

## AMEYA CENTRE FOR ROBOTICS & EMBEDDED TECHNOLOGY

### Syllabus for PCB designing

- **SCH**

1. Drawing a schematic
2. Making custom schematic components
3. Working with sheets and ports
4. Connecting wires to components
5. Checking of errors
6. Modifying library components
7. Linking .sch and .pcb files

- **PCB**

1. Designing a pcb (Single & Multilayer)
  - a. Manual Routing
  - b. Auto Routing
2. Placing components, power and ground traces, pads and traces
3. Making custom pcb components
4. Modifying library components
5. Adding Power planes(VCC & GND)
6. Making Gerber files
7. Multilayer stack-up
8. Adding top overlay/Silkscreen

- **Tutorials**

- **Single layer (Express PCB)**

1. Power Supply circuit
2. Transistorized Astable multivibrator
3. Operational Amplifier circuit
4. 555 Circuit
5. Digital gates Circuits
6. LDR sensor circuit

- **Multi Layer (Altium)**

1. Tank Ciicuit
2. Blown Fuse Indicator
3. Electronic appliance Protection
4. Electronic lock code
5. AVR Microcontroller based Sensor Interfacing