

About CBIT(A)

Chaitanya Bharathi Institute of Technology (Autonomous) has an ecosystem which caters to Research, Consultancy, Start-Ups, Incubations, Strategic Collaborative Associations with Industries and Foreign Universities. CBIT(A) is accredited by NAAC with A++ Grade. The Institute is pioneering the development of an Artificial Heart in Collaboration with SHARE India / Pittsburgh University and Cornell University, USA. CBIT(A) has been standing as a temple of learning for the past 44 years. UGC has granted Autonomous status from the Academic Year 2013-14 onwards. The Faculty and Students have successfully executed Sponsored Research and Consultancy Projects, from various funding Agencies such as DRDO, ISRO, DST, AICTE and UGC. MHRD - Institute Innovation Cell (IIC), MSME - Business Incubation (BI), Hexagon 3D Innovation Lab, Cognizant Innovation Lab and Robotic Process Automation Lab have been established in the Research and Entrepreneurship Hub, for the Students and Faculty to pursue their Research Interests.

About CET Department

Department of Computer Engineering and Technology offers a BE CSE (IoT, Cyber Security Including Blockchain) undergraduate engineering programme. Since the academic year 2020-21 with an intake capacity of 60 seats. This programme combines Computer Science, with the functional and operational aspects of IoT, Cyber Security and Blockchain Technology. CET department has well equipped laboratories with necessary software's and committed, qualified well trained staff for teaching/learning process. CET department is consistently exploiting the trending curriculum, teaching, and learning practices, providing scope for the students to acquire knowledge and exploring better opportunities, for those aiming for admissions in prestigious institutions for their higher studies.

About Mechanical Department

The Department of Mechanical Engineering, CBIT is offering one undergraduate program B.E in Mechanical Engineering with an intake of 120 and two PG programmes; M.E in CAD/CAM and M.E in Thermal Engineering. The department has 45 faculty members out of whom 27 are Ph.Ds. 24 R&D sponsored projects worth Rs. 285 lakhs were sanctioned to the department, 28 patents were published and 9 patents were granted, 18 workshops and 4 FDPs were organized in the last 3 years. The Department is well equipped with all state-of-the-art equipment, Laboratories & workshops providing all necessary facilities to the students. The Hexagon Capability Center, India has opened an Innovation laboratory in the premises of the CBIT. The lab has been equipped with hardware and software worth Rs.6.50 crore. B.E Mechanical Engg. and M.E CAD/CAM Programmes were accredited by NBA.

About Letfix Technologies

Letfix Technologies strive to offer young minds with the whole pack of technical skill sets with utmost convenience. Letfix Technologies envisions being a catalyst augmenting technical development and have the tendency to transform and uplift young minds. Letfix Technologies aspires to be a premier centre of technical growth by offering quality technical education and research with application expertise in engineering and technology, where learners are nurtured to evolve into competent professionals.

About STTP

The Industrial Internet of Things (IIoT) is revolutionizing the industrial landscape by integrating smart devices, sensors, and data analytics into traditional industrial systems. This comprehensive course aims to provide engineering students with a solid understanding of IIoT concepts, technologies, and their applications. The course combines theoretical knowledge with practical hands-on sessions to equip participants with the necessary skills to design, implement, and manage IIoT systems.

Course Duration(90 hours)

- 45 hours of physical mode
- 45 hours of online support for group(s) projects

Certificate(s) of Participation

- STTP certificate
- Internship Certificate on successful completion of projects

Objectives of the STTP

- Understand the fundamentals of IoT, IIoT its components, and its impact on industrial systems.
- Gain insights into various IoT, IIoT architectures, protocols, and communication technologies.
- Learn to design and implement IoT, IIoT systems using sensors, actuators, and edge computing devices.
- Develop skills in data analytics, real-time monitoring, and predictive maintenance in IoT, IIoT environments.
- Explore security challenges and strategies for protecting IoT, IIoT systems from cyber threats.
- Acquire practical experience through hands-on sessions, project work, and case studies.

