



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Workshop : Exploring Embedded Systems with Arduino: Hands-on Applications

Date : 24-01-2025

Resource Person : Prof .Dr.H.Rekha, Asso.Professor/ECE

Course Objectives

1. To introduce fundamental concepts of embedded systems and their real-world applications.
2. To familiarize students with Arduino hardware and software development environments.
3. To enable students to design and implement embedded projects using sensors, actuators, and communication modules.
4. To develop problem-solving skills through hands-on experiments and coding in Arduino IDE.
5. To explore interfacing techniques and real-time control applications in embedded systems.

Course Outcomes

After completing this course, students will be able to:

1. Understand the architecture and working principles of embedded systems and Arduino.
2. Write and debug Arduino programs using C/C++ and the Arduino IDE.
3. Interface sensors, actuators, and communication modules with Arduino for real-world applications.
4. Design and implement embedded projects for automation and IoT applications.
5. Demonstrate the ability to analyze, troubleshoot, and optimize embedded system performance.

Course outcomes (cos)	Mapped program outcomes (pos)	Attainment level (low/medium/high)
CO1	1,2	High
CO2	3,5	High
CO3	1,5,12	Medium
CO4	3,6,7,11	High
CO5	4,9,10	Medium









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The Electronics and Communication Engineering Department of Sir Isaac Newton College of Engineering and Technology successfully organized a one-day workshop titled "Exploring Embedded Systems with Arduino: Hands-on Applications" on 24th January 2025.

The event commenced with a warm welcome address delivered by Mr. P. Navaneethakrishnan, Head of the ECE Department. This was followed by the presidential address by Dr. Elangovan, Academic Coordinator, and Dr. Silambarasan, IQAC Coordinator. The chief guest, Dr. A. Kumaravadivel, Principal, inspired the audience with his keynote speech.

The technical sessions were thoughtfully structured to provide both theoretical and practical knowledge. The first seminar session was conducted by Dr. H. Rekha, Associate Professor, who shared valuable insights into embedded systems and Arduino applications. The second session featured hands-on training, where students gained practical exposure under the guidance of Ms. Mahisanthini, Ms. Badizya Lizy, Ms. Janani, and Dr. Suganya.

Mr. Arivazhagan, the Program Coordinator, ensured the smooth execution of the workshop, while Dr. Silambarasan, IQAC Coordinator, distributed certificates to all participants. A special moment was the recognition of the best-performing students, who were awarded mementos based on their performance during the hands-on training session.

The workshop witnessed enthusiastic participation from 75 students from various polytechnic institutions, who actively engaged in the sessions and gained valuable knowledge. The event concluded with a vote of thanks delivered by Ms. Badizya Lizy, expressing gratitude to all dignitaries, participants, and volunteers who contributed to the success of the workshop.

This initiative by the ECE Department provided an excellent platform for students to enhance their technical skills and foster innovation in embedded systems.