



eLearning Course Title: **ROBOTICS (BEGINNER)**

eLearning Course Type: **Paid**

Registration Fee (including GST):- **Rs. 999/-**

Course conducted by Group/ Regional Directorate Name:- **HRM & CoE Group**

Name & Designation of Course Coordinator: **Mr. Yadu Kr. Yadav, Assistant Director**

Course Coordinator Contact Details: **+91-9958748893**

About eLearning Program (Brief One para): -

Robotics is an interdisciplinary field that integrates computer science and engineering. Robotics involves design, construction, operation, and use of robots. The goal of robotics is to design machines that can help and assist humans.

eLearning Course Coverage (Specify Module details) :-

MODULES	Beginner Level
1	Introduction of robotics
2	What is Robotics? How does work robots?
3	Application of Robots
4	What are Robotic Manipulators?
5	Motion Planning in Robots
6	What are embedded systems?
7	ATmega328p Introductions
8	Embedded Programming C - Basic C language
9	Embedded Programming C- Timer ,Interrupt, ADC
10	Embedded Programming C- PWM , UART ,I2C , SPI
11	ATmega328p Configurations
12	Atmega328p- Arduino pin Diagram
13	Sensor Interface

14	Sensor data and Conditions
15	Motor Driver
16	H-Bridge
17	Programming For Motor Driver
18	Forward and Backward Kinematics
19	Attaching everything
20	Geared Motor – clamp- chassis
21	Ultrasonic sensor with motor
22	Obstacle Avoiding Testing
23	Line follower or Edge avoidance Robot

Register to learn (Key Learnings' in bullet points):

Robots produce more accurate and high quality work. Robots rarely make mistakes and are more precise than human workers. They can produce a greater quantity in a short amount of time. Benefits include:

- ✓ Mundane Tasks are Reduced
- ✓ Reduction in Labour
- ✓ Safety
- ✓ Consistency
- ✓ Precision
- ✓ Increased Output

Thanks & Regards
NPC Team