

## Repair & maintenance of Photo Copier & Fax Machine

**Name of the course** : Repair & maintenance of Photo Copier & Fax Machine.

**SECTOR** : ELECTRONICS

**CODE** : ELC211

**Entry qualification** : 8<sup>th</sup> std pass with age at least 14 years.

**MES Modules on Basic Electronics -Repair and Maintenance  
of Power supply, Inverter and UPS**

**Duration** : 120 Hrs

**TERMINAL COMPETENCY:**

1. : HE/SHE can able to repair Photo copying machine & Fax machines

**CONTENTS:**

<b>Practical Competencies</b>	<b>Underpinning Knowledge (Theory)</b>
<i>Practice procedures for safety and health hazards measures</i>	<i>Electrical and personal safety, dangers and preventions</i>
<b>(a). PHOTO COPIER</b>	
Operation of a photo copier.	Principle of photo copying
Dismantling and assembling of paper feed mechanism, paper tray, Thermal unit and Toner Unit.	Photo sensitive materials- selenium etc..
Identify the various sensors used in the copier and their fixtures.	Image transfer methods
Fault finding and repairing in electrostatic high voltage unit.	Various types of sensors and their functions.
Dismantling and fitting of drum unit- cleaning of drum unit	Electrostatic charger and charging of drum assembly.
Dismantling and refitting of Carriage unit , mirror unit and light unit	Toner and its properties.
Fault finding in light unit	Paper trays, Paper feed mechanism and the sensors used for paper movement
Identify the faults and repair in the thermal unit.	Effects of light Intensity on charging the drum unit.
Control modules- understand the fault codes and identify the faulty sections.	Focusing, enlargement methods
Fault finding in control module	Functions of control module – fault codes
Periodic cleaning and servicing of copier machines	Fault finding methods and procedure for copier machines
Overall fault finding and repair a photo copier machine.	Principle of Colour Copiers
Fault finding and repair of Colour copiers	Multipurpose copy printers and heavy duty copiers.
Repairing of Jumbo copiers	
Repairing of multipurpose copy printers.	
Repairing of heavy duty copiers	
<b>(b). FAX MACHINE</b>	
Operation of a Fax machine.	Principle of Fax machine.
Telephone line access and phone connection	Properties of telephone line, ISDN line
Dismantling and assembling of paper feed mechanism, paper tray, Thermal unit and Toner Unit of Fax machine	Data reception and printing Checksum and its importance
Identify the various sensors used in the Fax machines	Scanning of paper and converting to data.

Thermal printers and Ink printers.	Printers thermal and ink , their working principles.
Identify the faults and repair in the thermal printer unit.	Paper trays, Paper feed mechanism and the sensors used for paper movement
Control modules- understand the fault codes and identify the faulty sections.	Functions of control module – fault codes
Fault finding in control module	Fault finding methods and procedure for Fax machines
Periodic cleaning and servicing of fax machines	Fault finding methods and procedure for Fax machines

RESOURCES:

1. Photo copier ( mono)
2. Photo copier colour
3. Copy printer
4. Jumbo copier
5. Fax machine
6. High voltage test unit
7. Multimeter