

**Industrial Automation**  
**VOC-103 : UPS Repairing**

(2 Credits: 50 Marks)

**Learning Objectives**

1. To provide basic concepts of UPS working
2. To equip students with basic troubleshooting skills with UPS

**Learning Outcomes**

On completion of the course, students should be able to -

1	Classify Electrical circuit. Voltage, current, resistance, series and parallel circuit with help of ohm's law
2	Identify Active & passive Electronic components & Explain Characteristics of PN junction diode
3	Explain basic term logy of single phase HWR, Full Wave, Bridge Rectification Circuits
4	Select Inverter for particular application and compare VSI & CSI inverter operation

**Course Contents:**

**Module I: Introduction & Engaging With Customers (8 Hrs)**

Qualifications Pack -Occupational Standards For Electronics Industry by Electronic Sector Skill Council (Field Technician: UPS and Inverter Corresponding NOPS ELE/N0061)

**Module II: Install The UPS/Inverter (6 Hrs)**

Qualifications Pack -Occupational Standards For Electronics Industry by Electronic Sector Skill Council (Field Technician: UPS and Inverter Corresponding NOPS ELE/N7201)

**Module III: Repair dysfunctional UPS/Inverter (8 Hrs)**

Qualifications Pack -Occupational Standards For Electronics Industry by Electronic Sector Skill Council (Field Technician: UPS and Inverter Corresponding NOPS ELE/N7202)

**Module IV: Interaction with Co-workers and Colleagues (8 Hrs)**

Qualifications Pack -Occupational Standards For Electronics Industry by Electronic Sector Skill Council (Field Technician: UPS and Inverter Corresponding NOPS ELE/N9962)

**Module V:** Tutorials, assignments and presentation based on Module I to IV

- Creating a Presentation (Exercise 1 – Creating a Annual Day Presentation)
- Modifying and Refining a Presentation (Exercise 2 – Modifying and Refining Presentation)
- Using Advanced Presentation Features (Exercise 3 – Advanced Features for Presentation)

**Module - III: Database Management Systems**

**(8 Hrs)**

- Overview
- Creating a Database (Exercise 1 – Creating a Student Database)
- Modifying a Table (Exercise 2 – Modifying a Student Database)
- Creating Forms ( Exercise 3 – Creating Form for Student Database)
- Queries and Reports (Exercise 4 – Creating Report)
- Protecting the Database (Exercise 5 – Protecting a Student Database)

**Module - IV: Internet**

**(8 Hrs)**

- Internet Basics
- Navigating the Web ( Exercise 1 – Navigating the web site)
- Finding Information on the Web (Exercise 2 – Searching result on the web)
- Communication Using E-Mail (Exercise 3 – Communicate result to your friends)

**Module - V:** Tutorials, assignments and presentation based on Module I to IV

**References:**

1. Microsoft Office Word 2007 a Beginners Guide: A Training Book of Microsoft Word 2007, By W.R. Mills, United States of America, Bloomington, Indiana.
2. Microsoft Office Word 2007: Illustrated Co: Illustrated Complete, By Jennifer A. Duffy, Carol M. Cram
3. Sams Teach Yourself Microsoft Office 2007 All in One, By Greg Perry
4. Microsoft Office Excel 2007: Comprehensive Concepts and Techniques, By Greg B. Shelly, Thomas J. Cashman, Jeffrey J. Quasney.
5. Microsoft Office Power Point 2007: Illustrated Introductory: Introductory, By David Beskeen
6. Microsoft Office Power Point 2007: Top 100 Simplified Tips & Tricks, By Paul McFedries.
7. Microsoft Office Access 2007: Comprehensive Concepts and Techniques, By Thomas J. Cashman, Philip J. Pratt
8. New Perspectives on Microsoft Office Access 2007, Comprehensive, Joseph J. Adamski, Kathleen T. Finnegan
9. Basic Internet, By O.H.U. Heathcote
10. Microsoft Office 2007 Power Point: A Training Book for Microsoft Power Point 2007, By W. R. Mills