

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

NPTEL Video Course - Civil Engineering - NOC:Remote Sensing and GIS for Rural Development

Subject Co-ordinator - Prof. Pennan Chinnasamy

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - Introduction to course - Rural development (RD)
- Lecture 2 - Water security (SF) and Water security (GW) and issues
- Lecture 3 - Food security and issues
- Lecture 4 - Agriculture and rural infrastructure issues
- Lecture 5 - Rural Development
- Lecture 6 - Data and mapping issues for Rural regions
- Lecture 7 - Introduction to Remote Sensing and need
- Lecture 8 - Remote Sensing for Water and Food Security
- Lecture 9 - Remote Sensing for Rural infrastructures
- Lecture 10 - Remote Sensing for Rural Development
- Lecture 11 - Intro to Remote Sensing Data for Rural Development
- Lecture 12 - Intro to Remote Sensing Data for Rural Development : Water
- Lecture 13 - Intro to Remote Sensing Data for Rural Development : Soil and Climate
- Lecture 14 - Intro to Remote Sensing Data for Rural Development : NASA datasets for water
- Lecture 15 - Intro to Remote Sensing Data for Rural Development
- Lecture 16 - Intro to GIS and QGIS
- Lecture 17 - Intro to GIS data types and download
- Lecture 18 - Intro to GIS vector data type and QGIS panel
- Lecture 19 - Vector Tools in QGIS
- Lecture 20 - QGIS tutorials for vector analysis and data searching
- Lecture 21 - Intro to Raster Data type in GIS
- Lecture 22 - Raster data type formats and uses
- Lecture 23 - Raster data and Vector data quality issues
- Lecture 24 - Raster data tools: Raster calculator and Raster Align
- Lecture 25 - Raster data tools: Clip and Masking tools
- Lecture 26 - Intro to GIS Projections and Co-ordinate systems
- Lecture 27 - Intro to digitization of images for raster data
- Lecture 28 - Digitization of scanned maps into raster data
- Lecture 29 - Extracting point and line features from georeferenced data

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- Lecture 30 - Extracting polygon features from georeferenced data
- Lecture 31 - Creating shapefiles from georeferenced maps
- Lecture 32 - Google Earth Pro introduction for extracting data
- Lecture 33 - Ground Control points from Google Earth Pro and Basemaps
- Lecture 34 - Digital Elevation models and sources
- Lecture 35 - Digital Elevation models (hands on example)
- Lecture 36 - Introduction to Land Use Land Cover
- Lecture 37 - Data for LULC and proxy data
- Lecture 38 - Analyzing Bhuvan LULC data - Part 1
- Lecture 39 - Analyzing Bhuvan LULC data - Part 2
- Lecture 40 - Analyzing USGS LULC data
- Lecture 41 - Different types of LULC classifications
- Lecture 42 - Different types of LULC classifications
- Lecture 43 - Remote Sensing for irrigation assessments
- Lecture 44 - Remote Sensing for Groundwater irrigation assessments
- Lecture 45 - Methods for Crop Statistics using Remote Sensing data
- Lecture 46 - Remote Sensing based indicators for rural development
- Lecture 47 - Remote Sensing methods for crop area and health assessments
- Lecture 48 - NDVI data access
- Lecture 49 - NDVI data from NASA platforms
- Lecture 50 - NDVI data from Sentinel and NASA platforms
- Lecture 51 - Remote Sensing based indicators database
- Lecture 52 - Synergized mapping using Remote Sensing and Crowd Sourced data for rural infrastructures
- Lecture 53 - RS and OSM for mapping rural infrastructures: Schools
- Lecture 54 - RS and OSM for mapping rural infrastructures: Hospitals
- Lecture 55 - RS and OSM for mapping rural infrastructures: Adding data, crops and water bodies
- Lecture 56 - RS and GIS application for Rural Development: Monitoring and Evaluation
- Lecture 57 - RS and GIS application for Rural Development: Monitoring and Evaluation using NDVI and NDWI
- Lecture 58 - RS and GIS application for Rural Development: Water Quality Assessment
- Lecture 59 - RS and GIS application for Rural Development: Indicators and Dashboards
- Lecture 60 - RS and GIS for Rural Development - Summary, Wrap and Ways Forward