

OBJECTIVES

This course offers an in-depth exploration of Industry 4.0 and the driving factors behind the transition to Industry 5.0, which facilitates the shift from mass manufacturing to personalized production at scale. It delves into achieving the seamless integration of key components such as big data, artificial intelligence, the Internet of Things (IoT), cloud computing, collaborative robots (COBOTS), innovation, and creativity within the framework of Industry 5.0.

The curriculum also delves into the pivotal roles played by robots, big data, and artificial intelligence in enabling precise and autonomous manufacturing techniques, culminating in the creation of a robust digital knowledge network derived from the insights of big data and AI algorithms, empowering intelligent decision-making. Industry 5.0 as a continued evolution of industrial practices and technologies, with a strong focus on human-robot collaboration, customization, and sustainability.

OUTCOMES

The participants of the FDP will be able to

- 1) Understand the motive behind Industry 5.0
- 2) Understand the latest techniques such as AI, IoT, COBOTS, e.t.c in Industry 5.0.
- 3) The importance of sustainable and environmental aspects in the engineering side for further industrialization.
- 4) The digital twins in the Industry 5.0.
- 5) Understanding the decentralized manufacturing concepts in the Industry 5.0.

ABOUT THE FDP

Industry 5.0 refers to robot and smart machines working alongside people with added resilience and sustainability goals included. Where Industry 4.0 focused on technologies such as the Internet of Things and bigdata, Industry 5.0 seeks to add human, environmental and social aspects back into the equation.

In this regard, Industry 5.0 can be seen as complementing the advances made in Industry 4.0 to support rather than supersede humans. This allows humans to intervene where required and move away from excessive automation to incorporate critical thinking and adaptability, while still taking advantage of the precision and repeatability of machines.

Human-Centric Approach, Human-AI Collaboration, Sustainability and Social Responsibility, Supply Chain Resilience, Cyber-Physical Systems, Data-Driven Decision-Making, New Manufacturing Technologies and Customization and Personalization are the main themes encompassed by Industry 5.0.

RESOURCE PERSONS

Prominent experts from Indian Engineering Service, ISRO, IIST, NITs, Digital University Kerala, Symbiosis Institute of Technology, Tata Elxsi e.t.c will share their expertise in the programme.



AICTE Training and Learning Academy (ATAL)

FACULTY DEVELOPMENT PROGRAMME

ON

INDUSTRY 5.0 –

A HUMAN CENTRIC SOLUTION

15th -20th January, 2024



COORDINATOR/CO-COORDINATOR

DR. JAYACHANDRAN E S / DEEBU U S

ORGANIZED BY

**DEPARTMENT OF ELECTRONICS & COMMUNICATION
ENGINEERING**

COLLEGE OF ENGINEERING ADOOR

(Managed by IHRD, a Govt. of Kerala Undertaking)
Manakkala.P.O
Adoor , Pathanamthitta – 691551

www.cea.ac.in

ABOUT THE INSTITUTE

College of Engineering, Adoor is located in Pathanamthitta district in the state of Kerala. The College of Engineering, Adoor was established by Government of Kerala in 1994 under the aegis of Institute of Human Resource Development (IHRD), a Government of Kerala undertaking. The college offers UG level programmes in Computer Science & Engineering, Computer Science (Data Science), Electronics & Communication Engineering, Electrical & Electronics Engineering and Mechanical Engineering. College of Engineering Adoor was selected for the TEQIP-II Project institutions. The Mechanical Engineering programme is accredited by National Board of Accreditation.

ABOUT THE DEPARTMENT

The B.Tech programme in Electronics and Communication Engineering at CEA delivers a comprehensive education that equips students with a robust understanding of both theoretical principles and practical applications in the field of engineering. The curriculum fosters a solid grounding in various areas, including communication, instrumentation, control systems, embedded systems, industrial and power electronics, microprocessor technology, VLSI design, and related subjects. Furthermore, the programme places significant emphasis on developing students managerial skills within the engineering domain. The alumni network of the department is a testament to the success of its graduates, who have gone on to make a significant impact in their respective fields and industries.

WHO CAN ATTEND?

The faculty members of AICTE approved Institutions, Universities, research scholars; participants form Government, Industry and professionals from R&D labs.

Number of participants is limited to 50. There is no course fee and preference will be given to new participants. Selection of the participants will be based on the first come first serve basis.

HOW TO REGISTER ?

Registration has to be done only through

<https://atalacademyaicte-india.org/>

For more information, kindly visit

<https://atalacademyaicte-india.org/FAQs>

Apart from that candidates must fill the [google form](#) attaching the [No Objection Certificate](#) from the concerned authority.

WHAT IS IMPORTANT?

It is mandatory to attend the test that will be conducted in the last day of the FDP related to the topics covered. It is also mandatory for the participants to have a minimum of 80% attendance and 60% marks in the test to earn the certificate.

HYPERLINKS

ATAL Academy: <https://atalacademyaicte-india.org/>

College Website: www.cea.ac.in

Google Form for registration: [Google form](#)

No Objection Certificate : [No Objection Certificate](#)

College Location: [CEA](#)

CHIEF PATRON



Dr. V A Arun Kumar
Director
Institute of Human
Resources Development (IHRD)

PATRON



Dr. K Sunilkumar
Principal
College of Engineering Adoor

HOW TO REACH?

CE Adoor is located at Manakkala 4kms away from Adoor town on the side lines of Adoor- Bharanikavu road.

Location: [9132538218142034](tel:9132538218142034), [76.71819966575075](tel:7671819966575075)

CONTACT DETAILS

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