

Mobile Controlled Robot Workshop Content

Session 1

- Introduction to Basic Electronics
 1. Electronics Components related to mobile robotics
 2. How Transistors are used in practical Circuit?
 3. How Capacitors are used in Filter circuits?
 4. How can someone choose the value of Resistors and their practical use?
 5. What are Integrated Circuits? Which ICs are commonly used and How?
 6. What are Photo sensors?

Session 2

- Introduction to Atmel's ATmega 8/16/32 microcontroller
 1. What is Microcontroller?
 2. Difference between microcontroller and micro processor?
 3. Microcontroller Architecture and interfacing
 4. How can we use a microcontroller in our own circuits?
 5. Microcontroller Programming in 'C'
 6. Writing your First 'C' Program in AVR Studio
 7. Compilation and debugging
 8. Loading Compiled 'C' Program on a Microcontroller using Robosapiens 'AVR Loader v1.0 Beta'
 9. Loader v1.0 Beta'

Session 3

- DTMF decoder ICs
 1. What is DTMF?
 2. Interfacing of DTMF ICs
 3. Concept and Algorithms
 4. Testing of a DTMF Circuits

Session 4

- Development of a Mobile phone Controlled Robot
 1. Assembling of Mobi-botricks Kit
 2. Programming of Atmega 8 microcontroller for Mobile control Robot
 3. Testing of Final Circuit
 4. Testing of a DTMF Circuits

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