

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

NPTEL Video Course - General - NOC:Risk-Based Engineering

Subject Co-ordinator - Prof Prabhakar V Varde

Co-ordinating Institute - Homi Bhabha National Institute

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

Lecture 1 - RBE: Background and Overview
Lecture 2 - RBE Framework
Lecture 3 - RBE-Framework continuation and Major Procedural Elements
Lecture 4 - RBE-Major Procedural Elements (Continued...)
Lecture 5 - Risk Characterization
Lecture 6 - Reliability Characterization and Probability Distributions-Discrete Distribution
Lecture 7 - Probability Distributions - Continuous Distribution
Lecture 8 - Statistical Estimation in Probability Theory
Lecture 9 - Probability and Confidence Interval
Lecture 10 - Regression Analysis
Lecture 11 - Life Prediction : Introduction
Lecture 12 - Life Prediction : Related Aspects
Lecture 13 - Life Prediction and Assessment Approaches
Lecture 14 - Life Prediction : Accelerated Screening and Life Testing
Lecture 15 - Probabilistic Fracture Mechanic Approach
Lecture 16 - Introduction and Reliability Block Diagram (RBD)
Lecture 17 - RBD - System Redundancies
Lecture 18 - Fault Tree Analysis
Lecture 19 - Fault Tree Analysis Continuation and Event Tree Analysis
Lecture 20 - Markov Model
Lecture 21 - Dynamic Fault Tree
Lecture 22 - Dynamic Event Tree and Binary Decision Diagram
Lecture 23 - Common Cause Failure
Lecture 24 - Importance and Sensitivity Analysis
Lecture 25 - Maintainability
Lecture 26 - PRA-Introduction
Lecture 27 - PRA-Organizational and Quality Aspects
Lecture 28 - PRA-Qualitative Modeling and Analysis
Lecture 29 - PRA-Quantification of the PRA model

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- Lecture 30 - Monte Carlo Simulation, Root Cause Analysis
- Lecture 31 - Low Power and Shutdown PRA
- Lecture 32 - Internal Flood PRA
- Lecture 33 - Level 1 Fire PRA
- Lecture 34 - Seismic PRA
- Lecture 35 - Level 2 and Level 3 PRA
- Lecture 36 - Human Reliability- Introduction
- Lecture 37 - State of the Art in Human-Reliability
- Lecture 38 - Technique for Human Error Rate Prediction (THERP)
- Lecture 39 - Human Cognitive Reliability (HCR) Method
- Lecture 40 - CQB - Method Consciousness, Cognition, Conscience and Brain
- Lecture 41 - Uncertainty - Introduction
- Lecture 42 - Uncertainty: Overview, preliminary discussions considering selected approaches
- Lecture 43 - Parametric Approach to Uncertainty
- Lecture 44 - Uncertainty Modelling using Fuzzy Approach in RBE
- Lecture 45 - Uncertainty â Bayesian, and Monte-Carlo technique
- Lecture 46 - Scope of Course and Introduction
- Lecture 47 - PoF and FMMECA
- Lecture 48 - Failure Mechanism and Models
- Lecture 49 - Virtual Qualification
- Lecture 50 - Physical qualification and Prognostics
- Lecture 51 - PHM Introduction
- Lecture 52 - Prognostics and Health Management in RBE
- Lecture 53 - Major AI and ML Techniques and Algorithms in PHM
- Lecture 54 - Role of ANN technique in RUL Estimation
- Lecture 55 - Uncertainty Management in PHM
- Lecture 56 - RBE-Introduction
- Lecture 57 - RBE for Life Extension in support of regulatory relicensing
- Lecture 58 - RBE-Risk Monitor
- Lecture 59 - RBE-Inservice-Inspection
- Lecture 60 - RB Operator Support System

