

COURSE PROSPECTUS

Name of the Group: *VLSI Design Group*

Name of the Course: *PG Diploma in VLSI & Embedded Hardware Design*

Course Code: *VL500*

Starting Date: *19.08.2019*

Duration: *24 Weeks*

Course Coordinator: *Nandakumar.R Ph # +91 9995427802*

Preamble: VLSI (Very Large Scale Integration) has emerged as a very significant technology to provide tremendous quantum of process technologies for MEMS, NEMS and RF components, many of the formerly external components can now be integrated into a single System on Chip which has resulted in a dramatic improvements in performance while achieving reduction in the size, cost and power consumption. Complexity in such systems arises not only from the diversity of the technologies, from sensors and actuators and RF frontends to baseband DSP software, etc., that must be integrated on chip comprising of tens of millions of transistors, but also from the fact that such systems must be increasingly built from parts that have been designed separately and using different tools and flows.

Objective of the Course: The PG Diploma in VLSI & Embedded Hardware Design is intended to impart training in designing complex embedded systems using reusable Intellectual Property (IP) Cores as building blocks and employing hierarchical design methods. Emphasis of the teaching curriculum is on design methodology and practical applications. The course contents have been designed keeping in view the emerging trends in needs for skilled manpower.

The curriculum has been designed in consultation with industry and academic experts and our strategic partners, to map the skill sets and design methodologies, which is high in demand in VLSI & Embedded Systems industries. Our students have been successfully placed in reputed product companies and we enjoy the trust of many reputed companies, who have entered into strategic alliances with us.

Outcome of the Course: This course is frequently updated in synchronization with the industry to provide the trainees in-depth knowledge and skills required by Embedded & VLSI markets around the globe. It provides comprehensive understanding about the fundamental principles, methodologies and industry practices.

- This uniquely hybrid course makes the successful participants readily employable in multiple roles available in broad spectrum of relevant industries. For people interested in entrepreneurship this would be an excellent launch pad. In addition the course also serves as a concrete platform for people involved in application research, consultancy and high end product development in both industry and academia.

Course Structure: The VL500 contains eight modules. The students are required to do a project work in any one of the modular areas, for a period of 6 weeks to be eligible for issue of PG Diploma in VLSI & Embedded Hardware Design

The modules are as follows:

Module No	Module Name	Duration(Weeks)
Module 1	Advanced Digital Design	1
Module 2	VHDL : Language and Coding for Synthesis	2
Module 3	Verilog HDL : Language and Coding for Synthesis	3
Module 4	RTL Verification (System Verilog, UVM)	5
Module 5	FPGA Design Methodology and Prototyping	2
Module 6	CMOS Logic & Physical Design	2
Module 7	Embedded Controller Based Product Design	3
Module 8	Project Work	6
Total		24

Other Contents

a. **Course Fees:**

General Candidates: Course fee is Rs 70,000.00 + GST at actuals

SC/ST Candidates: Tuition Fees are waived for SC/ST students admitted under SCSP/TSP. However they are required to remit an amount of **Rs. 8,260.00** as **Advance caution/security deposit. This amount will be considered as caution/security deposit and will be refunded after successful completion of the course. If the student fails to complete the course successfully this amount along with any other caution/security deposits by the student will be forfeited.**

Modular wise Course Fee: Not Applicable for this course

b. **Registration Fee:** An amount of Rs.1000/- (including GST) (nonrefundable) should be paid at the time of registering for the course.

This fee shall be considered as part of course fee, if the student joins the course. If a student register and pay for more than one course and join for any one course, all such amount will be adjusted against the course fee payable.

If the student does not join for the registered course / any of the registered courses, fee paid shall be forfeited.

For SC/ST candidates, the registration fee is Rs.500/- and will be considered as part of caution/security deposit and will be refunded after successful completion of the course. If the candidate does not join or fails to complete the course the amount will be forfeited

However above the registration fee shall be refunded on few special cases as given below

- Course postponed and new date is not convenient for the student
- Course cancelled in advance, well before the admission date

c. **Course Fee Installment Structure:**

Students can pay the full fees of *82600.00* (Rs. *70,000.00* + *GST*) in advance or as installments as given below

Fees	*Amount for General Candidates	Amount for SC/ST Candidates. (considered as caution/security deposit)	#Due Date (on or before)
Registration Fee	Rs.1000/-	Rs.500/-	During Registration
**Advance Fee	Rs. 10,000	Rs. 7,760	
1 st Installment	Rs. 30,300	Nil	19/08/2019
2 nd Installment	Rs. 41,300	Nil	19/09/2019
Total Fee	Rs. 82,600	Rs. 8260 (refundable after successful completion of course)	-

*Above fees is inclusive *GST@actuals(18%)* and revision if any will be applicable at the time of payment.

Fine will be applicable to late fee payment.

** Advance fee - After publication of first selection list, the students in the first selection list have to pay the Advance Deposit within the due date to take the provisional admission. Students in the additional selection list should pay both Advance and First installment fee together on or before counseling day

d. **Eligibility:**

M.E/M.Tech/B.E/B.Tech(ECE/EEE/AEI/CSE/IT/Biomedical/Medical Electronics, Mechatronics and allied branches) / M.Sc (Electronics/CS). Graduates with appropriate experience and final year students[#] also may apply.

[#] Final year students have to include the copies of course completion certificate of their qualifying degree/ diploma or copies of the mark lists up to the last semester/ year. On the date of counseling/ admission, he/she must produce the originals of course completion certificate/ mark lists up to the last semester/year examination.

For more details about the policy refer:

<http://nielit.gov.in/sites/default/files/course/NIELITCalicutPoliciesShortTermCourses.pdf>

e. Number of Seats : 40

f. Selection of candidates : In the order marks obtained for qualifying degree

g. Test/Interview (*if applicable*) : Not Applicable

h. Counseling/Admission : 19.08.2019

i. Important Dates (if applicable) :

<i>Last date for receiving completed application forms</i>	First selection list will be prepared based on the applications received on or before 05.08.2019. The additional selection list will be prepared based on the applications received on or before 12.08.2019, and excluding the applicants, included in the first selection list.
<i>Publication of first selection list in our Website</i>	05.08.2019
<i>Last date for taking provisional admission by paying the advance fees, for applicants in the first selection list</i>	12.08.2019
<i>Publication of additional selection list in our website (if there are vacant seats)</i>	12.08.2019
<i>Counseling date</i>	19.08.2019
<i>Class Commencement date</i>	19.08.2019
<i>Payment of first installment fees</i>	19.08.2019
<i>Payment of second installment fees</i>	19.09.2019

j. Course Timings : 9.30 am to 4.45 pm

k. Placement : <http://nielit.gov.in/content/placement-3>

l. Lab Facilities : <http://nielit.gov.in/calicut/calicut/content/vlsi-design-group>

m. Course Contents:

<http://nielit.gov.in/calicut/course-calendar?coursecode=VL500>

[Click here for General Terms and Conditions – Applicable to all courses](#)