Major Equipment for IDEA Lab

Existing Facilities
CNC machines:

- **Horizontal Turing Centre:** The equipment has a maximum work piece size of 140 mm diameter and 200 mm length. The production-ready machine is equipped with an 8 tool turret and a spindle speed of 4000 rpm with 3.7 kW of power.

- **Vertical Milling Centre:** The 3 axis VMC is equipped with a work volume of 800 x 400 x 350 mm, 12 tool ATC, and a spindle speed of 6000 rpm with 3.7 kW of power.
Major Equipment for IDEA Lab

3D Printers:

Creality – Ender 3-V2 (9 No’s)

Creality – CR-X pro (3 No’s)
**Coordinate Measuring Machine:**

**ECLIPSE - Carl Zeiss Make**

<table>
<thead>
<tr>
<th>Design</th>
<th>Bridge Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probe</td>
<td>RDS System</td>
</tr>
<tr>
<td>Control</td>
<td>CNC Microprocessor Control (3-Axis)</td>
</tr>
<tr>
<td>Measuring Range</td>
<td>700 X 700 X 580</td>
</tr>
<tr>
<td>Measure error</td>
<td>2.5 Microns - 250 mm</td>
</tr>
</tbody>
</table>
**Major Equipment for IDEA Lab**

**Industrial Automation & Robotics Lab:**

- **KUKA Robot** KR - 6 R 700 six with controller (KRC4 compact, SIM pro, KRC4 compact basic cabinet with mounting plate)
- **SCARA Robot** Wit maximum payload of 3 kg
- **Robotic Component Kit, SIM 900 GSM model,** stepper motor, 1 inch 7 segment display, android controller robot, trainer kit box
Major Equipment for IDEA Lab

**Industrial Control Lab:**

- Portable Type Control Logic Board
- PLC Training Kit
- Experimental unit of industrial control and automation using SCADA
List of Mandatory Equipment for IDEA Lab

- Laser Cutter
- CNC Router
- 3D Printers
- Desktop Lathe cum Milling
- Drilling M/c 1 HP Motor
- Handheld High Speed Drilling machine
- Benchtop Grinder Machine
- Solder stations
- Desoldering machine
- Portable Welding M/cs
- Microwave Oven
- Magnifying Glass with Stand
- Digital Microscope
- Mixed Signal Oscilloscope
- Digital Storage Oscilloscope
- Signal Generator
- Variable Power Supply
- Benchtop Multimeter
- Heavy Duty Laser Printer
- PCB Milling Machine
- PCB prototype machine
- Quadcopter assembly kit
- Relay modules
- GPIO Modules