



**INCANTO
DYNAMICS**



**PROFESSIONAL CERTIFICATION
IN ROBOTICS, AUTOMATION
AND EMBEDDED SYSTEMS**



Project Based Industry Specific Training

100% Placement Assistance

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Embark on your journey of learning and innovation with Incanto Dynamics. Together, we can shape the future of industrial solutions. Join us and be a part of this exciting journey.

Career opportunities in **Automation, Robotics & Embedded Systems**



Manufacturing

Automation plays an important role in manufacturing and production. Automation enables the efficient production of automobiles, electronic products, pharmaceuticals, etc. with high quality and consistency.

Automation engineer plays a vital role in the development of automation systems. Development involves the design, manufacture, and Programming [coding] of a system required for various assembly tasks, such as welding, painting, and final assembly.

Automation engineers should have skills in designing electrical systems, mechanical systems, pneumatics, Hydraulics, Programming PLC, HMI, SCADA, Robots, Embedded Systems Integration, and Machine vision systems for inspection applications using AI, and ML Techniques.

Information Technology

Software is a part of any automation system. Customized software development will be required, specific to the integration with robotics, AMR, AGV, and embedded automation systems.

Major IT Companies develop customized product-based software.





Smart City

Utilizing technology and data-driven solutions to enhance the quality of life, sustainability, and efficiency of its services and infrastructure. Smart cities integrate various systems and technologies, such as Internet of Things (IoT) devices, sensors, data analytics, and communication networks, to optimize operations, improve services, and address urban challenges. Smart cities deploy advanced surveillance systems, emergency response solutions, and predictive analytics to enhance public safety, prevent crime, and respond effectively to emergencies, intelligent transportation systems, such as air quality, traffic flow, waste management, intelligent transportation systems, including real-time traffic monitoring, smart parking solutions, public transit optimization, and electric vehicle infrastructure, to improve mobility, reduce congestion, and lower emissions.

Warehouse Automation

Warehouse automation involves the use of technology and automated systems to optimize and streamline operations within warehouses and distribution centers. This includes automating tasks such as inventory management, order fulfillment, picking, packing, and shipping to improve efficiency, accuracy, and productivity. Robotic material handling systems use robotic arms and AGV [Autonomous Guided Vehicle], and AMR [Autonomous Mobile Robot] equipped with cameras and sensors to identify, grasp, and move items within the warehouse. These robots can handle a wide range of products and packaging types, increasing picking efficiency and throughput.





Building **Automation**

Building automation involves the integration of various systems and technologies to automate and control building operations, including heating, ventilation, air conditioning (HVAC), lighting, security, fire alarms, elevators, emergency lighting, and renewable energy systems. The goal of building automation is to optimize energy efficiency, enhance occupant comfort, improve operational efficiency, and reduce maintenance costs.

