechanics of Respiration - Section 2
- Lecture 4 - Ventilation, Perfusion Ventilation Perfusion Relationship
- Lecture 5 - Essential Principles of Spirometer
- Lecture 6 - Types of Pulmonary function tests
- Lecture 7 - Obstructive Lung Diseases: Pathophysiology
- Lecture 8 - Restrictive lung Diseases: Pathophysiology
- Lecture 9 - Drug Effects on Pulmonary Function
- Lecture 10 - Lung Disorders in Children
- Lecture 11 - Assessment of Lung Functions in Children
- Lecture 12 - Static and Dynamic lung function tests
- Lecture 13 - Interpretation of Normal Pulmonary Function Tests
- Lecture 14 - Indications for Pulmonary Function Testing
- Lecture 15 - Obstructive Airway Diseases - Approach
- Lecture 16 - Clinical Diagnosis of Restrictive Lung Disease - Part 1
- Lecture 17 - Clinical Diagnosis of Restrictive Lung Disease - Part 2
- Lecture 18 - Essential Criteria For a Good Pulmonary Function Testing
- Lecture 19 - Interpretation of pulmonary function tests in Restrictive lung disease
- Lecture 20 - Interpretation of PFT in Obstructive lung diseases
- Lecture 21 - Diffusion Capacity of Lungs for Carbon Monoxide DLCO
- Lecture 22 - Radiological assessment of obstructive and restrictive lung disorders
- Lecture 23 - Laboratory Video - Pulmonary Function tests - Interpretation and application in clinical practice

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

NPTEL Video Course - Multi Disciplinary - NOC:Making Learning Engaging Through Interactive Games

Subject Co-ordinator - Prof. Kartic Vaidyanathan

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Need for interactive gamified learning
- Lecture 2 - Learnings from the Master Class titled Confessions of a Converted Lecturer by Prof Eric Mazur
- Lecture 3 - Understanding Play and its context in learning in 21st century
- Lecture 4 - Benefits of Game Based Learning Scientific Evidences
- Lecture 5 - Learning Stoichiometry calculations using board game Case Study
- Lecture 6 - Benefits of Game Based Learning across age groups and subjects
- Lecture 7 - Benefits of Puzzle Games
- Lecture 8 - Game Based Learning Adoption by Countries Overview
- Lecture 9 - Yu Kai Chow Psychology of gamification
- Lecture 10 - Board Card Game Activity Game Sources
- Lecture 11 - Board Card Game Mechanics Across Subjects - Part 1
- Lecture 12 - Board Card Game Mechanics Across Subjects - Part 2
- Lecture 13 - Growth Mindset Card Game Game Play of UNO adaptation
- Lecture 14 - How Play Game Mechanics Enhance Learning in the UNO Game
- Lecture 15 - Tools for building Board Card Games Snake and Ladder
- Lecture 16 - Sample Games Created Inspired by Snake and Ladder Mechanics
- Lecture 17 - Sample Card Games Created Across Subjects and Different Mechanics by Students
- Lecture 18 - Tools for building Bingo Games
- Lecture 19 - Puzzle Game Design Tools
- Lecture 20 - Mentimeter
- Lecture 21 - Quizizz
- Lecture 22 - Wordwall
- Lecture 23 - GIMKIT - Part 1
- Lecture 24 - GIMKIT - Part 2
- Lecture 25 - Raptivity Digital Tool Demo
- Lecture 26 - Example scenarios of student and faculty created digital games across topic
- Lecture 27 - Dr. Preeti Aghalayam's - Experience narration with interactive games
- Lecture 28 - Interview with Dr. Anuradha Prashant
- Lecture 29 - Interview with Dr. Ankur Gera and her faculty team

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

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- Lecture 30 - Interview with Dr. GK SuraishKumar
- Lecture 31 - Interview with Dr. Jacey Lynn Minoi
- Lecture 32 - Interview with Dr. Kirupa Priyadarshini
- Lecture 33 - Dave Eng Interviews Prof. Silviana Falcon Who has Written Lectuers and Play

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

NPTEL Video Course - Multi Disciplinary - NOC:Local Anaesthesia in Dentistry

Subject Co-ordinator - Prof. Ramakrishna Shenoi, Prof. Sobhan Mishra, Prof. Kannan Balaraman, Prof. S. Jimson

