

#### National Institute of Electronics & Information Technology Gorakhpur – Extension Centre Lucknow

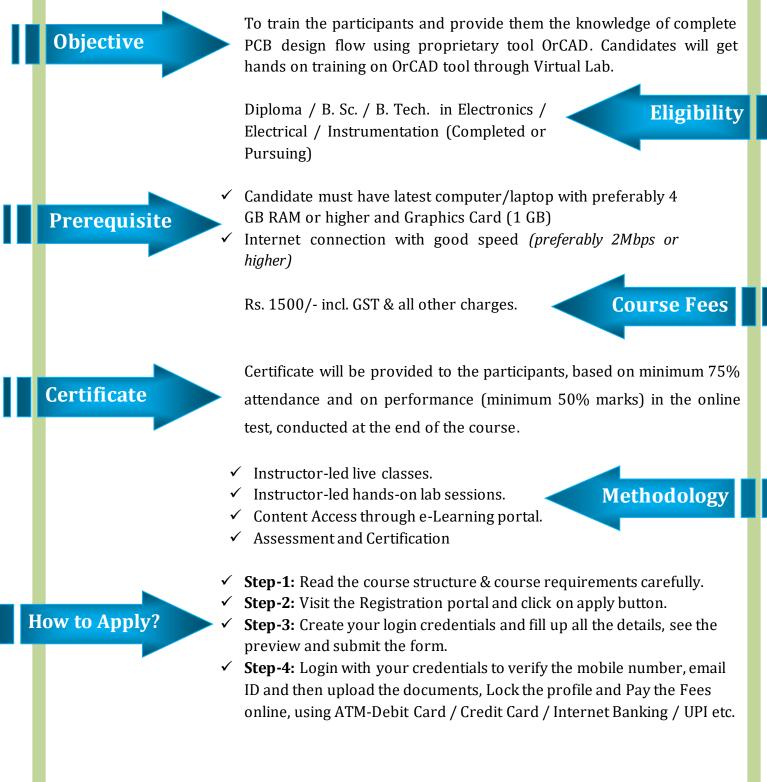
(Under Ministry of Electronics and Information Technology, Govt. of India) MMMUT Campus, Deoria Road, Gorakhpur-273010 http://www.nielit.gov.in/gorakhpur/



# PCB Design using OrCAD

## Course in PCB design using OrCAD 2 Weeks Online Course

Duration: - 2 Weeks. (2 Hrs. per day)





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### **Course Content**

Day	Торіс	Day	Торіс
Day #01	<ul> <li>Introduction to Printed Circuit Board (PCB)</li> <li>PCB Fabrication Process</li> <li>Design flow with OrCAD</li> <li>Creation of a project</li> <li>Accessing the components</li> <li>Implementation of Schematic</li> <li>Simulation of Circuit using Pspice Simulation</li> <li>Run time settings</li> </ul>	Day #02	<ul> <li>Study of datasheet for packaging information</li> <li>Adding footprints to the components</li> <li>Creating the netlist</li> <li>Importing the components on ORCAD PCB Editor</li> <li>Placing and moving the components as per design sequence</li> <li>Routing the components</li> </ul>
Day #03	<ul> <li>Generating the Gerber files /manufacturing files and documentation for PCB fabrication</li> <li>Generation of Bill of Material (BOM)</li> </ul>	Day #04	<ul> <li>Creation of your own THT symbol</li> <li>Creation of footprint using pad stack editor for THT</li> </ul>
Day #05	<ul> <li>Creation of your own SMD symbol</li> <li>Creation of footprint using pad stack editor for SMD</li> </ul>	Day #06	<ul> <li>Assignment 1: Complete Design flow of two stage RC circuit on OrCAD Tool</li> <li>Assignment 2: Complete Design flow of Diode Clipper circuit on OrCAD Tool</li> </ul>
Day #07	<ul> <li>Assignment 3: Complete Design flow of BJT Q2N2222 as switch on OrCAD Tool</li> <li>Assignment 4: Complete Design flow of Wein bridge oscillator circuit using IC 741 OPAMP on OrCAD Tool</li> </ul>		
Day #08			
Day #09	• Assignment 6: Complete Design flow of Low cost power supply (DC-DC) using 1N4734A on OrCAD Tool		
Day #10	<ul> <li>Assignment 7: Complete Design flow of low cost programmable power supply(AC-DC) using IC LM317 and IC 7805C on OrCAD Tool</li> </ul>		

## **Course Coordinator**

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