Airport **Automation**

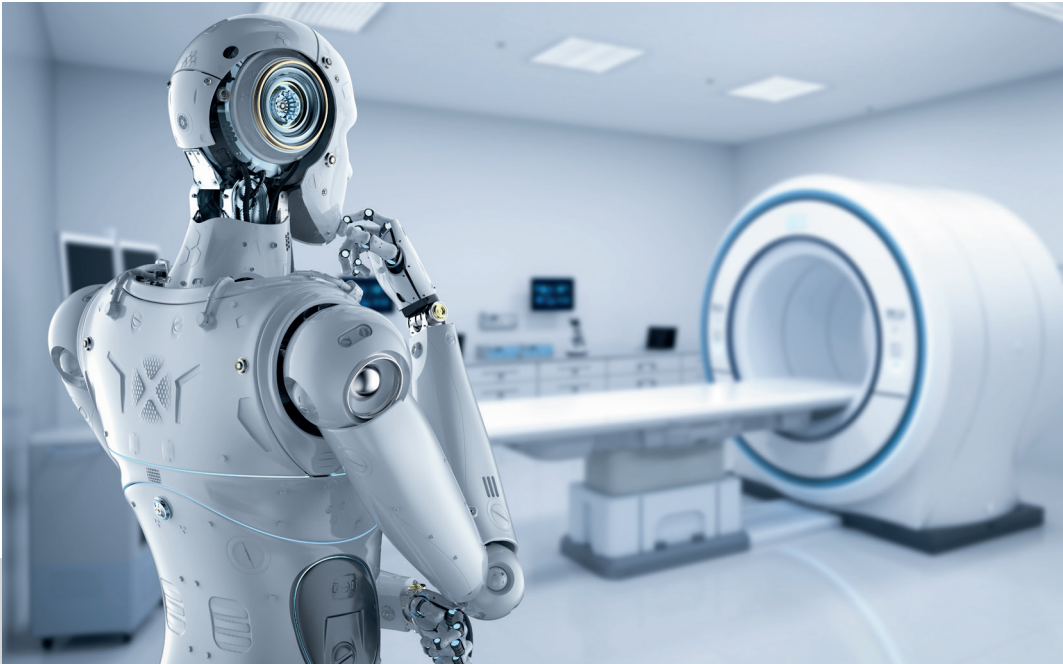
Development of Airport SCADA system (Supervisory Control and Data Acquisition) for monitoring and control of various processes and equipment throughout the facility. Airport SCADA systems are utilized to oversee functions such as air traffic control, runway operations, baggage handling, security systems, and facility management.

SCADA systems help airport authorities to maintain operational efficiency, ensure safety and security, and respond effectively to any issues or emergencies that may arise. They provide real-time data visualization, ATC Interactions, control capabilities, and remote monitoring, allowing airport staff to make informed decisions and quickly address any operational challenges.

Airport automation also streamlines various processes, such as check-in, security screening, baggage handling, and boarding. These systems can include self-service kiosks, automated bag drops, biometric identification, robotic assistance, automated guided vehicles, and flight status updates from ATC. The goal is to improve efficiency, enhance passenger experience, and increase operational reliability.



Medical



Development of robotic applications required for surgeries, which involves the use of robotic systems to perform surgical procedures. These systems are controlled by surgeons who use computer consoles to manipulate robotic arms with precision instruments. These systems are used in various surgical specialties, including urology, gynecology, general surgery, thoracic surgery, and orthopedic surgery.

Robotic surgery offers several potential benefits, including increased precision, smaller incisions, reduced trauma to surrounding tissues, shorter recovery times, and potentially improved outcomes for patients. The robotic system provides surgeons with enhanced visualization and dexterity, allowing for more precise movements and better access to hard-to-reach areas within the body.

Automation in **Agriculture**

Agriculture involves the deployment of machinery, sensors, robotics, GPS technology, and drones to automate tasks traditionally performed by humans. Also, IOT-based software solutions for monitoring and gathering data about soil conditions, weather patterns, and crop health.

Automation in agriculture offers several benefits, including increased efficiency, higher yields, reduced labor costs, and improved sustainability.



Self-Driving Cars

The development of autonomous vehicles (AVs) or driverless cars involves the integration of sensors, cameras, GPS, and radars to govern the vehicle speed, acceleration, braking, and steering along with the navigation instructions. Artificial intelligence (AI) technology enables them to navigate and operate on roads without human intervention. These vehicles use a combination of sensors and algorithms to perceive their environment, detect obstacles, interpret traffic signs and signals, and make driving decisions in real time.

Advanced AI algorithms and machine learning techniques will be used to process sensor data, interpret complex environments, and make driving decisions autonomously. AI systems learn from experience and continuously improve their performance through data analysis and feedback.

Self-driving cars may communicate with other vehicles, infrastructure, and traffic management systems through vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication technologies. This enables cooperative driving, collision avoidance, and traffic management optimizations.



PROGRAMME HIGHLIGHTS



Innovative Learning Pathways

Dive into the future with our cutting-edge curriculum in Robotics, Automation, and Embedded Systems. Tailored for real-world applications in automotive EVs, healthcare robotics, and more



Industry-Driven Expertise

Learn from the leaders: Our courses are delivered by seasoned professionals at the forefront of technological innovation. Experience mentorship that bridges academia and industry.