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

NPTEL Video Course - General - Introduction to Japanese Language and Culture

Subject Co-ordinator - Mrs. Vatsala Misra

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction to Japanese scripts
- Lecture 2 - Jiko shoukai (Self introduction)
- Lecture 3 - Dochira kara desu ka (Where are you from?)
- Lecture 4 - Senmon wa nan desu ka (What is your specialization?)
- Lecture 5 - Kore wa hon desu (This is a book)
- Lecture 6 - Ikura desu ka (How much is it?)
- Lecture 7 - Ima nan-ji desu ka (What is the time now?)
- Lecture 8 - Kaigi wa roku-ji-han kara desu (The meeting is from 6
- Lecture 9 - Ashita Tokyo e ikimasu. (I will go to Tokyo tomorrow)
- Lecture 10 - Watashi wa mainichi roku-ji ni okimasu (I wake up at 6â oclock everyday)
- Lecture 11 - Itsu Kanpur e kimashita ka (When did you come to Kanpur?)
- Lecture 12 - Y?binkyoku wa asoko ni arimasu (The post office is over there)
- Lecture 13 - Rao san wa doko ni imasu ka (Where is Mr. Rao?)
- Lecture 14 - Pikuniku e ikimash? (Letâ s go for a picnic)
- Lecture 15 - Kesa pan to tamago o tabemashita (I ate eggs and bread for breakfast)
- Lecture 16 - Depa-to no tonari no biru wa gink? desu (The building next to the department store is the bank)
- Lecture 17 - Taj hoteru wa ookii hoteru desu(Hotel Taj is a big hotel)
- Lecture 18 - Hoteru de nani o tabemashita ka (What did you eat at the hotel?)
- Lecture 19 - Tokyo wa ?kikute kirei desu (Tokyo is big and beautiful)
- Lecture 20 - Ko-hi- wa oishiku arimasen(Coffee is not tasty)
- Lecture 21 - Hantai kotoba (Opposites)
- Lecture 22 - Watashi wa mainichi miruku o nomimasu (I drink milk everyday)
- Lecture 23 - Watashi wa oniisan ni kamera o moratta(I received a camera from my brother)
- Lecture 24 - Nani o tabetai desu ka(What do you want to eat?)
- Lecture 25 - Nani o sashiagemasu ka (Giving and Receiving)
- Lecture 26 - Sensei wa watashi ni hon o kuremashita (My teacher gave me a book)
- Lecture 27 - Chotto matte kudasai (Just a minute please)
- Lecture 28 - Ke-ki o tabete mite kudasai (Eat and see how is the cake)
- Lecture 29 - Nani o shite imasu ka(What are you doing?)

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- Lecture 30 - Tokyo ni sunde imasu (I live in Tokyo)
- Lecture 31 - Kanji ga kakemasu (I can write Kanji)
- Lecture 32 - Im?to wa ningy? o hoshigatte imasu (My sister wants a doll)
- Lecture 33 - Aisukuri-mu ga ke-ki yori suki desu (I like ice-cream more than cakes)
- Lecture 34 - Kutsu o kai ni ikimasu (I am going to buy shoes)
- Lecture 35 - Ashita motto atsuku narimasu (It is going to become very hot tomorrow)
- Lecture 36 - Rainen Tokyo e iku to omoimasu (I think I will go to Tokyo next year)
- Lecture 37 - Pen de kaite mo ii desu ka(Is it alright to write in pen?)
- Lecture 38 - Comprehensions and Expressions
- Lecture 39 - Basic Kanji
- Lecture 40 - Basic Kanji

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

NPTEL Video Course - General - Astronomy in Ancient, Medieval and Early Telescopic Era of India

Subject Co-ordinator - Prof. Amitabha Ghosh

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Introduction

Lecture 2 - Pre Siddhantic Astronomy

Lecture 3 - Siddhantic Astronomy

Lecture 4 - Astronomy in Medieval India

Lecture 5 - Introduction to Telescopic Astronomy and Concluding remarks

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

NPTEL Video Course - General - NOC:Carbon Accounting and Sustainable Designs in Product Lifecycle Management

Subject Co-ordinator - Prof. Amandeep Singh Oberoi, Prof. Deepu Philip, Prof. Prabal Pratap Singh

