



RajaRajeswari College of Engineering

(An Autonomous Institute, under Visvesvaraya Technological University, Belagavi)

Sponsored by: MOOGAMBIGAI CHARITABLE AND EDUCATIONAL TRUST

Department of Electrical and Electronics Engineering

Date: 01/04/2026

CIRCULAR

The Department of Electrical and Electronics Engineering, is organizing a **5-Day Workshop on "Embedded System Design Using Arduino"** from **8th April 2026 to 15th April 2026**, between **1:30 PM and 4:00 PM** at the **EEE Department**. The workshop is designed to provide students with practical knowledge and hands-on experience in embedded system development using Arduino platforms. The sessions will cover Arduino hardware and software fundamentals, programming techniques, sensor and actuator interfacing, real-time applications, and project development. Through interactive demonstrations and practical exercises, participants will gain the skills required to design and implement embedded system solutions for engineering applications. Only 35 students are encouraged to actively participate and utilize this opportunity to enhance their technical knowledge and practical skills in embedded systems and automation.

HOD - EEE

Dr. Arul Jose R
Professor & HOD

Dept. of Electrical & Electronics Engg.
Rajarajeswari College of Engineering
Bengaluru-74



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Department of Electrical and Electronics Engineering

Date: 15/04/2026

Technical Workshop

1. Type of Event : SKILL LAB TRAINING: 5-Day Workshop on "Embedded System Design Using Arduino"

2. Event Name : "5-Day Workshop on "Embedded System Design Using Arduino""

3. Date of Organization: 08th April 2026 to 15th April 2026

4. Event Coordinator: 1. Prof. Prutha G
2. Prof. Kiruthika K

5. Outcome of the Event:

The primary objective of the workshop was to provide students with practical knowledge and hands-on experience in Embedded System Design using Arduino. The workshop aimed to familiarize participants with Arduino programming, sensor interfacing, embedded system applications, and real-time project development. It also focused on enhancing students' technical skills and encouraging innovation in the field of embedded systems and automation.

i. Day 1 – 08th April 2026: Introduction to Embedded Systems and Arduino

The workshop commenced with an inaugural session conducted by the Department of Electrical and Electronics Engineering. Dr. R. Arul Jose introduced the participants to the fundamentals of embedded systems, their applications, and the importance of Arduino in modern automation systems.

Topics Covered:

- Basics of Embedded Systems
- Introduction to Arduino Hardware
- Arduino IDE Installation and Configuration
- Understanding Arduino Board Architecture
- Writing and Uploading Basic Programs

Students performed their first Arduino programming exercise by blinking LEDs and understanding the input-output functionalities of the Arduino board.

ii. Day 2 – 09th April 2026: Arduino Programming and Digital Interfacing

The second day focused on Arduino programming concepts and digital interfacing techniques.

Topics Covered:

Campus: #14, Ramohalli Cross, Kumbalgotu, Mysore Road, Bengaluru – 560074

Phone: +91-80-28437124 / 28437375

Email Id: hodeee@rrce.org

Website: <https://www.rrce.org>



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- Variables, Data Types, and Functions
- Digital Input and Output Operations
- Push Button Interfacing
- LED Control Applications
- Serial Communication Basics

Students developed simple programs to control LEDs and display outputs using Arduino serial monitors. Hands-on sessions helped participants understand practical implementation techniques.

iii. Day 3 – 10th April 2026: Sensor Interfacing and Data Acquisition

The third day emphasized interfacing various sensors with Arduino and acquiring real-time data.

Topics Covered:

- Sensor Fundamentals
- Temperature and Humidity Sensors
- Ultrasonic Sensor Interfacing
- Light Dependent Resistor (LDR) Applications
- Real-Time Data Monitoring

Students performed experiments using different sensors and learned how to collect, process, and display sensor data through Arduino.

iv. Day 4 – 13th April 2026: Actuator Control and Automation Applications

The fourth day concentrated on controlling actuators and developing automation systems.

Topics Covered:

- Relay Interfacing
- Motor Driver Circuits
- DC Motor and Servo Motor Control
- LCD Display Interfacing
- Home Automation Concepts

Students designed mini automation systems using sensors, relays, and motors. Practical sessions enabled them to understand industrial and domestic automation applications.

v. Day 5 – 15th April 2026: Mini Project Development and Demonstration

The final day was dedicated to project development and demonstration activities.

Topics Covered:

- Integration of Sensors and Actuators
- Embedded System Project Design
- Troubleshooting and Testing
- Project Demonstrations
- Future Scope of Embedded Systems

Students worked in teams to develop simple Arduino-based projects such as obstacle detection systems, automatic lighting systems, temperature monitoring systems, and robotic vehicle prototypes. Each team demonstrated their project and explained its working principle. The workshop concluded with an interactive feedback session, certificate distribution, and a valedictory function.

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6. OUTCOMES OF THE WORKSHOP:

The workshop successfully achieved its objectives and provided participants with practical exposure to embedded system development. At the end of the workshop, students were able to:

- Understand the fundamentals of Embedded Systems and Arduino.
- Develop and upload Arduino programs independently.
- Interface sensors and actuators with Arduino boards.
- Design basic automation and control systems.
- Develop mini-projects using Arduino platforms.
- Enhance problem-solving, teamwork, and project presentation skills.

The participants expressed their satisfaction with the hands-on learning experience and gained confidence in developing real-time embedded system applications.