Global Project Engagement

Engage with the world: Work on international projects across automotive, pharmaceuticals, and medical robotics sectors. Your bridge to a global career starts here.



100% Placement Assistance

Your success, guaranteed: With our commitment to 100% placement assistance, embark on your career journey with confidence. We're your partners in achieving your professional dreams.



State-of-the-Art Facilities

Train in our advanced labs, equipped with the latest in robotics and embedded systems technology. Our hands-on approach prepares you for the challenges of tomorrow's tech landscapes.



Tailored to Industry Needs

Designed with industry feedback, our programs ensure you gain relevant, up-to-date skills in manufacturing, product development, and beyond. Get ready to lead in high-demand sectors.



Transformative Educational Journey

Join Incanto Dynamics for an educational experience that transforms your potential into expertise. Where opportunities in robotics and industrial solutions shape your future.



Exclusive Access to Emerging Technologies

Stay ahead of the curve with exclusive insights into emerging technologies and their applications in critical sectors like EVs, medical robotics, and clean energy solutions.



Empowering Future Innovators

Be part of a community that empowers, innovates, and leads. At Incanto Dynamics, you're not just a student; you're a future industry innovator.



Hands on Comprehensive Learning Ecosystem

Our ecosystem encompasses more than just courses: it's about mentorship, real-time projects, and networking. A holistic educational journey tailored for you.

PROGRAM CURRICULUM

Industrial Automation

- ✓ Programmable Logic Controller [PLC] - Delta, Siemens, Omron
- ✓ Field Controls
- ✓ Human Machine Interface (HMI)
- ✓ Supervisory Control and Data Acquisition- (SCADA)
- ✓ Electrical Control Panel Design
- ✓ Industrial Safety
- ✓ LabVIEW ✓ Practical-C
- ✓ SQL Integration with SCADA System.
- ✓ Industrial Communication Protocols
- ✓ OPC

Internet of Things

- ✓ IOT Fundamentals
- ✓ IOT Endpoint Design and Development
- ✓ Communication, Sensor & Bluetooth
- ✓ Wireless Communication
- ✓ Python
- ✓ Arduino, Raspberry-Pi
- ✓ Node MCU
- ✓ Common Gateway Interface [CGI]
- ✓ Pubsub with MQTT

Embedded Systems

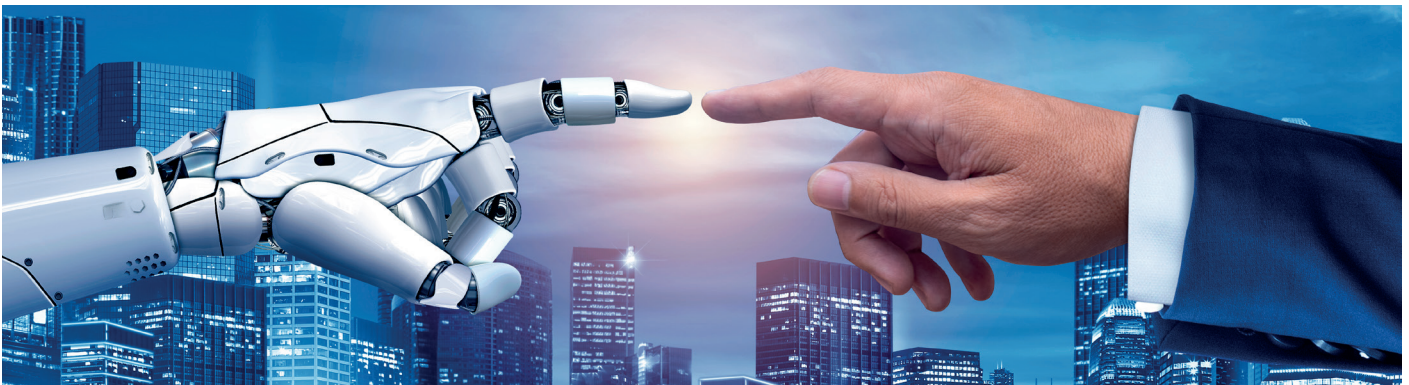
- ✓ Practical-C ✓ OOPS - C++
- ✓ 8-Bit Microcontroller ✓ Linux
- ✓ 32-Bit Microcontroller
- ✓ Real-Time Operating System
- ✓ Communication Protocols