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Productivity and Sustainability - Part 1
Lecture 2 - Measuring Productivity
Lecture 3 - Measures Affecting Productivity
Lecture 4 - Productivity and Sustainability - Part 2
Lecture 5 - Environmental Management system
Lecture 6 - Green System
Lecture 7 - Carbon Footprint
Lecture 8 - Carbon Credit Trading
Lecture 9 - Industrial Ecology and Carbon Footprint
Lecture 10 - Examples of Carbon Footprint Calculations
Lecture 11 - Examples of Carbon Footprint Calculations
Lecture 12 - Some More Green Thoughts and Footprints
Lecture 13 - Green Manufacturing
Lecture 14 - Partnership for a New Generation of Vehicles (PNGV)
Lecture 15 - Smart Design and Engineering
Lecture 16 - Road to Product Lifecycle Management - Part 1
Lecture 17 - Road to Product Lifecycle Management - Part 2
Lecture 18 - Road to Product Lifecycle Management - Part 3
Lecture 19 - Sustainability and Green Supply Chain - Part 1
Lecture 20 - Sustainability and Green Supply Chain - Part 2
Lecture 21 - Energy Transformations
Lecture 22 - PLM Components and levels - Part 1
Lecture 23 - PLM Components and levels - Part 2
Lecture 24 - PLM integration - Part 1
Lecture 25 - PLM integration - Part 2
Lecture 26 - Facility carbon accounting
Lecture 27 - Activities of emission - Part 1
Lecture 28 - Activities of emission - Part 2
Lecture 29 - Carbon and business data - Part 1

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Lecture 30 - Carbon and business data - Part 2
Lecture 31 - Carbon and business data - Part 3
Lecture 32 - Carbon accounting software - Part 1
Lecture 33 - Carbon accounting software - Part 2
Lecture 34 - Carbon Accounting Model - Part 1
Lecture 35 - Carbon Accounting Model - Part 2
Lecture 36 - Carbon Accounting Model - Part 3
Lecture 37 - Carbon Accounting Model - Part 4
Lecture 38 - Carbon Accounting Model - Part 5
Lecture 39 - Integrated PL,SLM and ALM
Lecture 40 - Environmental, Social and Governace (ESG) Systems
Lecture 41 - Carbon Accounting Databases - Part 1
Lecture 42 - Carbon Accounting Databases - Part 2
Lecture 43 - Carbon Accounting Databases - Part 3
Lecture 44 - Database Management Systems
Lecture 45 - Database Design
Lecture 46 - Terminologies in Database Design - I
Lecture 47 - Terminologies in Database Design - II
Lecture 48 - Database Schema - Part 1
Lecture 49 - Database Schema - Part 2
Lecture 50 - Database Normalization - Part 1
Lecture 51 - Database Normalization - Part 2
Lecture 52 - Carbon Accounting User Interface - Part 1
Lecture 53 - Carbon Accounting User Interface - Part 2
Lecture 54 - Carbon Accounting User Interface - Part 3

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NPTEL Video Course - General - NOC:Stress Management

Subject Co-ordinator - Prof. Rajlakshmi Guha

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - What is Stress
- Lecture 2 - Sources of stress
- Lecture 3 - Types of Stress
- Lecture 4 - Personality Factors and Stress
- Lecture 5 - Stress and the College Student
- Lecture 6 - Stress and Nervous System
- Lecture 7 - Hypothalamic-Pituitary-Adrenal (HPA) Axis
- Lecture 8 - Effect of Stress on Immune System
- Lecture 9 - Health Risk Associated with Chronic Stress
- Lecture 10 - Stress and Major Psychiatric Disorders
- Lecture 11 - Understanding your stress level
- Lecture 12 - Role of Personality Pattern, Self Esteem, Locus of Control
- Lecture 13 - Role of Thoughts Beliefs and Emotions - I
- Lecture 14 - Role of Thoughts Beliefs and Emotions - II
- Lecture 15 - Life Situation Intrapersonal
- Lecture 16 - Developing Cognitive Coping Skills
- Lecture 17 - Autogenic Training, Imagery and Progressive Relaxation
- Lecture 18 - Other Relaxation Techniques
- Lecture 19 - Exercise and Health
- Lecture 20 - DIY Strategies Stress Management

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

NPTEL Video Course - General - NOC:Outcome Based Pedagogic Principles for Effective Teaching

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 to Need of 21st Century Education

Lecture 2 - Accreditation

Lecture 3 - Outcome based Learning

Lecture 4 - Approach to Design Outcome based Learning

Lecture 5 - Approach to Design Outcome based Learning (Continued...)

