

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA IN ELECTRONICS & COMMUNICATION ENGINEERING
SEMESTER: V

Subject Name: **PCB Designing Tools**

Sr. No.	Course Content
1.	Capture Basics: <ul style="list-style-type: none">1.1 The Capture work environment1.2 Starting a project1.3 Setting up project1.4 Printing and plotting
2.	Creating Designs: <ul style="list-style-type: none">2.1 Design structure2.2 Placing, editing, and connecting parts and symbols2.3 Adding and editing graphics and text2.4 Changing view of a schematic page2.5 Creating and editing parts
3.	Processing Design: <ul style="list-style-type: none">3.1 Processing tools3.2 Preparing to create a netlist3.3 Creating a netlist3.4 Creating reports3.5 Exporting and importing schematic data3.6 Generating a part
4.	Circuit Simulation: <ul style="list-style-type: none">4.1 Using Capture with PSpice4.2 Creating a New Simulation Profile4.3 Setting up the simulation4.4 Simulating the circuit and observing the simulation results4.5 Use of the Probe Cursors in PSpice
5.	Creating PCB Using Layout: <ul style="list-style-type: none">5.1 The Layout design environment5.2 Using Capture with Orcad Layout5.3 Setting up the board5.4 Creating and editing obstacles5.5 Creating and editing text5.6 Placing and editing components5.7 Routing the board5.8 Using thermal reliefs and copper pour zones5.9 Post processing5.10 Creating and editing footprints

Note:

Students have to prepare circuit schematics and PCB layouts of electronic circuits of complexity varying from resistive network to microcontroller based systems.

References Books:

1. OrCAD Capture User's Guide, Cadence Design Systems, Inc.
2. PSPICE for Basic Circuit Analysis, J. G. Tront , MGH
3. OrCAD Layout User's Guide, Cadence Design Systems, Inc.