Robotic Level 1

- ✓ Fundamentals of Robotics
- ✓ Practical C ✓ GPIO-Basics
- ✓ Communication Protocol
- ✓ Robotic application development
- ✓ Design of Grippers and Actuators
- ✓ Machine Vision integrated with Robot
- ✓ Overview of Force Sensor, Spectroscopy, and Conveyor Tracking.

Robotic Level 2

- ✓ Robot Operating System [ROS]
- ✓ Integration with Dot NET
- ✓ Integration with Python
- ✓ Machine Learning ✓ Neural Networks
- ✓ AMR ✓ Open CV ✓ Jetson



PROGRAMME CURRICULUM

Very large Scale Integration [VLSI]

- ✓ Fundamentals
- ✓ Verilog
- ✓ Inverter Design
- ✓ Logic Design
- ✓ Design of Dynamic Circuits
- ✓ ALU Subsystems Design
- ✓ Memory Design
- ✓ Layout Design
- ✓ Finite State Machines

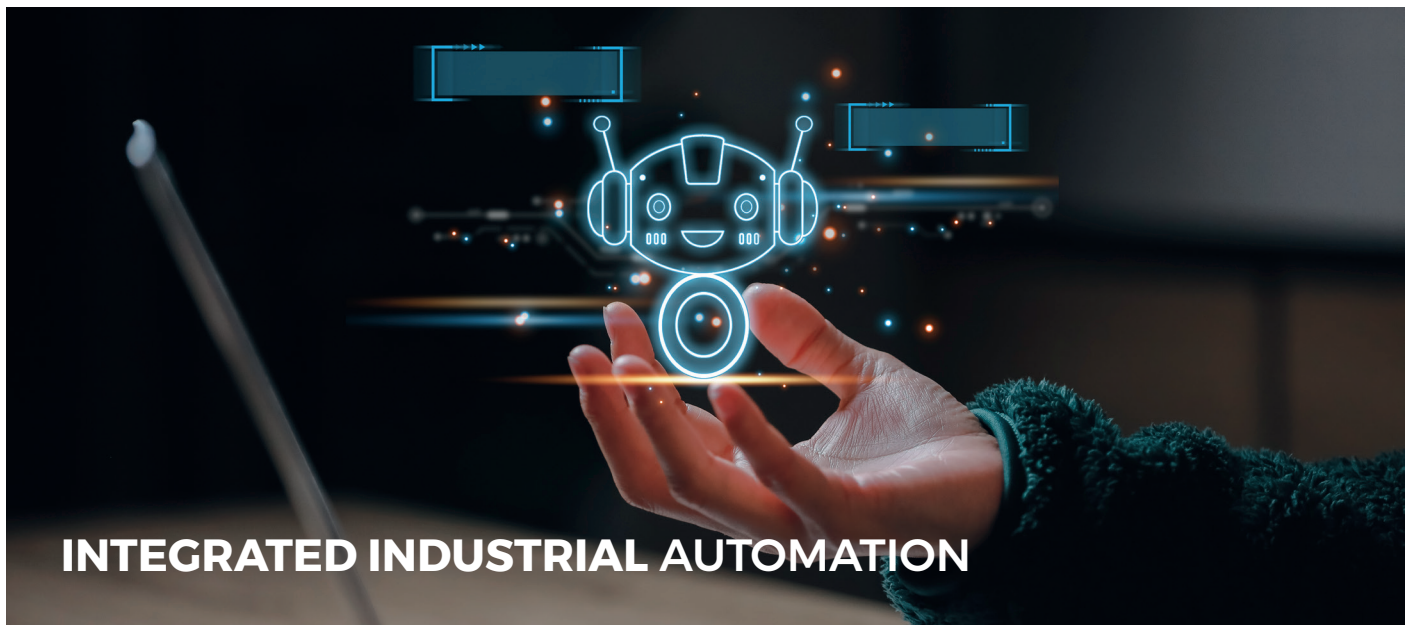
Distributed Control System [DCS]