Lecture 6 - Instructional Design for Active Learning

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

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

NPTEL Video Course - General - Ayurvedic Inheritance of India

Subject Co-ordinator - Dr. M.S. Valiathan

Co-ordinating Institute - Manipal University

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

- Lecture 1 - Roots of Ayurveda
- Lecture 2 - Traditional Medicine in Buddhist India
- Lecture 3 - Period of Systematization
- Lecture 4 - Philosophical ideas in Ayurveda
- Lecture 5 - Human Body in Health
- Lecture 6 - Human Body in Disease
- Lecture 7 - Food and Drinks
- Lecture 8 - Code for Healthy Living
- Lecture 9 - Diseases
- Lecture 10 - Diagnosis and Prognosis
- Lecture 11 - Medical Treatment of Diseases
- Lecture 12 - Materia Medica
- Lecture 13 - Surgical Treatment of Diseases
- Lecture 14 - Surgical Instruments
- Lecture 15 - Treatment of fractures; some surgical procedures
- Lecture 16 - Principles and methods of rejuvenation
- Lecture 17 - Selection of Students
- Lecture 18 - A Science Initiative in Ayurveda (ASIIA)
- Lecture 19 - Ayurvedic Biology
- Lecture 20 - Conclusion

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

NPTEL Video Course - General - NOC:Introduction to Research

Subject Co-ordinator - Dr. G. Phanikumar, Prof. C. Balaji, Dr. Arun K.Tangirala, Dr. Abhijit P. Deshpande, Pr

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Insight into research
Lecture 2 - Role of Guide and Student
Lecture 3 - Art of Re-Search
Lecture 4 - Persistent small steps towards success
Lecture 5 - Overview of research
Lecture 6 - Overview of Literature Survey
Lecture 7 - Literature Survey using Web of Science
Lecture 8 - Literature Survey using Scopus
Lecture 9 - Writing Up
Lecture 10 - Tutorial on using BibTeX with LaTeX to add references to a document
Lecture 11 - Tutorial on using Microsoft Word with Bibliographic Sources
Lecture 12 - Tutorial on using Microsoft Word with endnote entries
Lecture 13 - Experimental skills
Lecture 14 - Data analysis - Part 1
Lecture 15 - Data analysis - Part 2
Lecture 16 - Modelling skills - Part 1
Lecture 17 - Modelling skills - Part 2
Lecture 18 - Safety in laboratory
Lecture 19 - How to make Technical presentation
Lecture 20 - Creativity in Research - Part 1
Lecture 21 - Creativity in research - Part 2
Lecture 22 - Creativity in research - Part 3
Lecture 23 - Technical Writing
Lecture 24 - Group discussion on Ethics in Research
Lecture 25 - Intellectual property - Part 1
Lecture 26 - Intellectual property - Part 2
Lecture 27 - DOE Part 1
Lecture 28 - DOE part 2
Lecture 29 - DOE part 3

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- Lecture 30 - DOE part 4
- Lecture 31 - DOE part 5
- Lecture 32 - Research in Applied Mechanics
- Lecture 33 - Research in Chemical Engineering
- Lecture 34 - Research in Civil Engineering
- Lecture 35 - Research in Computer Science and Engineering
- Lecture 36 - Research in Engineering Design
- Lecture 37 - Research in Humanities and Social Sciences
- Lecture 38 - Research in Mechanical Engineering
- Lecture 39 - Research in Metallurgical and Materials Engineering
- Lecture 40 - Research in Ocean Engineering
- Lecture 41 - Research in Management Studies
- Lecture 42 - Research in Aerospace Engineering
- Lecture 43 - Research in Biotechnology
- Lecture 44 - Research in Chemistry
- Lecture 45 - Research in Electrical Engineering
- Lecture 46 - Research in Mathematics
- Lecture 47 - Research in Physics
- Lecture 48 - Discussion with Research Scholars

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NPTEL Video Course - General - NOC: Biology for engineers and other non-biologists

