The detailed content for a 2-day training program on "**PCB (Printed Circuit Board) Design and Manufacture**":

Day 1:

A. Introduction to PCB Design and Manufacture

- Overview of the concepts and principles of printed circuit boards and their applications
- Explanation of the history and evolution of PCBs, including the different types of boards and their uses
- Discussion of the benefits of PCBs, including accuracy, speed, and reliability

B. Designing a PCB

- Overview of the design considerations and best practices for PCB design
- Explanation of the limitations and challenges of PCB design, including material properties, accuracy, and manufacturing compatibility
- Hands-on exercises to reinforce the concepts and techniques covered, including designing and testing simple PCBs

C. Introduction to PCB Design Software

- Overview of the types of PCB design software and their applications
- Explanation of the basic features and functions of PCB design software, including schematic capture, layout, and simulation
- Hands-on exercises to reinforce the concepts and techniques covered, including using PCB design software to create a simple schematic and layout

Day 2:

A. PCB Manufacture Processes and Techniques

- Overview of the different types of PCB manufacture processes and techniques, including photolithography, etching, drilling, and plating
- Explanation of the advantages and disadvantages of each process and technique, including material compatibility, accuracy, and speed
- Hands-on exercises to reinforce the concepts and techniques covered, including using different PCB manufacture processes and techniques to produce a printed circuit board

B. Testing and Troubleshooting of PCBs

- Overview of the common problems and challenges encountered in PCB design and manufacture
- Explanation of the techniques and tools used to test and troubleshoot PCBs, including continuity tests, voltage tests, and inspection
- Hands-on exercises to reinforce the concepts and techniques covered, including testing and troubleshooting a simple PCB

C. Advanced Topics in PCB Design and Manufacture

- Overview of advanced topics in PCB design and manufacture, including multilayer boards, surface mount technology, and embedded components
- Explanation of the benefits and challenges of these advanced topics, including design considerations and manufacturing techniques
- Hands-on exercises to reinforce the concepts and techniques covered, including designing and manufacturing a simple multilayer board