

We breed robots here!!

Syllabus for Control roBOTix

- 1. Microprocessors, microcontrollers & programming**
 - 1.1 Introduction to microprocessors and microcontrollers
 - 1.2 Assembly language programming
 - 1.3 Interfacing and applications
 - 1.4 Industrial applications
 - 1.5 Advanced programming and mathematical calculations
- 2. Control Systems**
 - 2.1 Open-loop and closed-loop systems
 - 2.2 Automation
 - 2.3 Components of a control system
- 3. Programming using C**
 - 3.1 Introduction
 - 3.2 Constants, variables and data types
 - 3.3 Operators and expressions
 - 3.4 Decision making, loops and branching
 - 3.5 Algorithms and pseudo-code
 - 3.6 Programming for robotics
- 4. Softwares**
 - 4.1 Use of software in robotics
 - 4.2 MATLAB
 - 4.3 LabVIEW
 - 4.4 Flash magic
- 5. PCBs**
 - 5.1 PCBs – Introduction
 - 5.2 PCB Design
 - 5.3 Soldering

6. Hands-on sessions

6.1 Robo-soccer

6.2 Microcontroller circuits

6.3 Multiple IR sensors using microcontroller

6.4 Soldering

6.5 Line follower robot

7. Robotics & Design

8. Programming & design sessions

9. Advanced robotics

9.1 Cognitive robotics

9.2 Biorobotics

9.3 Industrial robotics

9.4 Medical robotics

9.5 Artificial intelligence

10. Projects & Home-work sessions