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - The Drug; Pharmacology; Neurophysiology; Action of Vasoconstrictors - Part 1  
Lecture 2 - The Drug; Pharmacology; Neurophysiology; Action of Vasoconstrictors - Part 2  
Lecture 3 - Anatomic Considerations - Panel Discussion  
Lecture 4 - Dosage and Clinical Actions of Specific Agents - Part 1  
Lecture 5 - Dosage and Clinical Actions of Specific Agents - Part 2  
Lecture 6 - Dosage and Clinical Actions of Specific Agents - Panel Discussion  
Lecture 7 - Armamentarium - Part 1  
Lecture 8 - Armamentarium - Part 2  
Lecture 9 - Armamentarium - Part 3  
Lecture 10 - Armamentarium - Part 4  
Lecture 11 - Anatomic Considerations - Part 1  
Lecture 12 - Anatomic Considerations - Part 2  
Lecture 13 - Anatomic Considerations - Part 3  
Lecture 14 - Anatomy of Trigeminal Nerve - Video Demonstration  
Lecture 15 - Maxillary Injection Techniques - Part 1  
Lecture 16 - Maxillary Injection Techniques - Part 2  
Lecture 17 - Demonstration of Maxillary Injection Techniques  
Lecture 18 - Maxillary Injection Techniques - Panel Discussion  
Lecture 19 - Mandibular Injection Techniques - Part 1  
Lecture 20 - Mandibular Injection Techniques - Part 2  
Lecture 21 - Demonstration of Mandibular Injection Techniques  
Lecture 22 - Mandibular Injection Techniques - Panel Discussion  
Lecture 23 - Local Complications  
Lecture 24 - Local Complications - Panel Discussion  
Lecture 25 - Systemic Complications - Part 1  
Lecture 26 - Systemic Complications - Part 2  
Lecture 27 - Systemic Complications - Part 3  
Lecture 28 - Demonstration of Systemic Complications

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

NPTEL Video Course - Multi Disciplinary - NOC: Intellectual Property Portfolio Management

Subject Co-ordinator - Prof. Rajat Agrawal

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Understanding Basics  
Lecture 2 - Types of IPR and Their Applications  
Lecture 3 - Innovation and Intellectual Property  
Lecture 4 - Understanding Various Portfolios  
Lecture 5 - International and National Scenario of IP  
Lecture 6 - Patent Filing Strategies  
Lecture 7 - Patent Filing  
Lecture 8 - Country Selection for Patent Filing in Foreign Countries  
Lecture 9 - International Filing - 1  
Lecture 10 - International Filing - 2  
Lecture 11 - Ranking Based Tier Strategies  
Lecture 12 - Centralization of Patent Renewals and Translations  
Lecture 13 - Budgeting for Patent Portfolio  
Lecture 14 - Monitoring Based Countermeasures  
Lecture 15 - General Cost Saving Measures  
Lecture 16 - Various IP Strategies (Patent)  
Lecture 17 - Various IP Strategies (Trademark, Copyright, Trade secret)  
Lecture 18 - Understanding Elements of IP Strategies  
Lecture 19 - IP Valuation Strategy  
Lecture 20 - IP SWOT (Strength, Weaknesses, Opportunities, Threats) Analysis  
Lecture 21 - Generations of Innovation  
Lecture 22 - Idea Generation  
Lecture 23 - Innovation Management  
Lecture 24 - Innovation Management System ISO 56000  
Lecture 25 - Strategies to Protect Innovation  
Lecture 26 - Ensuring Quality and Extracting Values from the Patent Portfolio  
Lecture 27 - International Patent Classification (IPC) System  
Lecture 28 - Patent Landscape  
Lecture 29 - Patent Infringement

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

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- Lecture 30 - PATENTSCOPE Search System
- Lecture 31 - IP Incubating
- Lecture 32 - IP Accounting
- Lecture 33 - IP Commercialization
- Lecture 34 - IP and Taxation
- Lecture 35 - Lean IP Management
- Lecture 36 - National IP Strategies
- Lecture 37 - Significance of IP Audit
- Lecture 38 - IP and SDGs
- Lecture 39 - IP Enforcement
- Lecture 40 - Case Studies

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

NPTEL Video Course - Multi Disciplinary - NOC:Teaching and Learning in Engineering (TALe)

Subject Co-ordinator - Prof. N.J. Rao

Co-ordinating Institute - IISc - Bangalore

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

- Lecture 1 - Overview of TALe and Good Engineer
- Lecture 2 - Education and Teaching
- Lecture 3 - Learning, Instruction and Assessment
- Lecture 4 - What is OBE?
- Lecture 5 - Accreditation
- Lecture 6 - Outcomes
- Lecture 7 - Program Outcomes - 1
- Lecture 8 - Program Outcomes - 2
- Lecture 9 - Taxonomy of Learning
- Lecture 10 - Cognitive Levels
- Lecture 11 - General Categories of Knowledge
- Lecture 12 - Metacognitive Knowledge
- Lecture 13 - Vincenti Categories of Engineering Knowledge
- Lecture 14 - Affective and Psychomotor Domains
- Lecture 15 - Taxonomy Table
- Lecture 16 - Course Outcomes - 1
- Lecture 17 - Course Outcomes - 2
- Lecture 18 - Course Outcomes - POs and PSOs
- Lecture 19 - Attainment of COs
- Lecture 20 - Attainment of POs and PSOs

