



**AICTE Training And Learning  
(ATAL) Sponsored  
One Week**



**Faculty Development Program  
(application Number:1691608732)  
on**

**OUTCOME-BASED RESEARCH:  
VLSI DESIGN AND MODELING**

**11-16 December 2023**

**REGISTRATION FORM**

- 1.Name:..... Male /Female:.....
- 2.Designation:.....
- 3.Organization:.....
- 4.Teaching Exp:..... Industry Exp:.....
- 5.Highest Qualification:.....
- 6.Specialization:.....
- 7.Areas of Interest:.....
- 8.Address for communication:.....  
.....
- 9.Mobile:.....
- 10.E.Mail:.....

**Declaration:**

The information furnished above is true to the best of my knowledge.I agree to abide by the rules and regulations governing the FDP.

Place :

Date: Signature of the Applicant

**Sponsorship**

Mr/Ms/Dr.....is an employee of our institution and is hereby sponsored for the attending the above FDP.

Place :

Date: Signature of the Principal

Note: Please send the scanned copy of the filled and duly signed registration form to the email [sudhagar.ece@bharathuniv.ac.in](mailto:sudhagar.ece@bharathuniv.ac.in)

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Dr.Swetha Sundeeep Aanand, Managing Director**

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**Address for communication**

The Co-Ordinator  
FDP

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**Bharath**  
INSTITUTE OF HIGHER EDUCATION AND RESEARCH  
(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



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And Learning  
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**One week**

**Faculty Development Program  
(Application Number 1691608732)**

**on**

**OUTCOME-BASED RESEARCH:  
VLSI DESIGN AND MODELING**

**Organized by**

**Department of Electronics and  
Communication Engineering**

**BHARATH INSTITUTE OF SCIENCE  
AND TECHNOLOGY**

**BHARATH INSTITUTE OF HIGHER  
EDUCATION AND RESEARCH**

**Venue: ECE Smart room**

**DATE: 11.12.2023 to 16.12.2023**

## About the Institution

Bharath Institute of Science and Technology(BIST) started with Sri Lakshmi Ammal Educational Trust as the first self-financing Engineering College in Tamil Nadu in 1984 by Dr.S.Jagathrakshakan.The trust then established Sree Balaji Dental College and Hospital in 1989. Sree Balaji Dental College and Hospital was first recognized as a Deemed to be University by MHRD in July 2002, under section 3 of UGC Act 1956 and placed under the purview of new trust of Bharath Institute of Higher Education and Research (BIHER). The Bharath Institute of Science and Technology (BIST) and other institutions (below) was then brought under the ambit of Bharath Institute of Higher Education and Research (BIHER).

## About the Department

It is started in 1992 with two under graduate programs and in 2003 six post-graduate programs were added (M.Tech in Power Systems and Power Electronics & Drives offered by EEE,M.Tech in Digital communication and networking,Embedded system design, VLSI Design and Applied Electronics offered by ECE) . The school also offers research programs (Ph.D.) in the various fields related to Electrical & Electronics Engineering and Electronics & communication Engineering to cater to the ever challenging needs of technical excellence in all areas of both departments such as Communication systems, Wireless networks, Signal and Image Processing, RF MEMS and MIC, Microwave antennas, Optical communication and Photonics, VLSI technologies,IOT and Embedded Systems, Power System, HVDC transmission, Modern Electric Drives, Electric mobility and Renewable Energy. Both B.Tech (EEE) & B.Tech (ECE) program is accredited by Accreditation Board for Engineering and Technology (ABET), USA.

## Aim of the programme

In the last few years, VLSI Design Technologies have gained immense popularity in the research community. The aim of this FDP is to provide research aspects and solutions to the various problems related to the VLSI Design & Modelling.

Focus on emerging concepts of VLSI Design & Modeling.

- To expand the in-depth knowledge of faculty's, industry delegates.

- To generate more open problems for research in related areas.
- Perceive the gaps in attaining learning outcomes as per bloom's taxonomy.To build up research activities in order to bridge the Gap between Academics and Industries through project-based learning in VLSI domain.
- To analyze teaching contents, teaching methods and experimental modes for core VLSI courses effectively.

## Expected Outcomes

- After attending FDP, participants will get in depth Knowledge on the main focus of the FDP will be on physics and technology of devices, circuit design, and system architecture used in CAD tools.
- The faculty members would be able to conduct research-based activities to build up the VLSI domain of their respective institutes
- The faculty members can relook Experiments, Assignments, and projects in VLSI domain to recognize the gaps in attaining learning outcomes as per Bloom's Taxonomy.
- To make the participants familiar with physiological signals and its uses in medical applications.
- Participants will get enhanced knowledge on designing wearable and reliable healthcare devices.

## FDP Theme

CMOS processes have emerged as a viable choice for the integration of today's complex mixed-signal and SoC systems. This FDP will introduce innovative teaching practices in IC design both front-end and back-end design methodologies to the faculty members and researchers to get firsthand experience in this area. The faculty development program on " OUTCOME-BASED RESEARCH: VLSI DESIGN AND MODELING " aims in developing faculty skills in various aspects of microelectronics and VLSI, encompassing materials research, device development and building complex digital and analog blocks. The program also aims in establishing strong research links with industry in India and abroad. The main focus of the FDP will be on physics and technology of devices, circuit design, and system architecture used in CAD tools.

## Indicative Topics

- Introduction to Evolution of Electronics & VLSI Design.
- Digital Integrated Circuit design.
- Digital ASIC design flow.
- Analog Integrated Circuit Design.
- Modeling and Simulation of semiconductor device and sensing and digital application.
- Emerging Technologies in VLSI design.
- Advanced Digital design and FPGA based design.
- Analog Integrated Circuits Beyond Silicon.
- Analog Integrated Circuit Design
- Analytical modelling of MOS Devices in VLSI, Deep sub-micron modelling, Advance MOSFET Design Structure.
- Analog Integrated Circuits Beyond Silicon
- VLSI Micro-architecture Design

## Resource Person

Sessions will be handled by eminent persons from reputed institutions/industries

## How to apply

The applicant should register AICTE-ATAL web portal at the earliest.

Website: <https://www.aicte-india.org/atal>

## Eligibility and selection

Faculty members from AICTE approved engineering colleges can apply. Selection is on "first come first serve" basis. Selection will be intimated through mail and selected participants should confirm their participation.

## Registration

- No registration Fee
- TA/DA will not be provided
- Selected participants should attend all the sessions for entire duration of FDP
- Last date for receipt of registration form :02.12.2023
- Intimation of selection on or before : 04.12.2023