Certificate Course in Integrated Embedded & VLSI System Design

Objective of the Course:

The objective of the course is to address the design problems and advance their solutions in VLSI circuits for embedded system and ubiquitous computing application.

Learning Outcomes:

The course is intended to give the student an understanding of the fundamental system level electronic issues involved in the design of digital deep submicron CMOS VLSI systems and a mastery of the basic techniques and methods used to deal with this topic.

Expected Job Roles:

Embedded Programmer

Duration of the Course (in hours)	120 hrs
Appr. Fees (INR):	Rs.16,000/-
Minimum Eligibility Criteria and pre-requisites, if any	Engineering graduates (undergoing also)

Outline of Course

S. No	Topic	Minimum No. of Hours
1.	Embedded C	6 hrs
2.	ARM/ Cortex Architecture	6 hrs
3.	ARM/ Cortex Peripherals	6 hrs
4.	Interfacing ARM/ Cortex to Peripheral devices	8 hrs
5.	Introduction to VLSI	2 hrs
6.	Advanced digital design	8 hrs
7.	CMOS circuit design	5 hrs
8.	HDL languages (VHDL / Verilog)	8 hrs
9.	FPGA Architecture	4 hrs
10.	System designing FPGA	5 hrs
11.	ASIC	2 hrs
12.	Mini project	35 hrs
	Theory / Lecture Hours:	60 hrs
	Practical / Tutorial / Lecture Hours:	60 hrs (including project)
	Total Hours:	120 hrs

Books recommended for reference and reading:	VHDL by Nawabi

Group Code:	EMBD	**Group Name:**	Embedded System
Course Code:	CP02	**Course Name:**	Certificate Course in Integrated Embedded & VLSI System Design