

GOVERNMENT POLYTECHNIC COLLEGE VALSAD Electrical Engineering Department ONE DAY WORKSHOP REPORT



Event Name	Arduino Programming and Sensor Interfacing
Date of Event	17/01/2025
Venue	Seminar Hall and Computer LAB, Government Engineering College, Valsad
Audience	Students of SEM 4 and SEM 6, Electrical Engineering and IT Engineering departments
Course	Project I (Code: 435904), MPCA (Code: 4360902), Project II (Code: 4360906)
Organized by	Mr. K.H. Tandel (Lecturer, EC Engineering), Mr. S.D. Choksi (Lecturer, Electrical Engineering), Mr. M.B.Gavit (Lecturer, Electrical Engineering)
Experts	Mr. Devendra Tandel (Assistant Professor, Government Engineering College, Valsad),Mr. K.H. Tandel (Lecturer, EC Engineering), Mr. S.D.Choksi(Lecturer, Electrical Engineering),

• Objective of the Workshop:

The workshop aimed to provide students with hands-on experience in Arduino programming and sensor interfacing, with a focus on embedded systems. The objective was to enhance students' understanding of Arduino hardware and software, as well as sensor integration techniques, preparing them for project-based applications in embedded systems.

• Overview of the Workshop:

The workshop was structured into four sessions, each designed to build on the students' knowledge of Arduino programming and sensor interfacing:

• Session 1: Introduction to Arduino hardware and basics of programming

The first session introduced students to Arduino boards, components, and the basics of programming required for embedded system projects.

• Session 2: Exploration of Arduino IDE and sensor interfacing techniques

Students explored the Arduino IDE and learned how to interface various sensors with the Arduino, understanding the principles of data collection and processing.

• Session 3: Practical session on Arduino installation and programming

Students installed the Arduino IDE and created simple programs. The session also included an introduction to online simulation tools for Arduino.

• Session 4: Development of sample projects using various sensors

In the final session, students applied their learning to build sample projects, utilizing sensors with Arduino to collect and process data, solidifying their understanding of embedded systems.

The expert speakers guided students through both theoretical and practical aspects of Arduino programming, sensor interfacing, and embedded systems, ensuring all participants gained valuable hands-on experience.

Feedback:

The workshop concluded with an engaging feedback session. Students appreciated the interactive approach and the practical, hands-on nature of the workshop. They expressed satisfaction with the sessions, highlighting how the skills gained would benefit them in their future projects and academic work.

Conclusion:

The workshop on Arduino Programming and Sensor Interfacing successfully met its objectives by providing students with practical knowledge and experience in embedded systems. The students from the Electrical Engineering and IT Engineering departments gained valuable insights into Arduino programming and sensor integration, preparing them for future project work and research. The event was highly appreciated by the participants, and the skills learned will undoubtedly contribute to their academic growth and future endeavors.

Name of	Code	SEMESTER	CO Covered
Course			
Microprocessor	4360902	6	1. CO3: Apply knowledge of microprocessors and
and Controller			microcontrollers in various applications.
Application			
Electrical	4350904	5	1. CO.2 Select the best suitable solution to solve the
Engineering			defined problem along with budget.
Project I			2. CO.3 Design methodology to reach final solution.
			3. CO.4 Initiate to assemble project after
			purchasing the component.
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Electrical	4360906	6	4. CO2: I roubleshoot the faults during the
Engineering			assembling procedure.
Project II			2. CO3: Execute testing of the project after
			assembling the final hardware to verify the result.
			5. U04: Modify the components of the project if
			requirea.



> PRACTICAL Session







Attendance

GOVERNMENT POLYTECHNIC VALSAD ELECTRICAL ENGINEERING DEPARTMENT

One Day Workshop on "Arduino Programming and Sensor DATE: 17.01.2025 Interfacing"

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