



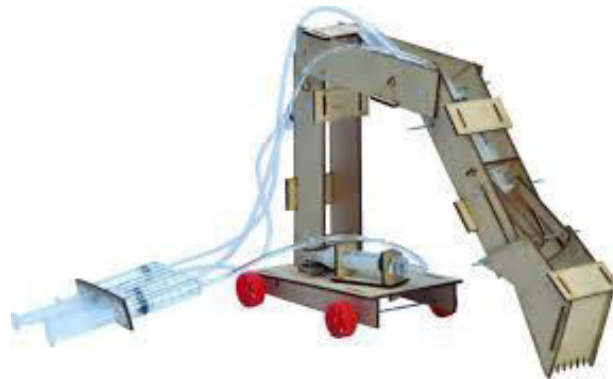
Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

3 Times IIT Bombay Robo Competition Winner

**Industrial Certified
School Robotics Developer**

**All India Council For Technical Skill
Development (AICTSD)
In Association with
IITians Embedded Technosolution**

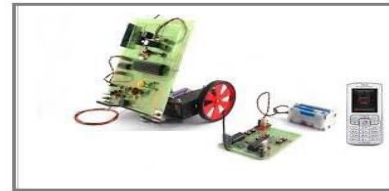
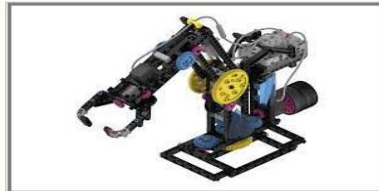
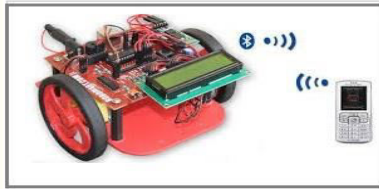




Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

3 Times IIT Bombay Robo Competition Winner





Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

3 Times IIT Bombay Robo Competition Winner

B R A N D

PROMISE

We Guarantee You that, You Can Develop Your Projects by Your Own After This Training Program



Module 1 - Introduction School Robotics

- Introduction of Automation & Technology
- Introduction of Artificial Intelligence(AI) & Its Use in Technology
- Artificial Intelligence Mechanism & Computations
- Science & Mathematical Principles used in Automation & Artificial Block Building
- Electrical & Mechanical Concepts Involved in Robot Building Concepts
- Introduction to Various Major Components used in Robot Building
- Schematic & Interconnections of Various Modules
- Introduction to Power Supply Unit Used in Automation
- Physics Concepts of Power Supply



Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

3 Times IIT Bombay Robo Competition Winner

- Power Supply Designing Concepts
- Integration of Various Mechanical & Electrical Components to form Basic Robot Unit
- Introduction to Electronics Passive & Active Components
- Use of Electronic Meters (Multimeter) to Test Various Active & Passive Electronic Components
- Understanding of Printed Circuit Board(PCB)
- Electronic Circuit Testing & Fault Finding
- LED Blinking Concepts

Module 2 - Arduino Introduction (Development Platform)

- Introduction to Embedded System with Arduino
- Scope of Arduino in Embedded Systems

Module 3 - Arduino Architecture

- Introduction to Arduino series
- Hardware architecture of Arduino controller Series
- Controller I/O ports
- Memories of controller
- Concept of Serial communication ,Interrupt etc.

Module 4 - Arduino IDE

- Introduction of Embedded Arduino Software



Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

3 Times IIT Bombay Robo Competition Winner

- Introduction of Embedded C Programming and programming concepts for Arduino

Module 5 - Arduino Programming

- Embedded C Programming for Arduino
- Arduino Libraries & Basic Module Interfacing
- Logic Families

Module 6 - LCD Interfacing

- Character LCD 16x2 interfacing logic and concept
- Introduction of LCD command and data signals
- LCD based programming
- Practical project based on character LCD

Module 7 - Keypad Interfacing

- Matrix keypad interfacing logic and concept
- Introduction of key pad interfacing using polling method
- Matrix keypad programming
- Practical project based on matrix keypad

Module 8 - Serial Communication

- Introduction to serial communication
- Serial communication concept
- Introduction of serial communication firmware and registers



Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

3 Times IIT Bombay Robo Competition Winner

- Serial communication programming
- Practical application based on Serial communication

Module 9 - Wireless Technology

- Introduction to Wireless Technology
- Introduction to Wireless domain Advantages & Applications

Module 10 - Bluetooth Technology & Application Design

- Introduction to Bluetooth Communication
- Bluetooth technology interfacing in real application
- Bluetooth module programming

Module 11 - RFID Interfacing & Applications Designing

- Introduction to RF & RFID communication
- RFID technology interfacing in real application
- RFID module programming
- Practical project design based on RFID technology with Arduino

Module 12 - LDR Interfacing & Applications Designing

- Introduction of LDR technology
- LDR technology interfacing in real application
- LDR programming
- Practical project design based on LDR technology with Arduino



Embedded Technosolutions

Venture of IIT Bombay & VJTI Alumni

3 Times IIT Bombay Robo Competition Winner

Module 13 - Project Designing & Development

Practical designing of a project based on above technology with Arduino

	<u>Live Projects</u> : School Robotics Automation Based
1	Basic Artificial & Automation Mechanism Module Designing
2	Mobile Controlled Based Remote Car
3	Bluetooth & Android Based Robot Designing
4	Wireless Home Automation
5	Traffic Light Designing
6	Electronics Rain Alarm
7	Smoke Detector Designing
8	Light Intensity based System Control