

## DEPARTMENT OF INTERDISCIPLINARY SCIENCE AND TECHNOLOGY

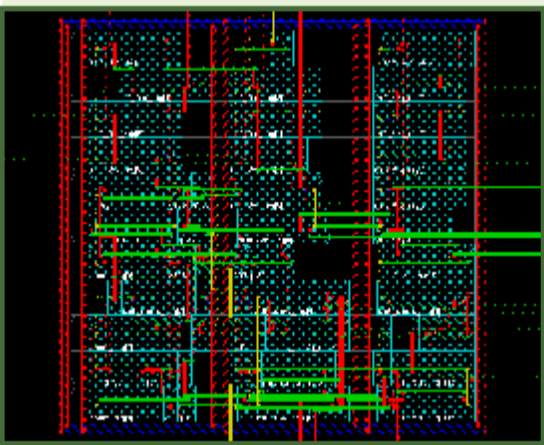
### Advanced Certificate Programme in VLSI Design (ACP-VLS) 6-Months, Full-time

#### Foreword

Electronic systems have taken rapid strides by increasing the speed and performance while reducing the size and cost. Fitting large number of transistors in small area with reduced power consumption is the key aspect for designing today's electronic systems. Factors such as increasing capability of an integrated circuit (IC) over the years in terms of performance, effective utilization of available area and yield have opened up new frontiers for the VLSI industry.

Current VLSI industry expects engineers to be able to apply their theoretical understanding to innovate and improve system design process. Electronic design automation (EDA) tools support the engineer through the design process by encapsulating design blocks. To encompass such a wide range of knowledge of very large-scale integrated circuits, this course focuses on the key concepts and models that enable the engineer to analyze design and predict the behavior of very large-scale integrated circuits with help of EDA tools.

#### Course Structure



#### Level - I

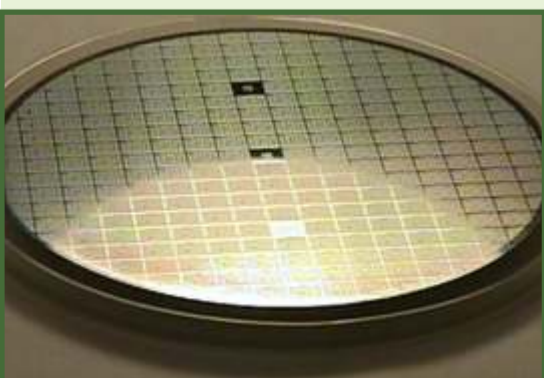
Course Code	Course Name	Credits
VLS -001	Programming languages and scripting languages	[2T+1 L]
VLS -002	Digital design with HDL	[2T+1L]
VLS -003	Programmable System On Chip (PSOC)	[2T+1L]
VLS -004	CMOS VLSI Design	[3T+1L]
VLS -005	Project - I	2L
SSD-001	Soft Skills Development - I	2T
<b>Total Credits</b>		<b>17</b>

#### Level - II

Course Code	Course Name	Credits
VLS -006	ASIC Design	[3T+1L]
VLS -007	Advanced Computer Architecture: Hardware Perspective	[3T+1L]
VLS -008	Verification & Testing	[3T+1L]
VLS -009	Project-II	3L
SSD-002	Soft Skills Development - II	2T
<b>Total Credits</b>		<b>17</b>

**Note:** One credit of Theory (T) equals 1 Hr. of teaching contact hour per week | One credit of Lab (L) equals 2 Hrs. of laboratory work per week

#### Lab Infrastructure



#### Hardware, Software & EDA Tools

- Xilinx CPLD Board
- Xilinx FPGA Boards
- Altera FPGA Boards
- GCC/GDB
- Xilinx ISE Design Suite
- Mentor Graphics ModelSim
- Cadence Virtuoso
- Electric
- Cadence Digital Suite Frontend and Backend
- Code Coverage Tool
- Accellera UVM 1.1

## Distinctive Features

- Strategic location of the Institute in the midst of top technology giants in the Pune Infotech Park
- Over 12+ years of quality experience in delivering technology programmes in niche and emerging areas
- Well qualified and committed faculty with rich teaching, research and industry experience
- Curriculum evaluated by industry experts
- State-of-the-art Laboratory to gain hands on experience on various technological tools & platforms
- Wired broadband internet connectivity of 8 Mbps
- Digital campus learning environment
- Dedicated placement team to facilitate the students for career counseling and placement assistance
- Active interface with technology and user companies
- Excellent on-campus hostel facility available (optional)
- Cafeteria facility available (on cash and carry basis)

## Knowledge / Certification Partners



## Faculty

- Prof. Amit Patwardhan
- Prof. Bhushan Patil
- Prof. Priyashraba Misra
- Prof. Yashodhan Mandke
- Prof. Aparna Khandekar
- Industry Experts

For any programme related queries, please email us at :

[dist@isquareit.com](mailto:dist@isquareit.com)

## Recruiters (Abridged List)

**Intel**  
[www.intel.in](http://www.intel.in)

**Zensar Technologies**  
[www.zensar.com](http://www.zensar.com)

**Sasken**  
[www.sasken.com](http://www.sasken.com)

**iGATE**  
[www.igate.com](http://www.igate.com)

**John Deere**  
[www.deere.com](http://www.deere.com)

**G & D India**  
[www.gi-de.com](http://www.gi-de.com)

**NXP**  
[www.nxp.com](http://www.nxp.com)

**LSI**  
[www.lsi.com](http://www.lsi.com)

**Cadence**  
[www.cadence.com](http://www.cadence.com)

**Wipro Technologies**  
[www.wipro.com](http://www.wipro.com)

## Eligibility

- B.E. / B. Tech / M.E. / M. Tech in Electronics & Telecommunications / Electronics / Electrical / Instrumentation / Computer Engineering / Computer Science / Information Technology or equivalent with at least 55% marks from a recognized university
- M.Sc. in Electronics / Computer or equivalent with at least 55% marks from a recognized university

For more details about the Programmes, Admission, Application & Selection process, please visit [www.isquareit.com](http://www.isquareit.com) or call any of our student counselors between 9 AM & 6 PM on: +91 9372121253 / 9372121254



### I<sup>2</sup>IT Trust & Society's CENTRE FOR ADVANCED STUDIES

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#### Disclaimer:

- The courses & course contents, lab hardware & software environment are subject to change without prior notice keeping in mind the new advances in technology & industry requirements.
- Advanced Certificate Programmes / Electives mentioned will be offered depending on the number of students opting for the respective courses.
- Due to any unforeseen circumstances, the Institute reserves the right to delay / postpone the commencement of the programme.
- The images and pictures used in this leaflet are for illustration purposes only, and in no way constitute or represent exact location, service or idea in this context.