

About the Institution

New Horizon College of Engineering (NHCE) is an Autonomous College affiliated to Visvesvaraya Technological University (VTU), approved by All India Council for Technical Education (AICTE) and University Grants Commission (UGC). New Horizon College of Engineering has been accredited by NAAC with 'A' Grade and National Board of Accreditation (NBA). It is an ISO 9001:2008 certified Institution.

About the Department

The Department of Electrical and Electronics Engineering (EEE) is one of the prestigious branches of Engineering and one among the oldest Departments of NHCE-Bangalore started in 2001. The Department is accredited by NAAC with 'A' Grade and accredited by NBA. The vision of EEE Department is to create contemporary Engineers, Innovators and Entrepreneurs who would make a better nation and in turn, a better world. A critical investigation and innovation into the modern state-of-art and cutting-edge technology lead to the fact that an Electrical Graduate fits better in today's competitive world.

The strength of the Department are highly qualified faculty members with expertise in various fields of Electrical Engineering, state-of-the-art laboratory facilities. The Department is inclined towards bridging the gap between Industry and Academia by collaborating with Multinational Companies in the field of Electrical Engineering.

The Department nurtures the young minds beyond the curriculum by facilitating Technical Clubs in promoting technical events, community development/society impact and universal value/ethics programs. Electrical and Electronics Engineering students have a greater exposure and flexibility in campus placement in the core industries, IT sectors and Public Sector Units.

AICTE Training and Learning (ATAL) Academy

AICTE Training and Learning (ATAL) Academy, established by MOE, Government of India, holds the vision to empower faculty to achieve goals of Higher Education such as access, equity and quality. The Council understands that there is a need of the day to train the young generation in Skill Sector and train Faculty and Technicians in their respective disciplines with latest tools and technologies. The main objective of ATAL Academy is to plan and help in imparting quality Technical Education in the country and to support technical institutions in fostering research, innovation and exchange of experiences such as workshops, orientations, learning, communities peer mentoring and other FDPs.

Chief Patrons

Dr. Mohan Manghnani
Chairman
New Horizon Educational Institution

Mr. Dhermesh Manghnani
President
New Horizon Educational Institution

Patrons

Dr. Manjunatha
Principal

Dr. R. J. Anandhi
Professor and Dean - Academics

Dr. Revathi V
Professor and Dean - R & D

Conveners

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Associate Professor

Mr. Vinod Kumar S
Senior Assistant Professor

Coordinators

Mr. Sunil S K
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Department of Electrical and Electronics Engineering

AICTE - ATAL

Sponsored

Six Days Faculty Development Program

on

Digital Twin Technology and its Role in Industrial Automation

18th - 23rd August 2025



www.newhorizonindia.edu

About the FDP

Creating an FDP (Faculty Development Program) about Digital Twin Technologies in Industrial Automation would involve a comprehensive approach to educate and update faculty members or professionals about the Integration, importance, and real-world applications of Digital Twin (DT) Technologies. Here's a structured outline that could guide the creation of such a program. This FDP gives insight on Introduction to Industry 4.0 and Digital Twin, Practical Insights and Tools for Implementation, Advanced Concepts and Future Directions, Fundamentals of Digital Twin Technology, Role of Digital Twins in Industrial Automation, Tools and Platforms for Building Digital Twins, Real-World Applications of Digital Twin, Data Integration and IoT for Digital Twins, Challenges in Implementing Digital Twins .

Course Content

- Introduction to Industry 4.0 and Digital Twin.
- Fundamentals of Digital Twin Technology.
- Types of Digital Twins: Descriptive, Diagnostic, Predictive, and Prescriptive.
- Technologies involved: IoT, AI, Machine Learning, Cloud Computing, and AR/VR.
- Role of Digital Twins in Industrial Automation.
- Tools and Platforms for Building Digital Twins.
- Real-World Applications of Digital Twin.
- Smart Factories and Automation using Digital Twins.
- Augmented Reality and Virtual Reality for enhanced simulation.
- Data Integration and IoT for Digital Twins.
- Challenges in Implementing Digital Twins.
- Future Trends and Emerging Technologies.
- Digital Twins in Supply Chain Management, Product Lifecycle Management, and energy optimization.
- AI and Machine Learning integration with Digital Twins.
- Hands-On Workshop / Case Study Analysis.
- Conclusion and Q and A.

Eligibility Criteria

The program is generally designed for Faculty Members, Researchers, and Technical Staff from Universities, Engineering Colleges, and other Educational Institutions which is approved by AICTE.

Guidelines

- No participant fees will be collected.
- NoC from the Institution is mandatory for the Participants
- Session time will be from 9.30 AM to 5.00 PM.
- Total number of participants is strictly limited to 50.
- Eligible participants will be selected based on first come first serve basis and will be intimated by e-mail only.
- Lunch will be provided during the course.
- TA shall be provided for the external participants as per the norms of ATAL.
- Coordinators decision will be final regarding the selection of participants.

Target Group

- Assistant Professors
- Associate Professors
- Ph.D. Scholars/PG Students.

Registration

- Registration is mandatory for attending the FDP.
- The participants are requested to register in the ATAL portal.

<https://atalacademy.aicte-india.org/login>



Certificates and Reports

After the completion of the program, certificates will generally be provided to those who have met the attendance and assessment requirements.

Faculty members may be asked to submit a report or reflection on their learnings, especially if the program included practical components or projects.

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