Embedded System & Robotics

Description

Robotics is the branch of mechanical engineering, electrical engineering, electronic engineering and computer science that deals with the design, construction, operation, and application of robots, as well as computer systems for their control, sensory feedback, and information processing. These technologies deal with automated machines that can take the place of humans in dangerous environments or manufacturing processes, or resemble humans in appearance, behaviour, and/or cognition. Many of today's robots are inspired by nature contributing to the field of bio-inspired robotics.

Expectations and Goals

Arduino is an open source, computer hardware and software company, project, and user community that designs and manufactures microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world. The project's products are distributed as open-source hardware and software, which are licensed under the GNU Lesser General Public License (LGPL) or the GNU General Public License (GP). On the Design tab of the ribbon, check out the Themes, Colors, and Fonts galleries to preview options right in your document and then select one to apply you like.

Prerequisites

- Basic C programming knowledge is mandatory

Course Schedule

Module	Topic	Hours
Module 1	Introduction of embedded system	2
	Basic micro controller concept,	8
	Embedded system application	1
	Avr microcontroller concept	4
	Embedded c using basicmicrocontroller	8
	Atmega 16 microcontroller	4
	PIC Microcontroller pin diagram	8
	PIC vs Atmega	4
	Arduino programming and pin diagram	8
Module 2	Atmega16 digital pin controll	4
	Atmega16 anlog pin controll	4
	PIC Microcontroller programming	4
	Sensor concept	4
	Microcontroller sensor interfacing	4
Module 3	Protious circuit design	8
	LCD connection and programming	4
	Working with Motor Driver IC	4
	DC Motor,Servo interfacing	4
Module 4	Serial communication	4
	PWM controll	4
	Relay concept	4
	Project Work	20