NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY, AURANGABAD

राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान, औरंगाबाद

Ministry of Electronics & Information Technology, Government of India

Industrial Training/Summer Internship Program

OBJECTIVE

The main aim of this Training is to create manpower who can design and develop innovative & low cost electronic product to solve the problems of industries and societies with the help of emerging technologies.

ELIGIBILTY

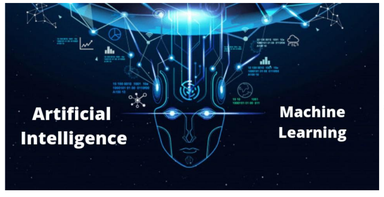
Diploma/ITI, Completed/ Undergoing (IT, Computer, E&TC, Electrical)

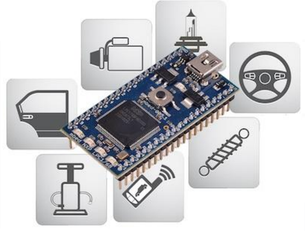
CERTIFICATE

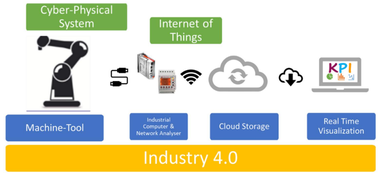
Certificate will be provided to the participants, based on minimum 75% attendance and on performance (minimum 50% marks) in the online test, conducted at the end of the course.

DURATION

Duration: 6 Weeks (3 Hours/Day).







Syllabus For Training

Sr. No.	Course content (IOT)
1	Fundamental of IoT
2	Microprocessors and Microcontrollers
3	Sensors & Actuators required for various IoT applications
4	Wireless Technologies
5	Edge Computing and Protocols

Sr. No.	Course Content (AI and Machine Learning)
1	Machine Learning
2	Machine Learning in Action
3	Libraries and Tools (Numpy, Pandas & MatPlotLib)
4	Importing a Data Set
5	Jupyter Shortcuts
6	A Real Machine Learning Problem
7	Preparing the Data
8	Learning and Predicting
9	Calculating the Accuracy
10	Persisting Models
11	Visualizing a Decision Tree

Sr. No.	Course content (Networking)
1	OSI Model
2	TCP/IP stack
3	Routing
4	Switching, VLAN
5	VLAN Routing

Syllabus For Elective

Sr. No.	Course Content(PCB)
1	Introduction to printed circuit boards.
2	Fundamentals of Basic electronic components.
3	Various IC Packages classifications.
4	IPC standards & fundamentals of electronic component's data-sheets study.
5	Customized Component symbol footprint & 3D Package creation.
6	Electronic circuit simulation for Analog, Digital & Mixed signal circuite sign rules for Analog, Digital & Mixed signal circuits.
7	Schematic editor introduction, schematics entry of electronic circuits.
8	Introduction to PCB layout editor, PCB layout design for Single sided boards in layout editor.OM, Netlist generation and ERC (Electrical rule check)
9	Setting up the DRC(Design rule check) for SSB.
10	PCB layout design for Double sided boards in layout editor.
11	Setting up the DRC(Design rule check)for DSB.
12	Gerber files Generation, CNC Milling & Drilling data generation in fabrication industry accepted formats, SMT pick & place file generation & 3D PCB files creation.
13	Artwork Generation using photo-plotter & Project Work.
14	PCB Fabrication Process flow for Double sided plated through hole PCBs using PCB Lab DSB PTH Machine setup.

Sr. No.	Course content (Android App Development)
1	Introduction to Android and Installation
2	Creating applications and activities
3	Creating user interface
4	Files saving sates and Database

Courses

- IOT
- Machine Learning and AI
- Networking
- Android App Development(Elective)
- PCB Manufacturing (Elective)

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