Outcomes of the STTP

On Successful completion of this program, participant will be able to:

- Analyse the basics, Architecture of IoT & IIoT.
- Evaluate smart objects and connecting smart objects.
- Build state of the art architecture in IIoT.
- Apply and modify protocols for IoT and IIoT.
- Design I/O interface and programming APIs, case studies on IoT & IIoT.



**Department of
Computer Engineering & Technology
and
Department of
Mechanical Engineering
Jointly Organizes
One Week Short Term Training Program
(STTP) on
IoT, IIoT and Applications**

10th - 15th July, 2023

in association with



LETFIX Technologies

Chennai

**॥ क्षणे क्षणे यन्व्रवतामुपैतत तदेव रूपं रमणीयतायाः ॥
kṣaṇe kṣaṇe yan navatām upaiti tad eva rūpaṃ ramaṇiyatāyāḥ
That which becomes new every moment is the very form of beauty
Māgha (7th Century Indian Poet)**

**For Faculty / Research Scholars / Students /
Industry People**

CHIEF PATRON

Sri. N. Subash, President, CBIT(A)

PATRON

Prof. C. V. Narasimhulu, Principal, CBIT(A)

CONVENERS

Dr. M. Subramaniam

Professor & Head, Department of CET, CBIT(A)

Dr. P. Prabhakar Reddy

Professor & Head, Department of Mechanical Engineering, CBIT(A)

COORDINATORS

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Professor, Dept. of CET, CBIT(A)

Ms. Kavita Agrawal

Assistant Professor, Dept. of CET, CBIT(A)

Dr. N. Janardhan

Assistant Professor, Dept. of Mechanical Engineering, CBIT(A)

ADVISORY COMMITTEE

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Prof. Swamy Das M., Joint Director Academics, CBIT(A)

Prof. P. V. R. Ravindra Reddy, Director Student Affairs, CBIT(A)

ORGANISING COMMITTEE

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Ms. G. Mamatha, Asst. Prof, CET

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Mr. P. Narsimhulu, Asst Prof, CET

Mr. K. Gurubrahmam, Asst Prof, Mech

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Mr. Syed Althaf, Computer Operator, CET

Mrs. V. Anusha Goud, Computer Operator, Mech

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Mr. Simhadri Adhit, CET

Mr. Vangapally Namish, CET

Mr. Aditya Raj Bhosle, CET

Mr. Garlapati Ritesh, CET

STTP OUTLINE (WITH HAND-ON)

Timings: 9:15am-12:45pm, 1:00pm-5:00pm

Day-1: Introduction to IoT

Fundamentals of IoT, including its definition, key concepts, benefits, applications across industries, its relation to Industry 4.0, challenges and opportunities in implementation, IoT system architecture communication protocols, wireless technologies and IoT data management and integration.

Day-2: Edge Computing and Data Analytics in IoT

Edge computing in IoT, data preprocessing and analytics, real-time monitoring and visualization, implementing edge computing, and data analytics platforms, security challenges including authentication, access control, encryption, privacy considerations, and regulatory compliance in IoT systems.

Day-3: Introduction about Industrial Automation and its Applications

Components such as breakers (MCB, MCCB, ELCB), contactors (AC and DC), relays, indication lamps, industrial switches, limit switches, and SMPS, including their wiring, control circuits, and working principles.

Day-4: Sensors

Sensor types include proximity, fiber optic, laser through-beam, diffuse-type photoelectric, and retro-reflective sensors, covering their control circuit, working principle, input types (digital/analog), characteristic, sensor teaching, output reading, and connections with lamps, load, contactors, and door automation.

Day-5: Control circuit for Timer/Counter

Control circuit for timer/counter, temperature controller, various timer types, PID-based heater control, programmable logic controller (PLC), ladder logic circuit, software installation, PLC wiring, human-machine interface (HMI), programming, communication circuits, and PLC-HMI interfacing.

Day-6: Industrial Project

Live Industrial projects for each batch

Who can attend?

Faculty, Research Scholars, Students and Industry People

Registration Fee:

- Rs 250 for faculty
- Rs 2000 for others

For Registration & Other Details, Contact:

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Registration Form

Name:

Designation:

Organisation:

Address:

Mobile No:

Email ID:

Signature of
Sponsoring Authority

Signature of
Participant