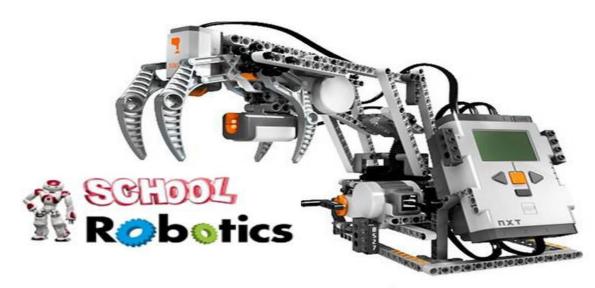


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# School Robotics Level - 3



1st Step to Build Your Child Future in Technology & Automation



कौशल भारत-कुशल भारत



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# Robotics & Artificial Intelligence are the Future of Automation

Let Your Child Understand these Things at School Level so that They Become Future Ready With IIT Bombay Alumni





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### \*Importance of Robotics Education at School Level\*

- 1. In A Survey Done by "World Economic Forum", It has Proved that the Combination of Science, Technology, Engineering & Mathematics are Very Important to Improve the "Analytical Skills" at School Level
- 2. Apart from Theoretical Studies "Project Based Learning" is Very Important which Improves the Technical Intelligence, Innovations, Leadership Qualities, Analytical Skills & Team Management Qualities at School Level.



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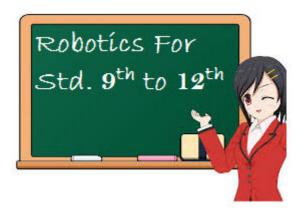
- 3. World is changing very fast. Ones upon a time there was a PC revolution, Then Mobile Revolution, now in future Robotics will be part of our lives.
- 4. The global robotics industry is growing rapidly and the trend towards its adoption is increasing in India as students.
- 5. Robotics will play a major role in the future so it is imperative that we prepare the present generation of students at school level for this transition
- 6. It Create curiosity, excitement and exploration among school children in Science, Mathematics and Technology.
- 7. Enable children to become motivated and engaged in Science, Mathematics and Technology (SMT) through observation, experimentation, inference, drawing, model, building, rational reasoning, test ability etc.
- 8. Whenever students work on any technical projects that improve their team activity.
- 9. They also have an opportunity to showcase their talent to the world through National & International level Robotics Competition.



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### Robotics Training Syllabus



### **Theory**

- 1. Introduction to Robotics
- 2. Robotics Mechanism & Computations
- 3. Science & Mathematical Principles used in Robot Building
- 4. Electrical & Mechanical Concepts Involved in Robot Building
- 5. Introduction to Various Major Components used in Robot Building
- 6. Schematic & Interconnections of Various Modules
- 7. Basic Robotics Module Designing



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#### **Arduino Platform**

- 8. Introduction to Open Source Platform Arduino
- 9. Introduction to Arduino IDE

#### **Arduino C Programming**

- 10. Embedded C Programming for Arduino
- 11. Arduino Libraries & Basic Module Interfacing
- 12. Logic Families

#### **Wireless Communication Technology**

- 13. Introduction to Wireless Technology
- 14. Introduction to Wireless domain Advantages & Applications

#### **DTMF Technology**

- 15. Introduction of DTMF mobile technology
- 16. DTMF technology interfacing in real application
- 17. DTMF programming

#### Radio Frequency Technology (RF)

- 18. Introduction of RF Communication
- 19. RF technology interfacing in real application
- 20. RF module programming



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### **RFID Technology**

- 21. Introduction to RFID communication
- 22. RFID technology interfacing in real application
- 23. RFID module programming

#### **Bluetooth Technology**

- 24.Introduction to Bluetooth Communication
- 25. Bluetooth technology interfacing in real application
- 26. Bluetooth module programming



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### **Practicals & Projects Designing**

- 1. Basic Wired Robot Development
- 2. DTMF Mobile Controlled Wireless Robot
- 3. RF Remote Control Robot
- 4. RFID Based Security System
- 5. Bluetooth & Android Based Robot Designing
- 6. Wireless Home Automation
- 7. Traffic Light Designing
- 8. Burglar Detection using Arduino

<u>Duration</u>	Total Lectures - 12	2 Hours / Lecture
<u>Projects</u>	1 Project / Lecture	Theory + 8 Projects

Thank You,

IIT Bombay Alumni



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### What Our Client Says About Us



Please Click the link below to see our client reviews about us

#### **Sulekha Reviews**

https://www.sulekha.com/iit-ians-embedded-technosolutions-thane-west-mumbai-contact-address

#### **Google Reviews**

https://www.google.co.in/search?q=embedded+technosolutio ns&oq=EM&aqs=chrome.1.69i60j6z9i59l2j69i61j69i60j69i65.4 120j0j4&sourceid=chrome&ie=UTF-8#lrd=0x3be7c3c1c6aaaacd:0x2a0bceeebb030d17,1,



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