7. CONCLUSION

The **5-Day Workshop on Embedded System Design Using Arduino**, organized by the Department of Electrical and Electronics Engineering from **08th April 2026 to 15th April 2026**, was conducted successfully. The workshop provided an excellent platform for students to acquire practical knowledge and technical skills in embedded system design and Arduino-based applications. The active participation of students and the valuable guidance provided by **Dr. R. Arul Jose** contributed significantly to the success of the event. The workshop enhanced students' understanding of emerging technologies and motivated them to undertake innovative projects in the field of embedded systems and automation.

8. 35 students from 2nd year department of Electrical and Electronics Engineering has attended workshop very actively made a grand success.



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EVENT POSTER



RAJARAJESWARI COLLEGE OF ENGINEERING
An Autonomous Institution
Under VTU, Approved by AICTE, UGC & GoK
No. 14, Ramohalli Cross, Kumbalagodu, Mysore Road, Bengaluru

Department of Electrical & Electronics Engineering

5 DAYS WORKSHOP ON EMBEDDED SYSTEM DESIGN USING ARDUINO

VENUE: EEE DEPARTMENT
🕒 1:30 PM TO 4:00 PM
📅 8TH TO 15TH APRIL, 2026

RESOURCE PERSON:
DR. ARUL JOSE R

PROGRAM COORDINATORS:
Mrs. Prutha G Assistant Professor Mrs. Kiruthika K Assistant Professor
Dr. R Arul Jose HOD-EEE Dr. P Ebby Darney Dean Student Affairs Dr. R. Balakrishna Principal

ADMISSION OPEN 2026-2027

CONTACT US
🌐 www.rrce.org
9008845678

QR Code

CET CODE: E145 / COMED-K: E099 / PGCET: T858

Embedded System Design using Arduino Workshop Poster

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Event Photos



Opening Ceremony of Skill Lab Training



Starting of Skill Lab training

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Students soldering the circuit



Students soldering the circuit

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Students dumping code to Arduino board



Students dumping code to Arduino board

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Students explaining to Principal RRCE Dr. R Balakrishna about the skills they studied.



Closing Ceremony of Skill lab training

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Attendance

Skill Lab -Embedded System Design Using Arduino

Sl No.	USN	Name of the Student	Day 1 8/4/26	Day 2 9/4/26	Day 3 10/4/26	Day 4 11/4/26	Day 5 13/4/26
1.	1RR24EE001	Akanksha HR	Akanksha	Akanksha	Akanksha	Akanksha	Akanksha
2.	1RR24EE003	Akshaya m. S	Akshaya	Akshaya	Akshaya	Akshaya	Akshaya
3.	1RR24EE004	Ananya S	Ananya	Ananya	Ananya	Ananya	Ananya
4.	1RR24EE005	Anu HK	Anu	Anu	Anu	Anu	Anu
5.	1RR24EE006	BHAVANA M	Bhavana	Bhavana	Bhavana	Bhavana	Bhavana
6.	1RR24EE008	Deeksha	Deeksha	Deeksha	Deeksha	Deeksha	Deeksha
7.	1RR24EE010	Divya A	Divya	Divya	Divya	Divya	Divya
8.	1RR24EE011	Divya GR	Divya	Divya	Divya	Divya	Divya
9.	1RR24EE012	Gagangowda D	Gagan	Gagan	Gagan	Gagan	Gagan
10.	1RR24EE013	Harish.B	Harish	Harish	Harish	Harish	Harish
11.	1RR24EE015	Kavana. T	Kavana	Kavana	Kavana	Kavana	Kavana
12.	1RR24EE017	Mahanthesh K	Mahant	Mahant	Mahant	Mahant	Mahant
13.	1RR24EE018	Manoj k j	Manoj	Manoj	Manoj	Manoj	Manoj
14.	1RR24EE019	Mantesh V	Mantesh	Mantesh	Mantesh	Mantesh	Mantesh
15.	1RR24EE020	Manu P	Manu	Manu	Manu	Manu	Manu
16.	1RR24EE026	Rahul.L	Rahul	Rahul	Rahul	Rahul	Rahul
17.	1RR24EE030	Shrinivasagouda	Shriniva	Shriniva	Shriniva	Shriniva	Shriniva
18.	1RR24EE032	Sushmitha B G	Sushmit	Sushmit	Sushmit	Sushmit	Sushmit
19.	1RR24EE033	Tejaswini NG	Tejaswi	Tejaswi	Tejaswi	Tejaswi	Tejaswi
20.	1RR24EE038	Yashwanth V	Yashwan	Yashwan	Yashwan	Yashwan	Yashwan
21.	1RR25EE401	Ajay a	Ajay	Ajay	Ajay	Ajay	Ajay
22.	1RR25EE405	Hithesh Gowda R	Hithesh	Hithesh	Hithesh	Hithesh	Hithesh
23.	1RR25EE408	Mahendra	Mahendra	Mahendra	Mahendra	Mahendra	Mahendra
24.	1RR25EE413	Pavan H N	Pavan	Pavan	Pavan	Pavan	Pavan
25.	1RR25EE424	Shashank C L	Shashank	Shashank	Shashank	Shashank	Shashank

Program Coordinator

Prof. Prutha G

Prof. Kiruthika K

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Dr. Arul Jose R

Professor & HOD

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