

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

NPTEL Video Course - Civil Engineering - NOC:Geographic Information Systems

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Co-ordinating Institute - IIT - Roorkee

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

- Lecture 1 - What is Geographic Information Systems ?
- Lecture 2 - Essential Components of GIS
- Lecture 3 - Different types of vector data
- Lecture 4 - Concept of topology
- Lecture 5 - Demonstration through GIS software
- Lecture 6 - Raster data model and comparisons with vector
- Lecture 7 - TIN data model and comparisons with raster
- Lecture 8 - Non-spatial data (attributes) and their types
- Lecture 9 - Vector data compression techniques
- Lecture 10 - Demonstration through GIS software
- Lecture 11 - Raster data compression techniques - 1
- Lecture 12 - Raster data compression techniques - 2
- Lecture 13 - Georeferencing
- Lecture 14 - Pre-processing of spatial datasets - 1
- Lecture 15 - Demonstration through GIS software
- Lecture 16 - Pre-processing of spatial datasets - 2
- Lecture 17 - Pre-processing of spatial datasets - 3
- Lecture 18 - Spatial Interpolation Techniques - 1
- Lecture 19 - Spatial Interpolation Techniques - 2
- Lecture 20 - GIS ANALYSIS - 1
- Lecture 21 - GIS Analysis - 2
- Lecture 22 - GIS Analysis - 3
- Lecture 23 - GIS Analysis - 4
- Lecture 24 - GIS Analysis - 5
- Lecture 25 - Demonstration through GIS software
- Lecture 26 - GIS Analysis - 6
- Lecture 27 - GIS Analysis - 7
- Lecture 28 - Attributes Classification Methods
- Lecture 29 - Special database systems and their types - 1

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- Lecture 30 - Demonstration through GIS software
- Lecture 31 - Spatial database systems and their types - 2
- Lecture 32 - Concept of NoData in Raster
- Lecture 33 - Different map projections
- Lecture 34 - Concept of digital elevation model (DEM) and how it is represented
- Lecture 35 - Demonstration through GIS software
- Lecture 36 - Various techniques to generate digital elevation model - 1
- Lecture 37 - Various techniques to generate digital elevation model - 2
- Lecture 38 - Various techniques to generate digital elevation model - 3
- Lecture 39 - Digital Elevation Models and different types of resolutions
- Lecture 40 - Demonstration through GIS software
- Lecture 41 - How to assess quality of a DEM?
- Lecture 42 - Integration of DEMs with satellite data
- Lecture 43 - Demonstration through GIS software...
- Lecture 44 - Common derivatives of DEMs - Slope and aspect - 1
- Lecture 45 - Common derivatives of DEMs - Slope and aspect - 2
- Lecture 46 - Common derivatives of DEMs - Slope and aspect - 3
- Lecture 47 - Demonstration through GIS software
- Lecture 48 - DEMs derivatives - 1
- Lecture 49 - DEMs derivatives - 2
- Lecture 50 - DEMs derivatives - 3
- Lecture 51 - DEMs derivatives - 4
- Lecture 52 - Shaded relief models and their applications
- Lecture 53 - DEM based Surface Hydrologic Modelling - 1
- Lecture 54 - DEM based Surface Hydrologic Modelling - 2
- Lecture 55 - DEMs and Dam Simulation and its application in groundwater hydrology
- Lecture 56 - Applications of DEMs in Viewshed and Flood Hazard Mapping
- Lecture 57 - Applications of DEMs in solar and wind energy potential estimations
- Lecture 58 - DEMs Sources, limitations and future of Digital Elevation Models
- Lecture 59 - Errors in GIS and key elements of maps
- Lecture 60 - Limitations of GIS