23.06.2025 to 27.06.2025

Workshop on "Arduino and FPGA Based Embedded System Design"

(UNDER THE ANCHOR INSTITUTE PROGRAM)

Anchor Institute Programme Office
Dhirubhai Ambani University (formerly DA-IICT),
GANDHINAGAR,GUJARAT

- **Supported by:** The Centre for Entrepreneurship Development (CED)-A Government of Gujarat Organization funded Anchor Institute Dhirubhai Ambani University (formerly DA-IICT).
- **Organized by:** Dhirubhai Ambani University (formerly DA-IICT), Gandhinagar, Gujarat, India.

Workshop Start Date	23.06.2025 to 27.06.2025
Venue	Dhirubhai Ambani University (formerly DA-IICT)
Program Schedule	Click here
Course Duration	The duration of the course will be 40 hours, consisting of 20 hours of theory sessions and 20 hours of laboratory sessions.
Target Audience	Professionals, Faculties, Ph.D. Scholar, PG and Final year UG Students
Course Fee (Pay Online)	Participants from Gujarat state are charged a fully refundable upfront course fee of 5,000 INR. Please note that this fee is non-refundable for candidates from other states. ***Please note that the registration fee will not be collected at the time of registration. A separate Google Form link for fee payment will be shared with shortlisted candidates after the scrutiny of all received applications.***
Accommodation	Complimentary accommodation, tea/coffee, and lunch will be provided throughout the workshop.
Refund Policy	Maintain a 75% minimum attendance to be eligible for the refund.
Certificate	A participation certificate will be conferred to individuals who maintain an attendance record of at least 75%.

- **Registration on the following link after the payment:**

To enroll, please complete the registration form by clicking here. Once you open the registration form, you will find further instructions and details.

The last day of registration is **15th June. 2025**

1. Course Objective

The objective of the course is to provide students with a comprehensive understanding of the principles and practices of embedded systems using Arduino. The course focuses on hands-on learning, covering hardware interfacing, programming, and developing real-world applications.

2. Expected Outcome

Upon completing the **Arduino and FPGA Based Embedded System Design** course, participants can expect to achieve the following outcomes:

- **Understanding of Embedded Systems**: Students will gain a deep understanding of embedded systems architecture, focusing on how microcontroller boards like Arduino, FPGA are used to control and interact with hardware components.
- **Hardware-Software Integration**: The course emphasizes hands-on experience in interfacing various sensors, actuators, and peripherals with Arduino and FPGA, providing students with practical skills in hardware-software integration.
- **Proficiency in Arduino and Verilog HDL Programming**: Students will become proficient in Arduino and Verilog HDL programming, learning key functions, libraries, and debugging techniques for developing and deploying embedded systems applications.
- **Design and Prototyping Skills**: Through project-based learning, students will develop the ability to design, prototype, and implement real-world embedded systems using Arduino

and FPGA, from concept to execution.

- **Problem-Solving and Innovation**: The course fosters critical thinking and problem-solving skills by challenging students to create solutions for real-world problems through embedded system designs.
- **Application of Embedded Systems in Various Domains**: Students will explore applications of Arduino in fields such as home automation, environmental monitoring, robotics, and IoT, equipping them to apply their knowledge in diverse industries.
- This course outcome prepares students for roles in industries like IoT, robotics, automation, and electronics design.

3. Organizers and Course Instructors:

Dr. Yash Agrawal is faculty at Dhirubhai Ambani University (formerly DA-IICT). His specialization includes VLSI, Nanotechnology, AI/Models for VLSI, Numerical Method Techniques--FDTD, device modulation and simulation, design techniques and modelling schemes of high-speed on-chip VLSI interconnects, Network-on-chip designs, flexible electronics, VLSI design for bio-medical applications, image processing using FPGA. He did his Postdoc from University of Rennes, France. He received his Ph.D. and M.Tech. Degrees in VLSI Design Automation and Techniques from NIT, Hamirpur, Himachal Pradesh, India. Dr. Yash has been expert and distinguished guest at various places. He has several publications in Book Chapters of Springer, IGI, Journals including IEEE Transactions in Electromagnetic Compatibility, IEEE Transactions in Nanotechnology, Springer, Taylor and Francis and several national and international reputed Conferences. He is guiding several Ph.D. and M.Tech. students. He is chair of both IEEE Electron Devices and Solid State Circuit societies, Gujarat section, India.

Dr. Rutu Parekh did her M. Eng. in Electrical Engineering from Concordia University, Montreal, Canada, PhD in Electrical Engineering (Nanoelectronics) from Université de Sherbrooke, Sherbrooke, Canada and as a Postdoctoral fellow at Centre of Excellence in Nanoelectronics, IIT Bombay in 2015. Her research areas are Micro / Nano electronics, Nanofabrication, embedded systems and IOE. She has research experience with École Polytechnique de Montréal, industrial experience with eInfochips, Ahmedabad, India and HP Karkland, Montreal, and teaching experience with Nirma University of Science and Technology, Ahmedabad. She is currently working as an Associate Professor at Dhirubhai Ambani University (formerly DA-IICT), Gandhinagar, India. In addition, she has been offering service as a Visiting Associate with The Inter-University Centre for Astronomy and Astrophysics, Pune, India, and also as technical advisor and a Board member of the committees. She has been actively engaged in sponsored research and development projects in the area of embedded systems, ASIC design related to military and space applications. She has published book and a number of international journal and conference articles related to her research areas. She is founder and chair of IEEE NTC chapter.

4. Address for Correspondence:

Mr. Jayesh Patel
CEP Office
Dhirubhai Ambani University (formerly DA-IICT)
Tel.: (+91) 079-68261565
Email: aip@daiict.ac.in