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

NPTEL Video Course - Multi Disciplinary - NOC:Teaching and Learning in General Programs

Subject Co-ordinator - Prof. N.J. Rao

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Teaching and Learning in General Programs (TALG)

Lecture 2 - Education and Teaching

Lecture 3 - Learning, Assessment and Instruction

Lecture 4 - Outcome Based Education (OBE)

Lecture 5 - Accreditation

Lecture 6 - Program Outcomes

Lecture 7 - POs and PSOs

Lecture 8 - Taxonomy of Learning

Lecture 9 - Taxonomy of Learning

Lecture 10 - Taxonomy of Learning

Lecture 11 - Taxonomy of Learning

Lecture 12 - Affective Domain

Lecture 13 - Psychomotor Domain

Lecture 14 - Taxonomy Tables

Lecture 15 - Course Outcomes - 1

Lecture 16 - Course Outcomes - 2

Lecture 17 - Tagging the Course Outcomes

Lecture 18 - Attainment of Course Outcomes

Lecture 19 - Attainment of POs and PSOs

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

NPTEL Video Course - Multi Disciplinary - NOC:TALE 2 - Course Design and Instruction of Engineering Courses

Subject Co-ordinator - Prof K Rajani Kanth

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Engineering Programs, NBA Accreditation and Engineering Courses

Lecture 2 - Course Design

Lecture 3 - ISD and ADDIE

Lecture 4 - Analysis Phase - 1

Lecture 5 - Analysis Phase - 2

Lecture 6 - Design Phase

Lecture 7 - Technology and Targets

Lecture 8 - Assessment Pattern and Assessment Instruments

Lecture 9 - Item Banks

Lecture 10 - Development Phase

Lecture 11 - Instruction Material and Learning Material

Lecture 12 - Implement Phase - 1

Lecture 13 - Implement Phase - 2

Lecture 14 - Evaluate Phase

Lecture 15 - Course Exit Survey

Lecture 16 - Evaluating Laboratories and Electives

Lecture 17 - Exit Surveys for Projects

Lecture 18 - Summary Feedback

Lecture 19 - Instruction

Lecture 20 - Instructional Situations

Lecture 21 - How Brains Learn - 1

Lecture 22 - How Brains Learn - 2

Lecture 23 - How Brains Learn - 3

Lecture 24 - Instructional Components - 1

Lecture 25 - Instructional Components - 2

Lecture 26 - Merrill's Principles of Learning

Lecture 27 - ID based on Merrill's Principles

Lecture 28 - Direct Approach to Instruction

Lecture 29 - Project Based Approach to Instruction

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

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- Lecture 30 - Problem Based Approach to Instruction
- Lecture 31 - Experiential Approach to Instruction
- Lecture 32 - Simulation Approach to Instruction
- Lecture 33 - Instruction for Design
- Lecture 34 - Instruction for Metacognitive Learning
- Lecture 35 - So, what should a teacher do?



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

NPTEL Video Course - Multi Disciplinary - NOC:NBA Accreditation and Teaching Learning in Engineering (NATE)

Subject Co-ordinator - Prof. N J Rao, Prof. K. Rajanikanth

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - NATE  
Lecture 2 - NBA Accreditation  
Lecture 3 - Outcome Based Education  
Lecture 4 - Self Assessment Report  
Lecture 5 - Education, Teaching, Learning, Instruction, and Assessment  
Lecture 6 - PEOs and POs (1-5)  
Lecture 7 - POs (6-9)  
Lecture 8 - POs (10-12)  
Lecture 9 - PSOs  
Lecture 10 - Taxonomy of Learning  
Lecture 11 - Cognitive Processes - 1  
Lecture 12 - Cognitive Processes - 2  
Lecture 13 - Categories of Knowledge - 1  
Lecture 14 - Categories of Knowledge - 2  
Lecture 15 - Taxonomy Table  
Lecture 16 - Affective and Psychomotor Domains  
Lecture 17 - Course Outcomes - 1  
Lecture 18 - Course Outcomes - 2  
Lecture 19 - Tagging Course Outcomes  
Lecture 20 - Computing Attainment of COs  
Lecture 21 - Computing PO and PSO Attainment  
Lecture 22 - Course Design Component of Teaching as per Fink's Model  
Lecture 23 - ISD and ADDIE Models  
Lecture 24 - ADDIE - Analysis Phase 1  
Lecture 25 - ADDIE - Analysis Phase 2  
Lecture 26 - ADDIE - Design Phase  
Lecture 27 - Technology for Assessment; Setting Targets  
Lecture 28 - Assessment Plan and Assessment Instruments  
Lecture 29 - Item Banks

