



**Karmaveer Bhaurao Patil University,**

**Satara**

**Syllabus for**

**Hardware Assistant (Skill Level – 4)**

**Under**

**Faculty of Science and Technology**

**(As per NEP 2020)**

**With effect from Academic Year 2024-2025**

**Title of Skill Course: Basic in Hardware Assistant**

1. Department: Department of Computer Application
2. Title: **Basic in Hardware Assistant**
3. Sector: Hardware and Networking
4. Year of implementation:2023

Course Structure

Skill Level	Theory Hours	Practical Hours	Total Hours	Credits	No. of students in batch
4	15	15	30	02	30

**Syllabus**

**Course Objectives:**

1. Understand Core Hardware Concepts.
2. Develop Technical Skills in Assembly and Disassembly.

**Theory Syllabus (Contact Hrs: 15, Credits: 01)**

**Unit I: Introduction to Computer Hardware**

Overview of Computer Systems, Internal Components of a Computer, Peripheral Devices, Understanding BIOS/UEFI, Basic Troubleshooting and Maintenance

**Unit II: Assembling and Disassembling a Computer**

Safety Procedures, Computer Assembly, Installing and Configuring Operating Systems, Disassembly of a Computer, Practical Sessions and Troubleshooting

**Practical Syllabus (Contact Hrs: 15, Credits: 01)**

List of Experiments ----- 15 hrs

1. Identifying Computer Hardware Components
2. Assembling a Desktop Computer
3. Installing and Configuring an Operating System
4. Basic Hardware Troubleshooting
5. Disassembling and Reassembling a Laptop

**Course Outcomes:**

1. Identification and Understanding of Hardware Components.
2. Proficiency in Assembling and Disassembling Computer Systems.

**Reference Books:**

1. "CompTIA A+ Certification All-in-One Exam Guide" by Mike Meyers
2. "The Complete PC Upgrade and Maintenance Guide" by Mark Minasi
3. "How Computers Work" by Ron White
4. "Upgrading and Repairing PCs" by Scott Mueller

**BOS Sub Committee:**

1. Mr. R. P. Suryawanshi
2. Mr. A. D. Phadatare

**Expert:**

1. Mr. Ravindra Kulkarni
2. Mr. Parag