ENGINEERS WITH
SOCIAL RESPONSIBILITY

The course will run for 5 days on weekends (Saturday and Sunday), scheduled on October 5, 6, 12, 13, and 19, 2024, from 9:30 AM to 6:30 PM.

Online certificate course on "Arduino Based Embedded System Design"

(UNDER THE ANCHOR INSTITUTE PROGRAM)

Address for Correspondence:

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Anchor Institute Programme Office
DHIRUBHAI AMBANI INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY, GANDHINAGAR, GUJARAT

- **Supported by:** The Centre for Entrepreneurship Development (CED)-A Government of Gujarat Organization funded Anchor Institute DA-IICT.

- **Organized by:** Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, Gujarat, India (DA-IICT).

Tentative Start Date	**Dates:** October 5, 6, 12, 13, and 19, 2024 **Days:** The course will run for 5 days on weekends (Saturday and Sunday) **Time:** 9:30 AM to 6:30 PM.
Mode	Online (Google meet link will sent to eligible participants)
Program Schedule	Click here
Course Duration	The duration of the course will be 40 hours.
Target Audience	Professionals, Faculties, Ph.D. Scholar, PG and Final year UG Students
Course Fee	➢ After the registration deadline, we will scrutinize each registration, and a separate Google form will be sent to eligible participants to collect the refundable fees. ➢ Participants from Gujarat State are charged a fully refundable course fee of 5,000 INR. ➢ Please note that this fee is non-refundable for candidates from other states.
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 **27th Sep. 2024**

- For more details, please visit https://www.daiict.ac.in/courses-through-aip-cep

1. Course Overview

The **Arduino-Based Embedded System Design** course is designed to provide participants with a thorough understanding of embedded systems, focusing on the Arduino platform. The course emphasizes hands-on learning through hardware interfacing, programming, and real-world application development.

By the end of the course, participants will be prepared for roles in industries such as IoT, robotics, automation, and electronics design, with the skills needed to create innovative solutions using Arduino-based embedded systems.

2. Course Objectives

- Equip participants with in-depth knowledge of embedded systems architecture.
- Develop proficiency in hardware-software integration using Arduino.
- Foster skills in designing, prototyping, and implementing embedded systems projects.

3. Expected Outcome

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

1. **Understanding of Embedded Systems**: Participants will gain a deep understanding of embedded systems architecture, focusing on how microcontrollers like Arduino are used to control and interact with hardware components.
2. **Hardware-Software Integration**: The course emphasizes hands-on experience in interfacing various sensors, actuators, and peripherals with Arduino, providing Participants with practical skills in hardware-software integration.
3. **Proficiency in Arduino Programming**: Participants will become proficient in Arduino programming, learning key functions, libraries, and debugging techniques for developing and deploying embedded systems applications.
4. **Design and Prototyping Skills**: Through project-based learning, Participants will develop the ability to design, prototype, and implement real-world embedded systems using Arduino, from concept to execution.
5. **Problem-Solving and Innovation**: The course fosters critical thinking and problem-solving skills by challenging Participants to create solutions for real-world problems through embedded system designs.
6. **Application of Embedded Systems in Various Domains**: Participants 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 Participants for roles in industries like IoT, robotics, automation, and electronics design.

4. Course Organizers/Coordinators/Instructors:

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 was also associated with The Inter-University Centre for Astronomy and Astrophysics, Pune, India, as a Visiting Associate. She is currently working as an Associate Professor at DA-IICT, Gandhinagar, India. She has published book and a number of international journal and conference articles related to her research areas.

Dr. Pankaj Kumar received his B.Tech. degree in Electronics and Communication Engineering from Ujjain Engineering College, Ujjain, India in 2011; his M.Tech degree from PDPM Indian Institute of Information Technology Design and Manufacturing, Jabalpur, India in 2014; his Ph.D. degree from National Institute of Technology Patna, Bihar, India in 2021. At present he is working as an Assistant Professor in Department of Information and Communication Technology at Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, Gujarat, India. He is interested in metasurfaces for terahertz applications and VLSI design.