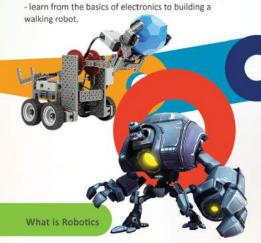## Amrita Robotics

Amrita Robotics is an initiative of Amrita Technologies, helping children explore robotics through hands on training on well designed curriculum along with training in 21st century skills, STEM education, life skills, maker workshop, programming languages. STEM supports broadening the study of engineering within each of the other subjects, and
beginning engineering at younger grades. We offer programs with various levels of
proficiency in which school children - from 11 to 17 years - learn from the basics of electronics to building a walking robot.

What is Robotics

Robotics is the interdisciplinary branch of engineering and science that includes mechanical engineering, electrical engineering, computer science, and others. Robotics deals with the design, construction, operation, and use of robots, as well as computer systems for their control, sensory feedback, and information processing.

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ROBOTICS LEARNING FRAMEWORK FOR INQUISITIVE MINDS

Why Technologies for School Kids

Education system in India is competitive in theoretical teaching and trains students rigorously to withstand fierce competition on a worldwide scale. Now Engineering colleges were increased a lot in India. Hence, large number of engineering and other graduates being churned out every year, only about few per cent are employable in the industry as per the various studies conducted. In most of the engineering institutions the course curriculum is, by and large, theoretical in nature and students are not made aware of the applications of the theories in the industry. In the process, the traditional course curriculum quite often fails to meet the needs of the industries. So the process has to start from grassroots.

Courses
Program Duration: 7 Months

Foundation

This level focuses on electronic fundamentals vying real world circumstances place students on firm grounds from the start. Learn about power generation, solid state electricity, all the way to how LEDs and sensors work. Induction into the fundamentals of coding, circuit building and debugging. Understanding the core concepts of conductors, insulators, power, voltage etc. How devices such as multimeters, electronic gauges, potentiometer and so on, functions.

Beginner

This level focuses on mechanical assembly of gears, wheels, chassis, torque, ground clearance and other important concepts such as the working of motors, electromagnetism etc. Hands on experience of building a robot that can do racing, sumo fighting, pick and place objects with arm assembly. Training imparted in a fun environment. Engineering/Technical drawings clearly define the entire requirement for a robot's assembly. Bluetooth controlled communication and how it helps in aggressive engagement in competitions of self built robots.

Advanced

Learn the basics of programming, to "Embedded C" programming of robots, in simple and inspiring environments. Create algorithms, headers, functions turning you into a creator and commander of robots. Guiding robots take various decisions depending on various situations makes the learning a fun experience and triggers your creative powers to think even bigger. Your new-found energies as expressed in the robotic applications you created should urge you to further expand your horizons in human-assistive technologies as well as self-contained robotics.

Expert

Combination of all three levels (F,B,A) to make a walking robot with some complexity in mechanical assembly, sensors and activity in repairing robots and robotic devices. Learn to create complex algorithms in designing and constructing self balancing including gaits, obstacle management and a host of challenges in the development of walking robots. Training in the theory of forward and inverse kinematics, degree of freedom. Spurs thinking on how robots can be made to mimic living beings including gestures.

Admissions

Foundation
Beginner
Advanced
Expert } www.amritarobotics.com

About The Company

Amrita Technologies is an innovator in Healthcare Informatics Software and leading technology provider to the healthcare and education industry through a variety of software and services. Amrita incorporates innovation from the ground up, providing enterprise-grade software solutions for any type of organization, any type of user, at very cost effective rates.

Why Robotics

Young children are growing up in an increasingly digital environment, school curriculum does not always focus on exploring the digital world until their later elementary years. Only a small number of countries and regions have established clear policies and frameworks for introducing technology to young children.
Today, we live in a world in which bits and atoms are increasingly integrated, however, we do not always teach our young children about this. Robotics offers a way to teach young children about the types of sensors and electronics they encounter in daily life in a hands-on and engaging way.