Department of EEE, CBIT

Value Added Course (VAC) on Raspberry Pi and its Interfacing

27th February - 03rd March 2023

Hands-on Training Course Content

- Introduction to Raspberry Pi
- Python Programming for Raspberry Pi
- Node Red with Raspberry Pi for IoT Applications
- IoT applications using Raspberry Pi
- Raspberry pi and Intelligent Instrumentation
- Raspberry Pi in IOT Applications
- IOT in smart Healthcare : Applications and Challenges
- Hardware Requirements for Module Interfacing using Rasberry Pi
- Case Study 1: IoT applications using Raspberry Pi
- Case Study 2: IoT Smart Healthcare
- E-Certificate will be provided through email only.

Organizing Committee

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Professor & HOD/EEE

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Dr. Amit Joshi -MNIT Jaipur
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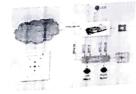E-mail:balasubbareddy_eee@cbit.ac.in
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Department of Electrical and Electronics Engineering

Technical Support by with NITTTR-Chandigarh

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Chaitanya Bharathi Institute of Technology
(Autonomous under UGC)
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www.cbit.ac.in

Chaitanya Bharathi Institute of Technology (CBIT)

CBIT is one of the premier Engineering Institutes in India, pioneer in Telangana State, which is at idyllic surroundings of Gandipet Lake, Hyderabad. The college offers Nine UG and Eleven PG programs. It has been standing as a temple of knowledge for the past 43 years by producing about 25,000 Eminent and skillful Graduate Engineers, who are successful in their Careers, serving all over the Globe. CBIT Students are prepared and perfected to secure Placements in reputed MNCs. The Institute has been accredited by NAAC – UGC with 'A' Grade and various programs are accredited by NBA – AICTE. The UGC has granted Autonomous Status from the Academic Year 2013-14 onwards. Stringent Academic Standards, Industry Compliant Teaching Methodology, Research Projects from Private and Public Sector organizations Industries in Engineering and Management and Consultancy Practice, enabled the Institute to establish its Identity in Technical Education and is ranked as one of the best amongst Private Engineering Colleges in

About Value Added Course (VAC)

Raspberry Pi is most popular SBC (Single Board Computer). We can used Raspberry Pi as an IoT device and IoT Gateway. In this article we discuss Raspberry Pi Interfaces. Interfaces used for connecting Sensors and actuators.

The Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python. It's capable of doing everything you'd expect a desktop computer to do, from browsing the internet and playing high-definition video, to making spreadsheets, word processing, and playing games.

Raspberry pi has Serial, SPI and I2C interfaces for data transfer. The Serial interface on Raspberry Pi has receive (RX) and transmit (TX) pins for communication with serial peripherals.Serial Peripheral Interface (SPI) is a synchronous serial data protocol used for communicating with one or more peripheral devices.

Faculty Training

Faculty training will be from renowned institutes and industries like the National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh, IITs, NITs and IIITs etc.

IEE Department Front View

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Department: Electronics and Telematics Engineering

2022-23

REPORT

FDP on Raspberry Pi and its Interfacing

Date of program: 27-02-2023 to 3-03-2023

I recently participated in a Faculty Development Program focused on the FDP on Raspberry Pi and its Interfacing, and the experience proved to be both enlightening and enriching. The program, conducted over the course of a week , aimed to equip me with the necessary skills and knowledge to integrate Raspberry pi concepts into their teaching methodologies. This FDP explained the use of the Raspberry Pi to connect to the Internet, from a user perspective. The first way to use the Raspberry Pi as a networked device is to use it as a general-purpose computer rather than as a programmed IoT device. Using networking with a Raspberry Pi in this way is similar to using the network from any Linux machine, and we present its use in this module. I also learned the standard Internet protocols that must be understood in order to develop network programs.This hands-on approach not only enhanced my technical proficiency but also provided valuable resources for creating engaging classroom activities.

Signature of the Faculty member

N.Rama Krishna Asst Professor,ETE

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