Chief Patron
Prof. K. Umamaheswar Rao
Director, NIT Rourkela and Chairman, FTBI

Patron
Prof. Manoj Kumar Mishra
President, FTBI-SDC

Advisors
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Prof. P. M. Khilar, CSE Dept.
Prof. R. K. Sahoo, FTBI
Prof. K C Pati, Chairman Steering Committee, FTBI
Mr. Chiranjibi Samal, CEO FTBI

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Department of Computer Science and Engineering

Department of Computer Science and Engineering, NIT Rourkela, was established in 1982. Since its inception, the department has seen dynamic progress and has established a reputation for imparting quality education both in undergraduate and graduate programmes. The department runs the undergraduate and postgraduate programmes, including the doctoral programme. The department also organizes several international and national conferences, workshops, short-term courses and faculty development programs for upskilling professionals in the domain of computer science and engineering. The department has well-equipped modern laboratories and infrastructures along with highly qualified faculty members.

FTBI-SDC

Skill Development Cell under FTBI is a hub of activities to enhance skills/knowledge for better employability and output. FTBI is a rising incubation centre in eastern India.

Skill Development Programme on ABC of IoT-2024

(**A**: Applications, **B**: Building Tools, **C**: Communication Protocols)

4th Mar - 15th Mar

Convener
Prof. Suchismita Chinara

Chairman
Prof. Bibhudatta Sahoo

Organized by

Skill Development Cell, Foundation for Technology and Business Incubation (FTBI-SDC)

in association with

Department of Computer Science and Engineering

National Institute of Technology Rourkela (769008) Odisha.

http://www.nitrkl.ac.in

About the Skill Development Programme (SDP)

The skill development program (SDP) **ABC of IoT-2024** (A: Applications, B: Building tools, C: Communications) aims to eliminate the gap between the demand and supply of skilled manpower, building new skills among young minds, aligning with the New Education Policy (NEP) 2020 to revolutionize the country's education system by the integration of technology.

The modules of **ABC of IoT-2024** are designed to build the vocational and technical training framework as per the industry's demand.

The modules further introduce the Internet of Things skill acquisition, covering hardware understanding, Arduino programming, and Application development. The SDP will also train the participants to upskill the domain capabilities in smart health, smart city, smart home automation, environment monitoring, smart parking systems, etc. The participants will have the exposure to do hands-on experiments/practicals with the hardware and software related to the Internet of Things. They will have the privilege of visiting the laboratories of the FTBI/CSE Department equipped with Industrial IoT devices for fabrication and manufacturing.

The target audience for the SDP will be High School Children of Classes IX, X, XI, and XII, as well as the students of ITIs, Polytechnics and Engineering Colleges. Upon successful completion of the individual module, the participants will be awarded certificates.

Prerequisite: Basic Knowledge of Computer Operation.

Contents of ABC of IoT-2024

Module 1: HardwareX

This module will provide the basic knowledge of IoT components like sensors, microcontrollers (Arduino /ESP/ Raspberry Pi), actuators and assembling the components for the design of the smart systems. The Contents of the module are:

- Introduction to IoT Components.
- Introduction to Microcontrollers.
- Programming with Microcontrollers.
- IoT Projects and Case Studies (Home Automation, Environment Monitoring, Health Monitoring, and SmartCities Design)

Module 2: SoftwareX

This module will provide practical knowledge of the working codes behind the various IoT Projects and the necessary guidance to solve user-specific problems. Contents of the module are as follows:

- Introduction to IoT Programming.
- Basic Python Programming.
- IoT Analytics using ThingSpeak.
- Application Creation.

Registration Link:
https://forms.gle/Ysx6Eicn12rErsTt7

SCHEDULE AND VENUE

The classes will be for the duration of 3 hours, from 5:30 PM to 8:30 PM, from Monday to Friday, in the conference hall of the FTBI/CSE Building of NIT Rourkela. The sessions will have 1-hour theory class followed by 2 hours of laboratory classes.

Module 1: 4th Mar to 8th Mar
Module 2: 11th Mar to 15th Mar

Registration and Fee Particulars

Application in the prescribed format must reach the convener on or before 25th February 2024. The registration fee, as mentioned below, must be deposited in the FTBI account as per the following details. The confirmation of participation will be intimated by 25th February 2024.

Bank Account No:	**38997871030**
Account Name:	**FTBI, NIT Rourkela**
IFSC Code:	**SBIN0002109**

The registration fee includes the SDP materials and refreshments.

Registration Fee

Module 1:	**₹1500**
Module 2:	**₹1500**
Module 1 and 2:	**₹2500**