Subject Co-ordinator - Dr. Madhulika Dixit, Prof. G.K. Suraishkumar

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction
Lecture 2 - Origin of Life
Lecture 3 - Evolution
Lecture 4 - Cells
Lecture 5 - Biomolecules
Lecture 6 - Biomolecules
Lecture 7 - Biomolecules
Lecture 8 - Biomolecules
Lecture 9 - Biomolecules
Lecture 10 - Cell structure and function ^ Prokaryotes
Lecture 11 - Cell structure and function ^ Eukaryotes
Lecture 12 - Cell cycle
Lecture 13 - Cell division ^ mitosis
Lecture 14 - Cell division ^ meiosis
Lecture 15 - Culture growth
Lecture 16 - Mendelian genetics
Lecture 17 - Mendelian genetics
Lecture 18 - Mendelian genetics
Lecture 19 - Mendelian genetics
Lecture 20 - DNA replication
Lecture 21 - Transcription
Lecture 22 - Translation

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NPTEL Video Course - General - NOC:Digital and the Everyday - from Codes to Cloud

Subject Co-ordinator - Prof. Amit Prakash, Prof. Bidisha Chaudhuri

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to the Course
Lecture 2 - Introduction to the Winter School
Lecture 3 - Socio-algorithmic processes and the Everyday - Part 1
Lecture 4 - Socio-algorithmic processes and the Everyday - Part 2
Lecture 5 - Socio-algorithmic processes and the Everyday - Part 3
Lecture 6 - Data Protection and Privacy Regulation in the Digital Era - Part 1
Lecture 7 - Data Protection and Privacy Regulation in the Digital Era - Part 2
Lecture 8 - Data Protection and Privacy Regulation in the Digital Era - Part 3
Lecture 9 - Data-driven Identities - Part 1
Lecture 10 - Data-driven Identities - Part 2
Lecture 11 - Data-driven Identities - Part 3
Lecture 12 - Promises and Challenges of e-Health - Part 1
Lecture 13 - Promises and Challenges of e-Health - Part 2
Lecture 14 - Promises and Challenges of e-Health - Part 3
Lecture 15 - Digital Finance - Part 1
Lecture 16 - Digital Finance - Part 2
Lecture 17 - Digital and our everyday interactions with the state - Part 1
Lecture 18 - Digital and our everyday interactions with the state - Part 2
Lecture 19 - Digital and our everyday interactions with the state - Part 3
Lecture 20 - Creating a Machine Zone through Affected Feedback
Lecture 21 - Creating a Machine Zone through Affected Feedback
Lecture 22 - Creating a Machine Zone through Affected Feedback

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NPTEL Video Course - General - NOC:Effective Engineering Teaching in Practice

Subject Co-ordinator - Prof. G.K. Suraishkumar

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction to the course
- Lecture 2 - An Inexperienced Engineering Teacher's View
- Lecture 3 - From traditional lecturing to helping students learn - 1
- Lecture 4 - From traditional lecturing to helping students learn - 2
- Lecture 5 - Better learning (Bloom's Taxonomy)
- Lecture 6 - Problem based learning (PBL) and Problem Solving - Part 1
- Lecture 7 - Problem based learning (PBL) and Problem Solving - Part 2
- Lecture 8 - Writing Learning Outcomes for a Course
- Lecture 9 - Active Learning
- Lecture 10 - Cooperative Group Learning
- Lecture 11 - Flipped Classroom
- Lecture 12 - Effective Laboratory Courses
- Lecture 13 - Assessment - Part 1
- Lecture 14 - Assessment - Part 2
- Lecture 15 - How can we use research in education? - Part A1
- Lecture 16 - How can we use research in education? - Part A2
- Lecture 17 - The Class, as a Whole - Part A3
- Lecture 18 - Psychological Type (Orientation) and Learning - Part B
- Lecture 19 - Cognitive Development Theories & Two Main Examples - Part C
- Lecture 20 - Learning Theories - Part D
- Lecture 21 - Feedback and Reflection - Part 1
- Lecture 22 - Feedback and Reflection - Part 2
- Lecture 23 - Feedback and Reflection - Part 3
- Lecture 24 - Live Session 1
- Lecture 25 - Live Session 2

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NPTEL Video Course - General - NOC:Virtual Reality Engineering

