# SYLLABUS FOR THE CCTV & NETWORKING

***Course Duration:*** *3Months (240 Hours)*

***Eligibility:*** *SSLC Pass or Equivalent*

***Mode:*** *Theory + Practical*

## Module 1: Electronics Fundamentals

1. Basic electricity
2. Voltage, current, resistance
3. Ohm's Law
4. Electronic components
5. Soldering and desoldering
6. Using a digital multimeter
7. Reading circuit diagrams

## Module 2: CCTV Technology

1. CCTV fundamentals
2. Camera types (TVI, AHD, CVI, IP)
3. DVR and NVR
4. Lens selection
5. Hard disk installation
6. Camera positioning
7. Power supply
8. Cabling standards

## Module 3: CCTV Installation

1. Cable laying
2. BNC connector crimping

3. RJ45 connector crimping
4. PoE technology
5. DVR/NVR configuration
6. Remote viewing
7. Mobile app setup
8. CCTV maintenance

## Module 4: Computer Networking

1. Network basics
2. LAN, WAN, MAN
3. IP addressing
4. Subnetting
5. Switches and routers
6. DHCP
7. DNS
8. NAT

## Module 5: Network Installation

1. UTP cable standards
2. RJ45 crimping
3. Network testing
4. Wi-Fi configuration
5. Access Point installation
6. Router configuration
7. VLAN basics
8. Network troubleshooting

## Module 6: Advanced CCTV & Networking

1. IP camera configuration
2. ONVIF
3. Port forwarding

4. DDNS
5. Cloud P2P
6. Wireless CCTV
7. Fibre basics
8. Network security

## Module 7: Practical Sessions

1. CCTV installation
2. DVR/NVR programming
3. Router configuration
4. Wi-Fi setup
5. Complete project installation

## Tools Covered

- Digital multimeter
- DC power supply
- Soldering station
- Hot air rework station
- Microscope
- Oscilloscope (basic)
- LAN cable tester
- RJ45 crimping tool
- OTG tools
- Flashing software

## Projects

1. Install a 4-camera CCTV system
2. Configure an IP camera
3. Set up a home/office network
4. Remote CCTV viewing via mobile
5. Troubleshoot network and CCTV faults

## Assessment

- Theory: 30%
- Practical: 60%
- Final Project & Viva: 10%

# SYLLABUS FOR THE MOBILE PHONE TECHNOLOGY& NETWORKING

***Course Duration:*** *3 Months (240 Hours)*

***Eligibility:*** *SSLC Pass or Equivalent*

***Mode:*** *Theory + Practical*

## Module 1: Electronics Fundamentals

1. Basic electricity
2. Voltage, current, resistance
3. Ohm's Law
4. Electronic components
5. Soldering and desoldering
6. Using a digital multimeter
7. Reading circuit diagrams

## Module 2: Mobile Phone Hardware

1. Mobile phone architecture
2. Android and iPhone hardware
3. Display types (LCD, OLED, AMOLED)
4. Battery technology
5. Charging circuits
6. SIM and memory card circuits
7. Camera modules
8. Speakers, microphones and sensors

## Module 3: Mobile Phone Repair

1. Disassembly and assembly
2. Screen replacement
3. Battery replacement
4. Charging problems
5. Water damage repair
6. Motherboard troubleshooting
7. IC identification
8. Microsoldering techniques

## Module 4: Mobile Phone Software

1. Android installation
2. Flashing firmware
3. FRP removal
4. Bootloader
5. Fastboot and Recovery mode
6. Software troubleshooting
7. Data backup and recovery
8. Unlocking methods

## Module 5: Computer Networking

1. Network basics
2. LAN, WAN, MAN
3. IP addressing
4. Subnetting
5. Switches and routers
6. DHCP
7. DNS
8. NAT

## Module 6: Network Installation

1. UTP cable standards
2. RJ45 crimping
3. Network testing
4. Wi-Fi configuration
5. Access Point installation
6. Router configuration
7. VLAN basics
8. Network troubleshooting

