

Embedded System Hardware Design Training - Basic	
Day	Topic
Day1 (Morning)	<ul style="list-style-type: none"> <li>• Introduction to Electronic Hardware System Design</li> <li>• Understanding an Hardware Design Document</li> </ul>
Day1 (Afternoon)	<ul style="list-style-type: none"> <li>• Introduction to electronic components resistors, capacitors, inductors, transistors, PLD, FPGA</li> <li>• Component Identification and selection for the requirement</li> </ul>
Day2 (Morning)	<ul style="list-style-type: none"> <li>• Power supply conversion               <ul style="list-style-type: none"> <li>○ Basics of AC to DC</li> </ul> </li> </ul>
Day2 (Afternoon)	<ul style="list-style-type: none"> <li>• Power supply conversion               <ul style="list-style-type: none"> <li>○ Basics of DC to DC</li> </ul> </li> </ul>
Day3 (Morning)	<ul style="list-style-type: none"> <li>• Digital I/O               <ul style="list-style-type: none"> <li>○ I/O standards</li> <li>○ Buffers/Drivers/Level Translators</li> </ul> </li> </ul>
Day3 (Afternoon)	<ul style="list-style-type: none"> <li>• Analog I/O               <ul style="list-style-type: none"> <li>○ Basics of ADC and DAC</li> </ul> </li> </ul>
Day4 (Morning)	<ul style="list-style-type: none"> <li>• Introduction to Processor based system</li> <li>• Introduction to FPGA based system</li> </ul>
Day4 (Afternoon)	<ul style="list-style-type: none"> <li>• Memory Interface               <ul style="list-style-type: none"> <li>○ SRAM</li> <li>○ Flash/EPROM</li> <li>○ SDRAM</li> </ul> </li> </ul>
Day5 (Morning)	<ul style="list-style-type: none"> <li>• Serial communication Interface               <ul style="list-style-type: none"> <li>○ UART</li> <li>○ SPI</li> <li>○ I2C</li> </ul> </li> </ul>
Day5 (Afternoon)	<ul style="list-style-type: none"> <li>• Schematic Entry</li> <li>• BOM creation</li> </ul>
Day6 (Morning)	<ul style="list-style-type: none"> <li>• PCB Stack up creation</li> <li>• Layout Guideline</li> </ul>
Day6 (Afternoon)	<ul style="list-style-type: none"> <li>• PCB CAD Layout Design</li> </ul>
Day7 (Morning)	<ul style="list-style-type: none"> <li>• Fabrication Guidelines and Gerber Release</li> <li>• Fabrication process</li> <li>• Assembly process</li> </ul>
Day7 (Afternoon)	<ul style="list-style-type: none"> <li>• Lab Ethics (Procedure for Safety – ESD, Power sequence etc)</li> <li>• Testing - Test and Measurement equipments</li> <li>• Test Report preparation</li> </ul>