

Blackfox Embedded Solutions, Erode

Arduino Course – Syllabus

Time: 30 Hrs

1. Introduction
2. Basic Electronics
3. Difference between Basic Electronics & Digital Electronics
4. Microprocessor vs Microcontroller
5. What is Embedded system
6. What is Arduino
7. Arduino Uno pin details
8. Installation of Proteus
9. Workout with circuits
10. C Programming Basics
11. Workout with C
12. Installation of Arduino IDE
13. Explanation of Arduino IDE and UI
14. LED Interfacing
15. Switch interfacing
16. Switch Interfacing with Internal Pull-up
17. What is Interrupt and How to use Interrupt in Arduino Uno
18. Buzzer interfacing
19. DC Motor Interfacing
20. Stepper Motor Interfacing
21. What is PWM and Motor Speed Control with PWM
22. Servo Motor Interfacing with Arduino
23. DC Relay and Bulb Interfacing
24. 7-Segment Display Interfacing
25. LCD 16x2 Interfacing
26. Keypad Interfacing
27. Calculator Project
28. Analog Interfacing - ADC
29. Potentiometer Interfacing
30. Voltage Divider Rule
31. Sensor Designing
32. IR Sensor Designing and Interfacing
33. Light Sensor Designing and Interfacing
34. What is Communication and Communication systems
35. Introduction to UART, SPI and I2C
36. UART Code
37. Interfacing GSM
38. Interfacing Bluetooth
39. Communicate with PC

- 40. SPI Protocol
- 41. SPI EEPROM Interfacing
- 42. I2C Protocol
- 43. RTC Module Interfacing
- 44. I2C EEPROM Interfacing
- 45. Project