BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING, NEW DELHI

(APPROVED BY AICTE, AFFILIATED TO GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY)

Hon'ble Dr. Patangrao Kadam
Founder, Bharati Vidyapeeth

Bharati Vidyapeeth's College of Engineering, New Delhi

Bharati Vidyapeeth's College of Engineering (BVCOE), New Delhi, since its establishment in 1999, has strived to provide the best engineering education to its students through well-qualified and dedicated faculty and well-equipped modern laboratories. The college is affiliated with Guru Gobind Singh Indraprastha University, New Delhi, and is approved by the All India Council for Technical Education (AICTE), Ministry of HRD, Govt. of India. BVCOE is steadily striding forward in its quest to establish itself among the top engineering colleges in North India.

INSTITUTE VISION

To be an institute of excellence that provides quality technical education and research to create competent graduates forserving industry and society.

INSTITUTE MISSION

M1:To impart quality technical education through dynamic teaching-learning environment.

M2: To promote research and innovation activities which gives opportunities for life-long learning in context of academic and industry.

M3: To build up links with industry-institute through partnerships and collaborative developmental works.

M4: To inculcate work ethics and commitment in graduates for their future endeavors to serve the society.

About Short Term Course

The Short Term Course (STC-2026) on Machine Learning for VLSI Design aims to familiarize participants with emerging techniques that integrate machine learning concepts into modern VLSI design workflows. The course offers a balanced combination of theory and hands-on sessions covering FSMs, FIFO architectures, Python-assisted hardware modeling and verification, AI-based control systems, hardware neural networks, and physical design fundamentals.

The course emphasizes practical implementation using industry-relevant tools and design methodologies, enabling participants to understand how machine learning can enhance design efficiency, verification accuracy, and system optimization in VLSI applications. Through guided exercises and project-based learning, participants will gain exposure to real-world design challenges and AI-enabled hardware solutions.

This STC is designed for faculty members, students, and professionals from industry. By the end of the course, participants will be equipped with foundational knowledge and practical skills to apply machine learning techniques in VLSI design, research, and teaching, and to explore future opportunities in intelligent hardware systems. Participation in this STC will help learners strengthen their academic profile and enhance career readiness in the evolving field of AI-enabled VLSI design.

☑ CERTIFICATE

Certificates will be awarded to the participants having more than 80% attendance.

Department of Electronics and Communication Engineering

The Department of Electronics and Communication Engineering has an approved annual intake of 180 students for its NBA-accredited B.Tech. (ECE) program. The department has highly trained and qualified faculty members who are committed to imparting high-quality education. The laboratories, developed by the faculty themselves, are well equipped, adaptive to the needs of ambitious students, and foster an environment conducive to research and practical knowledge acquisition. To encourage extracurricular activities among students, the department has various professional chapters and cells. The activities and competitions organized by these communities allow students to showcase their technical and fundamental electronics skills. A considerable number of our talented students have been recruited by prestigious government and private sector organizations. Thus, we believe that our students will be assets not only to our department and institution, but also to the nation at large.

DEPARTMENT VISION

The department aspires to be an advanced center of learning by synergizing teaching, learning and research to produce competent engineers capable of serving the society.

DEPARTMENT MISSION

DM1: To prepare graduates with sound technical knowledge and motivate them to explore emerging areas of research. DM2: To create environment for the development of research and innovation activities.

DM3: To build strong relationships with industry through collaborative partnerships, student internships and research towards product development.

DM4: To instill ethical and professional values among graduates with awareness towards societal and environmental concerns.

Schedule

Day 1

- FSM & Python–Hardware Interface
- Introduction to FSM (Moore & Mealy)
- Python Basics for AI/ML
- Dual Port RAM Architecture & Verilog Coding
- Hands-on-session: Verilog–Python Integration

Day 2

- FIFO Design & Python Programming
- FIFO Architecture (Synchronous & Asynchronous)
- Timing Concepts
- Python for Design & Verification
- Hands-on-session: Python-Assisted FIFO Design

Day 3

- AI-Based Traffic Control System
- AI-Based Traffic Signal Control
- System Architecture, Algorithm Design & FSM Mapping
- Hands-on-session: Traffic Control Simulation & Analysis

Day 4

- Hardware Neural Network Design
- Neural Networks for Hardware
- Architecture & Data Representation
- Hands-on-session: Hardware Neural Network Implementation & Evaluation

Day 5

- STA & Physical Design
- Static Timing Analysis
- Timing Closure
- Physical Design Flow
- Power Optimization
- Hands-on-session: STA / Physical Design Activity

For More Information

Dr. Parashuram - 9891663345

www.bvcoend.ac.in

Organising Committee

Chief Patron: **Hon. Dr. Vishwajeet Kadam**
Secretary, Bharati Vidyapeeth,Pune

Patron: **Prof. Dharmender Saini**
Principal, BVCOE, New Delhi

Convener: **Prof. Kirti Gupta**
HoD, Dept.of ECE, New Delhi

Co-Conveners: **Dr. Monika Gupta**, Dept. of ECE
Dr. Priyanka Gupta, Dept of ECE
Dr. Jyoti Gupta, Dept of ECE
Dr. Parashuram, Dept. of ECE

Members: **Mr. Sourabh Rana**, Dept. of ECE
Dr. Mihika, Dept. of ECE
Mr. Jatin Gaur, Dept. of ECE
Ms. Sikha, Dept. of ECE

Registration Details:

https://forms.gle/y1ei73NKZQX4gf2M6

Industry Person: ₹ 1000.00
Faculty: ₹ 500.00
Student: ₹ 200.00

Bank Account Details

Merchant Name: Bharati Vidyapeeth's College of Engineering
A/C NO:- 31976258020
IFSC CODE:-SBIN0006623
Name of the Bank: State Bank of India
A/C TYPE:- Current
Branch Name : Jawala Heri, Paschim Vihar

Note: While making online payments, the participants must mention their names in the payment remarks to enable us to trace your payment in the bank statement.

One-Week
SHORT TERM COURSE
ON
MACHINE LEARNING FOR VLSI DESIGN

9-13 February 2026

Mode: Offline

BHARATI VIDYAPEETH PUNE

Organised by

Department of Electronics and Communication Engineering
Bharati Vidyapeeth's College of Engineering, New Delhi