

BHARATI VIDYAPEETH
(DEEMED to be UNIVERSITY)
COLLEGE OF ENGINEERING, PUNE
Department of Electronics & Communication Engineering

Student Training Program

Topic : STM 32 Microcontroller and Programming

Phase 1 : 22nd Jan – 24th Jan 2026

Phase 2 : 5th Feb – 7th Feb 2026

A training program on STM32 Microcontrollers was organized for **110 students** with the objective of providing practical knowledge of embedded systems and microcontroller programming. The program aimed to enhance students' technical skills and familiarize them with ARM-based microcontroller technology widely used in embedded systems, automation, robotics, and IoT applications.

The training program was conducted by expert trainers from Dolpin Labs, located in Pune, who have experience in embedded systems development and industry-based training. The trainers guided students through both theoretical concepts and practical implementation of microcontroller-based systems.

During the training, students were introduced to the development environment STM32CubeIDE, which is used for coding, compiling, debugging, and programming STM32 development boards. The sessions covered fundamental topics such as embedded system basics, STM32 architecture, GPIO configuration, timers, ADC, and UART communication.

Hands-on activities were an important part of the training. Students performed practical experiments such as LED blinking, push-button interfacing, and serial communication with peripherals. These experiments helped students understand how software interacts with hardware components in real-time embedded systems.

The training program followed a **practical and interactive learning approach**, allowing students to directly implement programs on STM32 boards under the guidance of the trainers. Students were encouraged to test their programs, debug errors, and understand hardware connections. This hands-on experience significantly improved their understanding of microcontroller programming.

A total of **110 students actively participated** in the program and showed great enthusiasm throughout the training sessions. The program helped them gain fundamental knowledge of embedded systems, programming in C language, and hardware interfacing techniques.

Overall, the STM32 microcontroller training program was highly beneficial and successfully enhanced the technical knowledge and practical skills of the participants. Such training initiatives help students prepare for future careers in **embedded systems, robotics, and Internet of Things (IoT)** technologies.