Subject Co-ordinator - Dr. M. Manivannan

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Course mechanics
Lecture 2 - Goals and VR definitions
Lecture 3 - Historical perspective
Lecture 4 - Birds-eye view (general)
Lecture 5 - Birds-eye view (general) (Continued...)
Lecture 6 - Birds-eye view (hardware)
Lecture 7 - Birds-eye view (software)
Lecture 8 - Birds-eye view (sensation and perception)
Lecture 9 - Geometric modeling
Lecture 10 - Transforming models
Lecture 11 - Matrix algebra and 2D rotations
Lecture 12 - 3D rotations and yaw, pitch, and roll
Lecture 13 - 3D rotations and yaw, pitch, and roll (Continued...)
Lecture 14 - Axis-angle representations
Lecture 15 - Quaternions
Lecture 16 - Converting and multiplying rotations
Lecture 17 - Converting and multiplying rotations (Continued...)
Lecture 18 - Homogeneous transforms
Lecture 19 - The chain of viewing transforms
Lecture 20 - Eye transforms
Lecture 21 - Eye transforms (Continued...)
Lecture 22 - Canonical view transform
Lecture 23 - Viewport transform
Lecture 24 - Viewport transform (Continued...)
Lecture 25 - Three interpretations of light
Lecture 26 - Refraction
Lecture 27 - Simple lenses
Lecture 28 - Diopters
Lecture 29 - Imaging properties of lenses

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- Lecture 30 - Lens aberrations
- Lecture 31 - Optical system of eyes
- Lecture 32 - Photoreceptors
- Lecture 33 - Sufficient resolution for VR
- Lecture 34 - Light intensity
- Lecture 35 - Eye movements
- Lecture 36 - Eye movements (Continued...)
- Lecture 37 - Eye movement issues for VR
- Lecture 38 - Neuroscience of vision
- Lecture 39 - Three Psychophysical Laws
- Lecture 40 - Sensation and Perception
- Lecture 41 - Psychophysics of Visual Perception
- Lecture 42 - Gamma Encoding
- Lecture 43 - Limiting Resolution
- Lecture 44 - Depth perception
- Lecture 45 - Depth perception (Continued...)
- Lecture 46 - Motion perception from Visual System
- Lecture 47 - Frame rates and displays
- Lecture 48 - Frame rates and displays (Continued...)
- Lecture 49 - Psychophysics of Depth Perception
- Lecture 50 - Overview
- Lecture 51 - Orientation tracking
- Lecture 52 - Tilt drift correction
- Lecture 53 - Yaw drift correction
- Lecture 54 - Tracking with a camera
- Lecture 55 - Perspective n-point problem
- Lecture 56 - Filtering
- Lecture 57 - Lighthouse approach
- Lecture 58 - Visual Rendering-Overview
- Lecture 59 - Visual Rendering-overview (Continued...)
- Lecture 60 - Shading models
- Lecture 61 - Rasterization
- Lecture 62 - Pixel shading
- Lecture 63 - VR-specific problems
- Lecture 64 - Distortion shading
- Lecture 65 - Post-rendering image warp
- Lecture 66 - Why Haptics?
- Lecture 67 - What is Haptics?
- Lecture 68 - Branches of Haptics

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- Lecture 69 - Human Haptics - Tactile System
- Lecture 70 - Kinesthetic System
- Lecture 71 - Motor System
- Lecture 72 - Haptic Devices and Interfaces - Kinesthetic Devices
- Lecture 73 - Haptic Devices and Interfaces - Tactile Devices
- Lecture 74 - Physics and Physiology
- Lecture 75 - Auditory perception
- Lecture 76 - Auditory localization
- Lecture 77 - Rendering
- Lecture 78 - Spatialization and display
- Lecture 79 - Combining other senses
- Lecture 80 - Interfaces -overview
- Lecture 81 - Evaluation of VR Systems
- Lecture 82 - Social interaction
- Lecture 83 - System control
- Lecture 84 - Manipulation
- Lecture 85 - Locomotion
- Lecture 86 - Principles of Perception
- Lecture 87 - Introduction to Kalman Filter
- Lecture 88 - Introduction to Extended Kalman Filter
- Lecture 89 - Grand Challenges in VR/AR
- Lecture 90 - Ultimate VR/AR System