- ✓ Fundamentals of Process Industries
- ✓ Field Devices & Controls
- ✓ Instrumentation
- ✓ Electrical Control Panel Designing
- ✓ PLC
- ✓ P&ID Symbols
- ✓ PID-Concept
- ✓ SCADA, HIS
- ✓ DCS-Hardware and Configuration
- ✓ Fieldbus Overview
- ✓ FBD-Programming

Special Purpose Machine Design

- ✓ Engineering Drawing Fundamentals
- ✓ - Material Selection
- ✓ - CAD, Solid works
- ✓ - Pneumatics & Hydraulics
- ✓ - Actuators
- ✓ - Shafts and Links
- ✓ - Robotics Fundamentals





INTEGRATED INDUSTRIAL AUTOMATION

Industrial Automation

1. Automation Overview
2. Basic Electronics
3. Basic Electricals
4. Basic Instrumentation
5. Pneumatics
6. Hydraulics
7. Inputs, Outputs and Field Controls
8. Electrical Control Panel Design
9. Safety Considerations
10. PLC-Siemens, Omron, Delta, Allen Bradley
11. Human Machine Interface [HMI]
12. Supervisory Control and Data Acquisition [SCADA]
13. LabVIEW
14. Industrial Communication Protocols
15. SQL Integration with SCADA System.

Internet of Things

1. IOT Fundamentals
2. IOT Endpoint Design and Development
3. Communication, Sensor & Bluetooth
4. Wireless Communication
5. Python
6. Arduino, Raspberry-Pi
7. Node MCU
8. Common Gateway Interface [CGI]
9. Pubsub with MQTT

Embedded Systems

1. Practical C
2. 8-Bit Microcontroller
3. 32-Bit Microcontroller
4. Real Time Operating Systems [RTOS]
5. Communication Protocols

Robotics Level 1

1. Robotics Fundamentals
2. GPIO-Basics
3. End Effector Design and Calculations
4. Programming Robot - Application Development
5. Vision system integrated with Robot.
6. Overview of Force & Torque Sensor, Spectroscopic Vision, Conveyor Tracking.



COMPANIES You can work at





ELEMENTS OF CAREER SERVICES

PROFILE BUILDER

- ✔ An easy to use Resume, LinkedIn and Cover letter preparation tool.
- ✔ Resume Score: AI-Driven Resume Score
- ✔ Real time recommendations to improve.
- ✔ Match your resume to the JD and check fitment.
- ✔ LinkedIn Profile Review.
- ✔ Cover Letter creation.

HIGH PERFORMANCE COACHING

Dedicated coaches working with you to identify best suited career opportunities

- ✔ Help you define your value proposition
Layout a Career Path and help you adhere to your timelines and goals
- ✔ Help you with interview preparations, finding jobs in the market, salary negotiations and other preparation as required

OFFLINE JOB FAIRS & NETWORKING EVENTS

Job Fairs and Networking Events are conducted every few months in key cities where you get a chance to:

- ✔ Interview with top companies for roles across functions
- ✔ Network with your peers across programs offered by Incanto - meet your program seniors and juniors
- ✔ Meet your Incanto student buddies, career coaches, industry experts, Incanto senior management and more

JOBS ON CAREER CENTRE

Career Centre offering Incanto jobs across experience levels and CTC ranges.

