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Course Outline & Syllabus

CCTV CAMERA INSTALLATION & NETWORKING

The course curriculum is designed and prepared by

eT&T

1st Month

Basic Electronics

Current, Voltage, Multi-Meter, soldering and dis-soldering pth Conductor, Insulator, on/off Sw, Fuse , Coil, AC, DC, Diode,   Zener Diode, Capacitor, LED, Transformer , Transistor

Power Supply

• Type of Power Supply
• Connection of Power Supply
• Load Calculation
• Test
• Making of Own Power
Supply unit for DVR and Camera
• **Fault & Repairing of Power Supply**

CCTV SYSTEM

• What is CCTV System
• What is CCD Camera
• Type of CCTV Camera
• Componets of Basic camera
• Assemblling CCTV Camera
• Types of Camera Lens

PCB of CCD Camera

• PCB Parts
• PCB Types
• PCB Technology

CCD(charge-coupled device) Description

• Function of CCD
• Type of CCD
• Sizes of CCD
• Brands of CCD

Quality of CCD Camera

• T V L
• Resolution
• **Connection of CCD Camera**
• Simple Camera Connections
• Audio : MIC & Speaker Connection.

• LED Night Vision Connections

Lens

• Type of Lense
• Board Lense
• C Mount Lense
• Auto Iris Lense
• Zoom Lense

CCTV ACCESSORIES

Cable
• Type of Cable
• Quality of Cable
• Gauge of Cable
• Use and application of Cable
Additional
• Motorised Lens
• Housing and Mounting
• Video Balloon
• Type of Connectors

DVR (DIGITAL VIDEO RECORDERS)

• Type of DVR
• Frames Configuration of DVR
• Internal Setting of DVR
• Front and Back Panel of DVR
• Wiring Connections of DVR
• Types of Storage Device
• HDD fixing in DVR
• HDD Formatting throw DVR Menu

CCTV CAMERA Installation

• Testing & Positioning Camera Through Camera Tester
• BNC connecter connection, power cable connection
• Cable Preparation & Testing
• Installation of CCTV camera
• Wiring and its connections

- Power supply for camera
- Connectors - BNC / RCA
- Power Connectors
- DVR Structure
- Front and back panel of DVR

2rd Month
DVR
- DVR Connections
- Audio Connection in DVR
- Hard Disc Installation
- Output to TV and Monitor
- DVR operation and settings
- USB Back up
TROUBLESHOOTING
- Hardware Troubleshooting
- Software Troubleshooting
- USB back up from DVR
- Fault findings
TEST AND ANALYSIS
- Written Test and grading

HOW TO VIEW CAMERA ON NET
NETWORKING FOR CCTV
- Introduction to LAN
- Networking topologies
- Media
- Cabling and Different Cables
- Communicating through LAN & WAN
- Making Straight throw cable and X-Over Cable
- IP Address configuration
- Ping Reply
- Remote Viewing of cameras
- Wiring and connections
- Network connectivity
- Modem or router configure
- DVR Port Forwarding
- DVR Software installation in computer and Mobile phone.
- Viewing of cameras on Smart phone & other computer throw same Wi-Fi or other internet