



**900+**  
PLACEMENTS

**Summer Training in Embedded**

# **Embedded System Design**

See your future in core electronics industry? We see that too! Let's work together



# PinE Training Academy

PinE Training Academy (Training Division of Aujus Technology Private Limited -Enabling VLSI Design) was established in 2014 by technocrats having expertise and vast work experience in the field of ASIC Design, FPGA, DSP, Real-Time Embedded System Design, and Board PCB.

For more info, visit - <https://pinetrainingacademy.in/>

## Hiring Partners

The logo for Synopsys, featuring the word "SYNOPSYS" in a purple, sans-serif font with a registered trademark symbol.The logo for Cadence, featuring the word "cadence" in a lowercase, black, sans-serif font with a registered trademark symbol.The logo for Keenheads, featuring the word "KEENHEADS" in a bold, green, sans-serif font.The logo for Circuit Sutra Technologies, featuring the words "CIRCUIT SUTRA" in a blue, sans-serif font with "TECHNOLOGIES" in a smaller font below it, and a blue swoosh graphic.The logo for Siemens, featuring the word "SIEMENS" in a bold, teal, sans-serif font.

# Meet Your Instructor



## Vaibhav Mishra

*(Founder at PinE Training Academy, Founder at Aujus Technology)*

Vaibhav Mishra brings 21 years of experience in FPGA, semiconductor technologies, and engineering training.

He previously worked as a Field Application Engineer (FAE) for Xilinx FPGA, gaining strong experience in FPGA architecture, customer support, and application development.

His professional background includes:

- 10 years of experience as an FPGA FAE working closely with FPGA technology and ecosystem development
- 11 years of experience in mentoring and training engineers in VLSI, FPGA, and Embedded Systems
- Founder of Aujus Technology, an FPGA design house focused on hardware design and development services

Through his initiatives, Vaibhav has actively contributed to building a talent pipeline in FPGA, VLSI, and embedded technologies.



Summer Batch Certificate



Summer Batch Certification Test



Summer batch Industry Orientation



Summer Batch get-together



Summer Classes

## Summer Training: Embedded

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### Module 1: Introduction to Embedded Systems

- What is an Embedded System
- Applications of Embedded Systems
- Difference between General Purpose & Embedded Systems
- Overview of Hardware & Software components
- Introduction to Microcontrollers vs Microprocessors

### Module 2: C Programming for Embedded Systems

- Basics of C Programming
- Data types, operators, control statements
- Functions and arrays
- Pointers and memory concepts
- Bitwise operations (important for embedded)



## Summer Training: Embedded

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### Module 3: Microcontroller Fundamentals

- Introduction to MCU architecture
- 8-bit vs 32-bit microcontrollers
- Overview of popular MCUs (AVR, ARM, etc.)
- Registers, memory, and I/O ports
- Clock and reset system

### Module 4: Embedded C Programming

- Embedded C vs standard C
- Register-level programming
- GPIO programming (input/output control)
- LED interfacing and control
- Switch/Button interfacing



Course Curriculum

## Summer Training: Embedded

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### Module 5: Interfacing Techniques

- Digital interfacing concepts
- LED, Switch, Buzzer interfacing
- Seven-segment display basics
- Introduction to LCD interfacing

### Module 6: Timers and Interrupts

- Timer concepts
- Delay generation
- Interrupt handling
- Real-time event handling



Course Curriculum

## Summer Training: Embedded

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### Module 7: Serial Communication

- Basics of communication protocols
- UART communication
- Introduction to SPI and I2C
- Data transmission between devices

### Module 8: Mini Project / Project-Based Learning

- Real-time embedded project development
- Problem definition and solution design
- Hardware + software integration
- Testing and debugging



## Program objective

The program is designed to provide strong fundamentals + hands-on exposure to Embedded Systems through C programming, microcontroller interfacing, and real-time applications.

## Tools & Platforms Used

Embedded C Compiler  
Microcontroller boards (AVR / ARM / STM / TI)  
Basic development kits

## Key takeaways from the summer training program:

- Strong understanding of Embedded Systems fundamentals
- Hands-on experience with microcontrollers
- Ability to write Embedded C programs
- Understanding of interfacing and communication
- Project-based learning experience



## Course Information:

- **Who Can Join:** Pursuing 1st (optional) 2nd Year B. Tech and M. Tech 1st Year
- **Branch:** Electronics & Electricals Engineering
- **Mode:** Offline and Online || Batch Size: 20 Trainees
- **Course starts every year:** 15th May / 15th June
- **Duration:** 45 days
- The Institute has the full right to select the modules as per the requirements of the industry, and also depends on the duration of the batch, without affecting the course fees.
- Certification test is mandatory to attend to receive the certificate.
- Internship project & certificate will be offered only to the performers or those who have completed the industry project.

## Course Fees

Total cost: INR 5900/-





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