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Lecture 30 - ADDIE- Development Phase  
Lecture 31 - ADDIE - Implement Phase 1  
Lecture 32 - ADDIE - Implement Phase 2  
Lecture 33 - Exit Surveys - 1  
Lecture 34 - Exit Surveys - 2  
Lecture 35 - ADDIE - Evaluate Phase  
Lecture 36 - Instruction An Overview  
Lecture 37 - Instructional Situations  
Lecture 38 - How Brains Learn  
Lecture 39 - Instructional Components  
Lecture 40 - Principles of Instruction Design  
Lecture 41 - Direct Instruction - 1  
Lecture 42 - Direct Instruction - 2  
Lecture 43 - Project Based Approach to Instruction  
Lecture 44 - Problem Based Approach to Instruction  
Lecture 45 - Instruction for Design thinking  
Lecture 46 - Simulation Approach to Instruction  
Lecture 47 - Instruction for Metacognitive Learning  
Lecture 48 - So, What Should the teacher do?  
Lecture 49 - NBA Criterion 1 Vision, Mission, PEOs - 1  
Lecture 50 - NBA Criterion 1 Vision, Mission, PEOs - 2  
Lecture 51 - NBA Criterion 2 Teaching-Learning Processes - 1  
Lecture 52 - NBA Criterion 2 Teaching-Learning Processes - 2  
Lecture 53 - NBA Criterion 3 COs and POs - 1  
Lecture 54 - NBA Criterion 3 COs and POs - 2  
Lecture 55 - NBA Criterion 4 Students' Performance  
Lecture 56 - NBA Criterion 5 Faculty Information and Contributions  
Lecture 57 - NBA Criterion 6 Facilities and Technical Support  
Lecture 58 - NBA Criterion 7 Continuous Improvement  
Lecture 59 - NBA Criterion 8 First Year Academics  
Lecture 60 - NBA Criterion 9 Student Support Systems  
Lecture 61 - NBA Criterion 10 Governance, Institutional Support and Financial Resources  
Lecture 62 - Summary

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

NPTEL Video Course - Multi Disciplinary - NOC:Fundamentals of Ecology

Subject Co-ordinator - Prof. Vishweshwara Guttal, Prof. Kavita Isvaran, Prof. Kartik Shanker, Prof. Umesh Srinivasan

Co-ordinating Institute - IISc - Bangalore

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

Lecture 1 - Fundamentals in Ecology  
Lecture 2 - Evolutionary Ecology  
Lecture 3 - How animals and plants sense and navigate the world  
Lecture 4 - Accessing resources  
Lecture 5 - Competing for resources  
Lecture 6 - Movement ecology  
Lecture 7 - Adaptations in predator-prey interactions  
Lecture 8 - Social behaviour  
Lecture 9 - Mating systems  
Lecture 10 - Life history theory  
Lecture 11 - General intro to population dynamics  
Lecture 12 - Math Refresher  
Lecture 13 - Density independent growth  
Lecture 14 - Tutorial/Numerical Examples  
Lecture 15 - Density dependent growth (Continuous time; logistic model)  
Lecture 16 - Lotka-Volterra competition models  
Lecture 17 - Competitive Exclusion and Coexistence  
Lecture 18 - Summary and recap  
Lecture 19 - Spatial population structure and dynamics  
Lecture 20 - Metapopulation case study: butterflies  
Lecture 21 - Study design - Part 1  
Lecture 22 - Study design - Part 2  
Lecture 23 - Study design - Part 3  
Lecture 24 - Quantitative thinking - Part 1  
Lecture 25 - Quantitative thinking - Part 2  
Lecture 26 - Introduction  
Lecture 27 - Conditions and resources  
Lecture 28 - Fundamental and realised niches  
Lecture 29 - Distribution of communities

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

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- Lecture 30 - Community assembly
- Lecture 31 - Introduction to species interactions
- Lecture 32 - Competition
- Lecture 33 - Predation
- Lecture 34 - Parasitism and Infectious disease
- Lecture 35 - Positive interspecies interactions
- Lecture 36 - Food webs
- Lecture 37 - Food web case study
- Lecture 38 - Plant-animal interactions
- Lecture 39 - Species invasion as an ecological process - I
- Lecture 40 - Species invasion as an ecological process - II
- Lecture 41 - Species concepts
- Lecture 42 - Species diversity - 1
- Lecture 43 - Species diversity - 2
- Lecture 44 - Diversity and distribution
- Lecture 45 - Relative abundance
- Lecture 46 - Macroecology - 1
- Lecture 47 - Macroecology - 2
- Lecture 48 - Biogeography
- Lecture 49 - The Changing Earth
- Lecture 50 - Ecosystems and Biogeochemistry - 1
- Lecture 51 - Ecosystems and Biogeochemistry - 2
- Lecture 52 - Introduction to the Anthropocene
- Lecture 53 - Climate change