- ✔ Easy apply feature for Incanto hiring partner vacancies.
- ✔ Create resume at profile builder and with one click to apply for various jobs

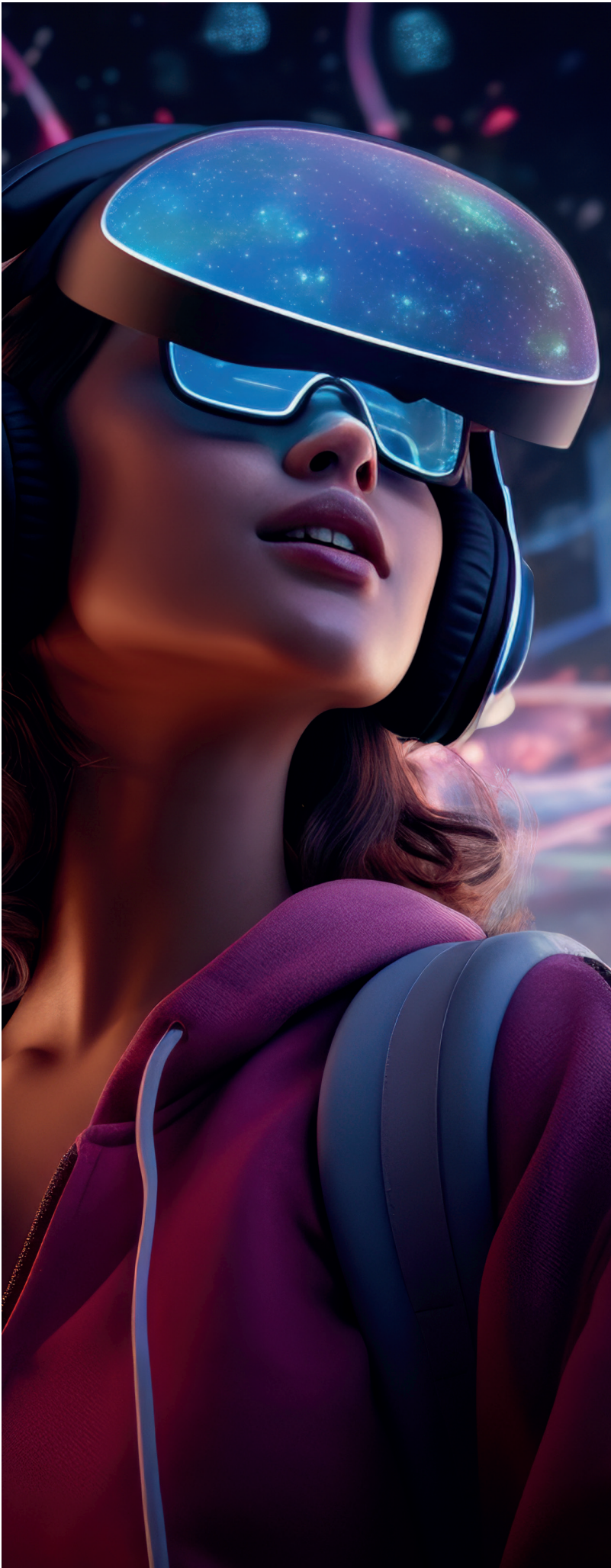
JUSTINTIME INTERVIEW PREP (JIT)

For upcoming job interviews JITs are conducted for eligible programs.

- ✔ Tailored to job role and target domain.
- ✔ Real time feedback and tips for improvement

PERSONALISED INDUSTRY SESSION

- ✔ 90-minute sessions over the weekend by leading industry experts
- ✔ Session categories: Career, Technical and Communications.
- ✔ Doubt resolution
- ✔ Develop proof of concepts and apply theoretical concepts in the real world
- ✔ Assess skill levels
- ✔ Peer Networking
- ✔ Classroom element
- ✔ Business communication sessions and much more



ADMISSION PROCESS

Step 1:

Explore Our Programs

Visit [website] to discover our courses in Robotics, Automation, and Embedded Systems. Find the program that aligns with your career goals.

Step 2:

Apply Online

Complete the online application form on our website. Ensure you fill in all the required details accurately to avoid any delays.

Step 3:

Admission Interview

Once your application is reviewed, you'll be invited for an interview. This is your opportunity to showcase your passion and potential.

Step 4:

Secure Your Spot

Upon successful interview completion, you'll receive an admission offer. Accept your offer by paying the course fee to secure your spot. The comprehensive course fee covers all your learning materials, access to our state-of-the-art labs, and 100% placement assistance.

Step 5:

Welcome to Incanto Dynamics



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