



## Course Content Transmission

Issue No. : 001  
Date of Issue : 01.08.2013  
Revision No : Nil  
Date of Revision : Nil  
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<b>Name of the course:</b>	Digital Transmission - I
<b>Duration:</b>	5 days
<b>Venue:</b>	Welisara

### Course content:

- ✚ Introduction to Digital transmission
  - ❖ Advantages of Digital over Analogue
  - ❖ Digital Transmission systems
  - ❖ Transmission Impairments
- ✚ Transmission Media
  - ❖ Transmission line characteristics
  - ❖ Transport and Access networks
  - ❖ Limitation for Data communication over PSTN\
  - ❖ Digital Subscriber Line (DSL)
- ✚ Signal Encoding
  - ❖ Manchester, Differential Manchester, Bi-phase and other signal codes
  - ❖ Frequency spectrum of a random data signal
  - ❖ Shannon's formula for Channel capacity
- ✚ Modems and Data Multiplexers
  - ❖ Digital Modulation methods
  - ❖ Scrambling and De-scrambling
  - ❖ Echo Cancellation
- ✚ Broadband access technologies
  - ❖ ISDN and ADSL
  - ❖ Introduction to CDMA



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- ✚ Base Band and Band Pass transmission
  - ❖ Synchronous Vs Asynchronous
  - ❖ E1 and HDLC frames structure
  - ❖ DMR block diagram and possible Base Bands
  - ❖ Introduction to Fiber optic transmission
- ✚ Error Control
  - ❖ Transmission Errors
  - ❖ Principles of error detection and correction
  - ❖ Error detection methods