



ROBOTICS PROGRAMMING WITH ARDUINO

About NIELIT

NIELIT is an autonomous Scientific Society under the administrative control of Ministry of Electronics & Information Technology (MeitY), Government of India. NIELIT Chandigarh was established in 1978 to provide professional services in the areas of Information, Electronics & Communication Technology (IECT). NIELIT Chandigarh is engaged in development of industry oriented quality education and training programmes in the state-of-the-art areas.

About Course

The course will bring the concept of robotics interfacing using Arduino. The course includes the Arduino basics, C programming with Arduino, interfacing digital and analog pins, motor driver, ultrasonic and IR interfacing with Arduino.

Course Objective

The learner will learn basics of robotics interfacing with Arduino, and will be able to make basic bots e.g. line follower, obstacle detection, etc. Further, the learner will learn the simulation on OrCAD and Proteus VSM in designing PCB & circuits

Brief Contents

- ❖ **Basics of Electronics Prototyping**
 - Basics of Electronics, components, tools
 - Introduction to Microcontroller
 - Circuit Simulation using Proteus VSM
- ❖ **Basics of Arduino Programming**
 - Arduino IDE & Driver Installation,
 - C Programming with Arduino
 - Understanding digital and analog Input-Output
- ❖ **Robotics interfacing with Arduino**
 - Types of motor, characteristics
 - L293D Motor driver interfacing
 - Controlling motor with Arduino
 - Ultrasonic and IR sensor interfacing
 - Overview of PCB designing using OrCAD
- ❖ **Project**
 - Line Follower
 - Obstacle detection bot

Eligibility

Knowledge of Computers

Fee

Rs.600/- + GST

Duration

1 Week

For further details, Contact:

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