## Module 7: Practical Sessions

1. Mobile disassembly
2. Screen replacement
3. Charging IC diagnosis
4. Router configuration
5. Wi-Fi setup
6. Complete project installation

## Tools Covered

- Digital multimeter
- DC power supply
- Soldering station
- Hot air rework station
- Microscope
- Oscilloscope (basic)
- LAN cable tester
- RJ45 crimping tool
- OTG tools
- Flashing software

## Projects

1. Repair a faulty Android phone
2. Set up a home/office network
3. Troubleshoot network

## Assessment

- Theory: 30%
- Practical: 60%
- Final Project & Viva: 10%

# SYLLABUS FOR THE DIPLOMA IN MOBILE PHONE TECHNOLOGY,CCTV & NETWORKING

***Course Duration:*** *6 Months (480 Hours)*

***Eligibility:*** *SSLC Pass or Equivalent*

***Mode:*** *Theory + Practical*

## Module 1: Electronics Fundamentals

1. Basic electricity
2. Voltage, current, resistance
3. Ohm's Law
4. Electronic components
5. Soldering and desoldering
6. Using a digital multimeter
7. Reading circuit diagrams

## Module 2: Mobile Phone Hardware

1. Mobile phone architecture
2. Android and iPhone hardware
3. Display types (LCD, OLED, AMOLED)
4. Battery technology
5. Charging circuits
6. SIM and memory card circuits
7. Camera modules

8. Speakers, microphones and sensors

## Module 3: Mobile Phone Repair

1. Disassembly and assembly
2. Screen replacement
3. Battery replacement
4. Charging problems
5. Water damage repair
6. Motherboard troubleshooting
7. IC identification
8. Microsoldering techniques

## Module 4: Mobile Phone Software

1. Android installation
2. Flashing firmware
3. FRP removal
4. Bootloader
5. Fastboot and Recovery mode
6. Software troubleshooting
7. Data backup and recovery
8. Unlocking methods

## Module 5: CCTV Technology

1. CCTV fundamentals
2. Camera types (TVI, AHD, CVI, IP)
3. DVR and NVR
4. Lens selection
5. Hard disk installation
6. Camera positioning
7. Power supply
8. Cabling standards

## Module 6: CCTV Installation

1. Cable laying
2. BNC connector crimping
3. RJ45 connector crimping
4. PoE technology
5. DVR/NVR configuration
6. Remote viewing
7. Mobile app setup
8. CCTV maintenance

## Module 7: Computer Networking

1. Network basics
2. LAN, WAN, MAN
3. IP addressing
4. Subnetting
5. Switches and routers
6. DHCP
7. DNS
8. NAT

## Module 8: Network Installation

1. UTP cable standards
2. RJ45 crimping
3. Network testing
4. Wi-Fi configuration
5. Access Point installation
6. Router configuration
7. VLAN basics
8. Network troubleshooting

## Module 9: Advanced CCTV & Networking

1. IP camera configuration
2. ONVIF
3. Port forwarding
4. DDNS
5. Cloud P2P
6. Wireless CCTV
7. Fibre basics
8. Network security

## Module 10: Practical Sessions

1. Mobile disassembly
2. Screen replacement
3. Charging IC diagnosis
4. CCTV installation
5. DVR/NVR programming
6. Router configuration
7. Wi-Fi setup
8. Complete project installation

## Tools Covered

- Digital multimeter
- DC power supply
- Soldering station
- Hot air rework station
- Microscope
- Oscilloscope (basic)
- LAN cable tester
- RJ45 crimping tool
- OTG tools
- Flashing software

## Projects

1. Repair a faulty Android phone
2. Install a 4-camera CCTV system
3. Configure an IP camera
4. Set up a home/office network
5. Remote CCTV viewing via mobile
6. Troubleshoot network and CCTV faults

## Assessment

- Theory: 30%
- Practical: 60%
- Final Project & Viva: 10%