

RoboTech

Robots that will be built:

- Line follower robot
- Obstacle avoider robot
- Object follower robot
- Photophobic robot
- Phototropic robot
- Wall follower robot
- Fire fighter robot
- Sound controlled robot
- 2 wheel self-balancing robot
- Sumo wrestling robot

Basics of Mechanics

- Speed
- Gravity
- Torque
- Friction
- 2/3/4 wheel driving
- Nuts/Bolts
- Screws
- Gears
- Pulley
- Wheels
- Tracks

Sensors:

- Introduction, need, application
- Human Senses
- Sensors used in the field of Robotics (Optical/Obstacle/Sound)
- Hands on experimenting and interfacing sensors

Introduction to Robotics:

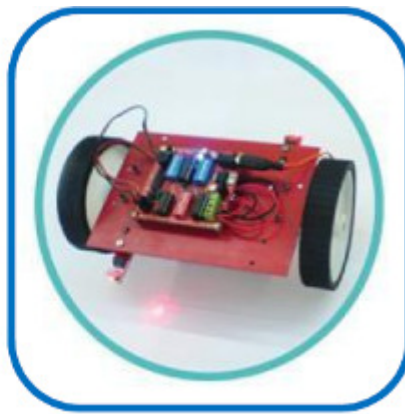
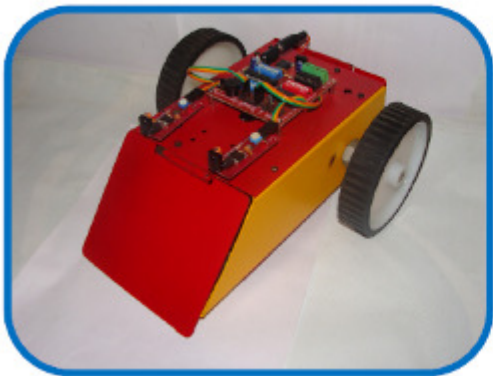
- Introduction, history, types, application
- Various components of Robot Building
- Assembling the mechanical structure of a Robot.
- Manual control of a robotic brain via wired and wireless medium.
- Making a robot capable of decision making

Basics of Electricity and Electronics:

- Current and Voltage
- Polarity
- Resistors, Capacitors and Insulators.
- Basic Circuit Building
- Magnetism
- Electromagnet
- LEDs
- Motors
- Generating electricity

Digital Designing:

- AND,OR,NOT Gates
- Symbols/Truth tables
- Binary logic
- Study of robotic logic using flow chart.
- Decision making



RoboMech

Robots that will be built:

- Dumpster
- Forklift
- Excavator
- Robotic Arm
- Staircase Climber
- Robotic Crane
- Robo Soccer

Basics of Mechanics

- Force
- Torque
- Friction
- Gravity
- Speed
- Nuts/Bolts
- Screws
- Pulley
- Wheels
- Tracks/Belts
- Gears

Introduction to Robotics:

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Basics of Electricity and Electronics:

- Electricity
- Wires
- Polarity
- Electrons
- Magnetism
- Electromagnets
- Motors
- Switches
- Batteries