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

NPTEL Video Course - General - NOC:Non-Conventional Energy Resources

Subject Co-ordinator - Dr. Prathap Haridoss

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Renewable Energy Technologies
Lecture 2 - Energy Usage by Humans - Estimate of Impact on Atmosphere
Lecture 3 - Conventional Sources of Energy
Lecture 4 - Non-Conventional Sources of Energy - An Overview
Lecture 5 - Energy consumption
Lecture 6 - Details of Energy usage in each sector
Lecture 7 - Consequences of Energy consumption
Lecture 8 - Solar Energy incident on Earth, Solar Spectrum
Lecture 9 - The Solar Energy Budget
Lecture 10 - Electromagnetic Radiation - The Solar Spectrum
Lecture 11 - Solar flat plate collector
Lecture 12 - Solar Radiator
Lecture 13 - Solar Energy - The Semiconductor
Lecture 14 - Solar energy - The p-n junction
Lecture 15 - Solar Cell - Growing the single crystal and making the p-n junction
Lecture 16 - Solar Energy - Interaction of p-n junction with radiation
Lecture 17 - Solar Energy - Solar cell characteristics and usage
Lecture 18 - Solar Energy - Solar cell construction
Lecture 19 - Solar Energy - Solar Photocatalysis
Lecture 20 - Wind Energy - Overview
Lecture 21 - Wind Energy - Energy Considerations
Lecture 22 - Wind Energy - Efficiency
Lecture 23 - Wind Energy - Parts and Materials
Lecture 24 - Wind Energy - Design Considerations
Lecture 25 - Ocean Thermal Energy - Conversion (OTEC)
Lecture 26 - Geothermal Energy
Lecture 27 - Geothermal Energy Technological aspects
Lecture 28 - Biomass Usage and Issues
Lecture 29 - Battery Basics

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- Lecture 30 - Battery Testing and Performance
- Lecture 31 - Lithium ion Batteries
- Lecture 32 - Common Battery Structures and Types
- Lecture 33 - Types of Fuel Cells
- Lecture 34 - Fuel Processing for PEM Fuel Cells
- Lecture 35 - Fuel Cells
- Lecture 36 - Characterization of Electrochemical Devices
- Lecture 37 - Fuel Cells
- Lecture 38 - Supercapacitors
- Lecture 39 - Flywheels
- Lecture 40 - Magnetohydrodynamic Power Generation

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

NPTEL Video Course - General - NOC:Introduction to Remote Sensing

Subject Co-ordinator - Dr.Arun K.Saraf

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - What is satellite based remote sensing?

Lecture 2 - Development of remote sensing technology and advantages

Lecture 3 - Different platforms of remote sensing.

Lecture 4 - Electromagnetic Spectrum, solar reflection and thermal emission

Lecture 5 - Interaction of EM radiation with atmosphere including atmospheric scattering, absorption and emission

Lecture 6 - Interaction mechanism of EM radiation with ground and spectral response curve

Lecture 7 - Principles of image interpretation

Lecture 8 - Multi-spectral scanners and imaging devices

Lecture 9 - Salient characteristics of Landsat, IRS, Cartosat, Resourcesat sensors

Lecture 10 - Image characteristics and different resolutions in Remote Sensing

Lecture 11 - Image interpretation of different geological landforms, rock types and structures

Lecture 12 - Remote Sensing Integration with GIS and GPS

Lecture 13 - Geo-referencing Technique

Lecture 14 - Basic Image Enhancement Techniques

Lecture 15 - Spatial Filtering, Band ratio and Principal Component Analysis techniques

Lecture 16 - Image Classification Techniques

Lecture 17 - InSAR Techniques in its applications

Lecture 18 - Hyperspectral Remote Sensing

Lecture 19 - Integrated applications of RS and GIS in groundwater studies

Lecture 20 - Limitations of Remote Sensing Techniques

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

NPTEL Video Course - General - NOC:Technical Communications for Engineers

Subject Co-ordinator - Prof. Arun K. Saraf

Co-ordinating Institute - IIT - Roorkee

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

Lecture 1 - Introduction to Technical Communications and their types

Lecture 2 - Title and an abstract

Lecture 3 - An abstract vs extended abstract vs summary

Lecture 4 - Keywords and Introduction sections

Lecture 5 - Background and review work

Lecture 6 - Data inputs and analytical methods

Lecture 7 - Results and discussion

Lecture 8 - Conclusions and acknowledgement

Lecture 9 - Letters, Email, SMS and WhatsApp message

Lecture 10 - Key components of a chart and types of plots

Lecture 11 - Key components of a chart and types of plots

Lecture 12 - Tables and captions

Lecture 13 - Key elements of a map figure

Lecture 14 - Power Point Presentations - 1

Lecture 15 - Power Point Presentations - 2

Lecture 16 - Power Point Presentations - 3

Lecture 17 - Project Proposals

Lecture 18 - References and bibliography

Lecture 19 - What is Plagiarism - 1

Lecture 20 - What is Plagiarism - 2

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

NPTEL Video Course - General - NOC:Biomedical Ultrasound: Fundamentals of Imaging and Micromachined Transducers

Subject Co-ordinator - Prof. Himanshu Shekhar, Prof. Karla P. Mercado-Shekhar, Prof. Hardik J. Pandya

Co-ordinating Institute - IIT - Gandhinagar

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

Lecture 1 - Introduction to the course
Lecture 2 - Introduction to ultrasound imaging
Lecture 3 - Basics of wave propagation
Lecture 4 - Scattering and acoustic wave equation
Lecture 5 - Intensity, Reflection, Transmission
Lecture 6 - Recap of Week 1
Lecture 7 - Introduction to Imaging modes
Lecture 8 - Imaging artifacts
Lecture 9 - Ultrasound imaging systems
Lecture 10 - Transducers and transducer arrays
Lecture 11 - Recap of Week 2
Lecture 12 - Introduction to Microfabrication
Lecture 13 - Silicon and Silicon Dioxide
Lecture 14 - Numericals on Ultrasound
Lecture 15 - Introduction to Cleanroom
Lecture 16 - Silicon and Silicon Dioxide - II
Lecture 17 - Thermal Oxidation - I
Lecture 18 - Thermal Oxidation - II
Lecture 19 - Thermal Evaporation theory
Lecture 20 - Thermal Evaporation lab demonstration
Lecture 21 - E beam Deposition theory
Lecture 22 - E beam deposition lab demonstration
Lecture 23 - Sputtering theory
Lecture 24 - Sputtering lab demonstration
Lecture 25 - Chemical Vapor Deposition - I
Lecture 26 - Chemical Vapor Deposition - II
Lecture 27 - Lithography
Lecture 28 - Lithography lab demonstration
Lecture 29 - Lithography optics - I

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- Lecture 30 - Lithography optics - II
- Lecture 31 - Introduction to Beamforming
- Lecture 32 - Beamforming Pt 2
- Lecture 33 - Beamforming and Signal Processing
- Lecture 34 - Intro to Field II simulation - impulse response, beam pattern
- Lecture 35 - Recap of week 7
- Lecture 36 - Ultrasound image quality metrics
- Lecture 37 - Contrast agents
- Lecture 38 - Contrast-enhanced imaging
- Lecture 39 - Nonlinear acoustics and imaging
- Lecture 40 - Recap of week 8
- Lecture 41 - Field II imaging simulations
- Lecture 42 - Doppler ultrasound
- Lecture 43 - Color and Power Doppler ultrasound
- Lecture 44 - Quantitative Ultrasound
- Lecture 45 - Recap of week 9
- Lecture 46 - Ultrasound bioeffects
- Lecture 47 - Bioeffects and safety
- Lecture 48 - Ultrasound elastography
- Lecture 49 - Shear wave imaging
- Lecture 50 - Recap of week 10
- Lecture 51 - RIE and DRIE
- Lecture 52 - Wet etching and Miller Indices - I
- Lecture 53 - Wet etching and Miller Indices - II
- Lecture 54 - Wet bench lab demonstration
- Lecture 55 - PCB (Printed Circuit Board)
- Lecture 56 - Ultrasonic Sensor
- Lecture 57 - Material Characterisation : STM and AFM
- Lecture 58 - Wire bonding lab demo
- Lecture 59 - Piezoelectric polymers
- Lecture 60 - Characterisation of materials - I
- Lecture 61 - Characterisation of materials - II
- Lecture 62 - Characterisation of materials - III